

**Through the *oculi* of Pliny the Elder:
A Gendered Representation of Roman Women as
Patients and Healers**

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Declaration

I, Melinda Anne Emma Ryan (42453003), certify that this thesis has not been submitted for a higher degree to any other university or institution.

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Summary

The study of ancient medicine has been the primary occupation of many recent scholars of ancient history. However, very little of that scholarship has focused on the efficacy of ancient pharmacopeia and even less has further concentrated on medical remedies related specifically to the female sex. The encyclopaedic wonder that is Pliny the Elder's, *Historia Naturalis*, abounds with hundreds of remedies and observations principally concerned with women's health. These passages specifically examine the 'everyday life' aspect of treating women's medical conditions, from menstruation through to motherhood. This thesis analyses and interprets a well-rounded collection of these references utilising socio-cultural and post-structuralist methodologies to determine how female healthcare was viewed in ancient Italy. It also briefly examines the roles available for imperial women to practise medicine in both a domestic and non-domestic setting. It is necessary, particularly during this age of gender equality advocacy, to attempt to provide a voice to an otherwise silent group of women. This thesis demonstrates the idiosyncratic representation of women as both patients and healers as seen through the work of an elite Roman male who lived in a predominantly patriarchal society.

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Abbreviations

<i>Agr.</i>	refers to Cato's, <i>De agricultura</i>
<i>Alex.</i>	refers to Nicander's, <i>Alexipharmaca</i>
<i>Am.</i>	refers to Ovid's, <i>Amores</i>
<i>Aph</i>	refers to Hippocrates', <i>Aphorisms</i>
<i>BJ.</i>	refers to Josephus', <i>Bellum Judaicum</i>
<i>CIL</i>	<i>Corpus Inscriptionum Latinarum (1863 -)</i>
<i>CLD</i>	Collins Latin Dictionary
<i>De. Lib. Ed.</i>	refers to Plutarch's, <i>De liberis educandis</i>
<i>De. loc. Aff</i>	refers to Galen's, <i>De locis affectis</i>
<i>De. Med.</i>	refers to Celsus', <i>De medicina</i>
<i>Dig.</i>	<i>Digesta</i>
<i>Ep.</i>	refers to Pliny the Younger's, <i>Epistulae</i>
<i>Geo.</i>	Refers to Strabo's, <i>Geographica</i>
<i>Gyn.</i>	refers to Soranus', <i>Gynaecia</i>
<i>HN</i>	refers to Pliny the Elder's, <i>Historia Naturalis</i>
<i>Mat. Med.</i>	refers to Dioscorides', <i>Materia Medica</i>
<i>Med.</i>	refers to Euripedes', <i>Medea</i>
<i>Met.</i>	refers to Ovid's, <i>Metamorphoses</i>
<i>Nat. Fac.</i>	refers to Galen's, <i>Περί φυσικῶν δυνάμεων</i>

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Introduction

‘...*Si ederint corvinum ovum, per os partum reddere.*’

‘...if [women with child] eat a raven’s egg they bear the infant through the mouth.’

Pliny, *Historia Naturalis*, 10.15.32

Background and Objectives

Interest in women from antiquity has grown remarkably over the years and, in line with this, the discipline of ancient world studies has undertaken fruitful historical research, particularly regarding women’s lived experiences.¹ This thesis will examine a specific facet of this lived experience: namely, the medical conditions and medical roles of elite Roman women as portrayed in Pliny the Elder’s encyclopedic work entitled the *Historia Naturalis (HN)*.²

Pliny the Elder was a Roman naturalist, whose most defining legacy was the *HN*, a 37 book work compiled in only two years.³ It contains a vast plethora of information and facts on all manners of subjects, in particular those, which relate to animals, plants, minerals and the human condition. Pliny was born into an equestrian family of affluent wealth and lived between 23-79 AD. This study will focus on the same relative period, the first century. In the *HN* Pliny dedicated 17 books to the study of medicine.⁴ It should be noted Pliny was interested in plants and their properties, not illnesses or cures.

¹ See Balsdon (1962); Pomeroy (1975) Pomeroy was the first scholar to conduct an exploration of women’s private live; Majno (1975); Jackson (1988); Hemelrijk (1999); Flemming (2000); Dixon (2001); Beagon (1992, 2005); Lefkowitz and Fant (2005); Richlin (2008, 2014).

² Aude Doody writes that, ‘encyclopedias, like dictionaries, insinuate a particular view of the world in their choice of what counts as knowledge.’ Doody (2010, 62). According to Doody’s view, what constitutes knowledge in a particular period needs to be taken into account when examining a work like the *HN*.

³ Baldwin (1995, 72-81); A naturalist is an expert or student of natural history.

⁴ It is these 17 books that will make up the foundation of this thesis.

When distilled to its essential ingredients, Pliny's work was one of knowledge and information. Michel Foucault postulates that texts, which have the ultimate purpose of providing knowledge, have often been identified as 'innocent'. For the purposes of this thesis any nuances present in the *HN* are situated around the social circumstances and treatment of women at the hands of a typical Roman male. These undertones will be examined in greater detail as we progress.

Medicine in Pliny's Roman world was comprised of magic, herbs, incantations and surgery.⁵ Further, he identifies 'folk medicine' as being the primary occupation of women.⁶ It has been argued, particularly by Janowitz, that Pliny's dismissal of magical cures may appear to be deceptively modern. However, his conception of magical remedies is inconsistent and paradoxical with no clear guidelines to evaluate or select his source materials. She concludes and is accurate in her supposition that 'his definition of magic cannot be ours.'⁷ Pliny's work (as related to in this thesis) focused on the everyday experiences of women undergoing menstruation, contraception, abortions, pregnancy, childbirth and childrearing. Ultimately

⁵ For the context of this research, the term 'medicine', as we know it, will need to encompass both magic and folk remedies, as Pliny did not often make a distinction between the two. The classification of magic as a form of medicine may inspire discomfort, but I would argue that such a delineation was a product of its time and as such should be perceived and interpreted in this manner. See Richlin (2008, 225-266).

⁶ Plin. *HN*. 25.5.10. Folk medicine can be divided into two separate branches. This defined is by Dorson, '(1) natural folk medicine, and (2) magico-religious folk medicine', he further defines these two fields, he writes, 'natural medicine, which is sometimes called "rational" folk medicine because of the predominance of herbs in its *materia medica*, is shared with primitive cultures, and in some cases some of its many effectives have made their way into scientific medicine. The second branch... attempts to use charms, holy words and holy actions to cure disease.' Dorson (1972, 192). It should be noted that for the purposes of this thesis remedies labelled as being folk-like in nature are simply being ascribed this modern label. Even by modern standards the definition of the term folklore is ambiguous and can have a variety of associations, which are open to individual interpretation. The concept of folklore medicine in the ancient world would not have existed. Although, the term 'folklore' as we know it may have been applied by the Romans to treatments orally transmitted by illiterate countrymen and women. This is probably the closest comparison we can subscribe to for the purposes of this thesis. So essentially a modern interpretation of *superstitio*, or folklore remedies, will be applied to Pliny's prescriptions.

⁷ Janowitz (2001, 13).

what we find in the 17 books he has devoted to medicine is an excellent microscope with which to view the everyday issues faced by women in the first century.

The purpose of this study is, therefore, two-fold: to identify what medical conditions women experienced in the Roman world of Pliny's *HN*; and to briefly ascertain what roles women living in this time and place performed to treat these specifically female medical conditions. The first aim is to examine what Pliny tells us about female medical conditions, in particular, the ailments of menstruation, abortion, contraception, pregnancy and childbirth.

My second aim arises from the first. By examining the evidence, we have concerning medical conditions and established medical practises, what can this reveal about the roles available for women to practice medicine, more specifically, the functions of midwifery and nursing. These roles will be most closely and succinctly addressed in my final chapter.

Literature Review

Regarding scholarship that currently exists on this thesis topic, there are a number of valuable studies, which have influenced the direction, and scope of this study. These will now be examined thematically. It is hoped this will both provide the reader with an understanding of this work's background and enhance their appreciation of the need and substance of this study.

Firstly, Mary Beagon has conducted significant research on Pliny. Her work *Roman Nature: The Thought of Pliny the Elder*, has been intrinsic in producing formative information on the educated Roman elite in the first century and notably offers insight into the mind of an archetypal member of this elite class. This work is substantive, offering much to the social

study of Pliny and his work.⁸ The work of Roger French, although not recent, has contributed a great deal to our knowledge of Pliny and his work, particularly in regard to the scientific components of the *HN*.⁹ More recently Trevor Murphy reflects upon the encyclopedic nature of the *HN* and has attempted to explain key concepts found within the work. He surmises that, for Pliny, the city of Rome is the measure with which he anchors his perspective on the world, and this influences the way he writes.¹⁰ This is a valid observation, which will inherently effect, whether intentional not, Pliny's writing. This influence will need to be recalled when interpreting the *HN*.

There has been relatively little scholarship on ancient conceptions around menstruation. The focus has instead been on fertility.¹¹ Menstruation does, of course, have links with fertility and as a result this is often discussed as an aside within the literature. However, even less of this literature has focused specifically on Pliny's representation of menstruating women. Menstruation was not fully understood by the ancients and likely due to the lack of female voices in antiquity, we have very little information concerning it.¹² The sources that remain tell us that women were more 'polluting' if they were menstruating.¹³ One authority on the subject is John Riddle who notes, 'in modern terms; these drugs could be called early term abortifacients, but a woman of earlier times who took an *emmenagogue* to regulate her menses could not know whether she had caused an abortion.'¹⁴ This is a crucial point, which stresses the experimental nature of the remedies found in the *HN*.

⁸ Beagon (1992). See also, Doody, (2010); Healy (1999); Murphy (2004).

⁹ French (1994); French and Greenway (1986).

¹⁰ Murphy (2004).

¹¹ See Riddle (1991, 1992, 1997).

¹² Riddle and Worth Estes (1991, 229).

¹³ Cole (1992, 104–21); von Staden (1992, 7–30.)

¹⁴ Riddle and Worth Estes (1991, 230). When Riddle says 'these drugs' he is referring to herbal/plant based treatments in the form of orally ingested or topically applied medicaments.

Additionally, John Riddle is the leading scholar on contraception and abortion in the Roman World.¹⁵ His work has been widely criticised by scholars such as Bruce Frier and Konstantinos Kapparis, who argue that Riddle's work, although providing a reliable reconstruction of 'chemical birth control agents', mistakenly asserts that these would have been reliable forms of contraception and abortifacients.¹⁶ Kapparis has published his substantive book on abortion and in this, he postulates that we (as modern observers) would be confronted by the dangerous lengths women were willing to go in order to terminate a pregnancy. Indeed, it is highly doubtful modern medical practitioners would want to test their efficacy. There is no reliable evidence from everyday women that these methods would have worked as there is very little in the literature on ancient medical conditions actually written by women. Pliny cites five female sources but they may well be pseudonyms and there is no way to confirm their authenticity. The Latin term for abortion, *abortus*, can be translated as either abortion or miscarriage.¹⁷ The interchangeable nature of this word can be deceiving when observed from a modern perspective, since the act of abortion is by its practice a purposeful act, while miscarriage is an accident. Pliny was not favourable towards the practice of abortion: further he appeared reluctant to relay information about birth control but did so nonetheless.¹⁸ Riddle's works incorporate an extensive study of ancient pharmacopeia, with particular attention reserved for the efficacious nature of ancient herbs, specifically those which were used to create/prevent abortions and conception. This scholar is a source material for this present study.¹⁹

Brent Shaw tells us that Roman girls got married at an early age and men married in their twenties facilitating a substantial age disparity between spouses. This, in turn, had

¹⁵ Riddle (1985, 1992, 1997, 2013).

¹⁶ Frier (1994, 328); Kapparis (2002).

¹⁷ Simpson (1968, 3).

¹⁸ Plin. *HN*. 25.7.25; See Riddle (1992, 83).

¹⁹ Riddle (1991, 1992, 1997).

implications for fertility and family dynamics. This gap may have affected contraception and the number of children Roman girls and women may have been able to conceive.²⁰ Another paramount scholar who has influenced the direction of this study is Keith Hopkins. He has highlighted the confusion the ancients exhibited between the practice of contraception and abortion.²¹ This is a valid point and will be re-emphasised when examining Pliny's work. Hopkins' underlying argument is that contraception was used to limit the size of families, for economic reasons. He highlights the lack of evidence for contraceptive use in the Roman world. Indeed, Pliny is one of the few sources who mention contraceptives. However, it could be argued that their use was not condoned by men and thus not recorded in the literature. Pliny's unique inclusion of information on contraceptives can simply be viewed as transference of knowledge. Hopkins argues that the use of contraceptive methods in the ancient Empire reflects significant variation. He also discusses the remedies he believed were effective and ineffective. The methods of ancient contraceptives may, of course, be many and varied, but variety does not always guarantee efficacy and this will be reflected in the results of this study.

Much of the scholarship on childbirth is linked with pregnancy. In any pre-modern society pregnancy and childbirth were hazardous undertakings. The types of remedies offered by Pliny for various ailments during pregnancy were problematic. Their efficacy has to be called into question. Ralph Jackson dedicated an entire chapter of his book to childbirth and contraception. Jackson has extensively examined the relationship between disease and doctoring in the Roman Empire. His work also provides a reliable overview of women's roles in gynecology, midwifery and nursing. Donald Todman has published two recent articles on this very topic, in which he details the evolution of birthing practices from their roots in folk

²⁰ Shaw (1987, 30–46).

²¹ He argues, 'this confusion of abortion with contraception, and the failure to make the distinction between them explicit may colour all our evidence.' Hopkins (1965, 139).

medicine to the establishment of the professional practice of midwifery.²² Todman's articles concentrate on the work of Soranus (98-138 AD), who wrote a manual on gynecology for midwives. Soranus' near contemporaneous work will supplement this study.²³

John Scarborough, Valerie French, Rebecca Flemming, Mary Lefkowitz and Maureen Fant are just five of the leading scholars who have produced significant bodies of work concerning Roman women's roles in medicine.²⁴ John Scarborough is a leading expert on Roman medicine. His work, *Roman Medicine*, was one of the earlier books produced on the subject. However, he does not focus heavily on women; he is mentioned here merely to note his significance in the field. The work of Valerie French is one of the principle accounts on midwifery and obstetrics in the Roman world. She has, in a mere few pages, summarised the socio-cultural importance of women's roles in Roman gynaecology.²⁵ Rebecca Flemming pays particular attention to medical texts written or attributed to women. Flemming's work has determined that the supreme opportunity available for women in the imperial period to practice medicine was in midwifery (*obstetrices*), closely followed by nursing (*nutrices*). Wet-nursing (*nutrices*), hairdressing (*ornatrices*), and walking companions (*pedisequae*) were the leading (respectable) careers open to women.²⁶ The *obstetrix* has been represented in the literary tradition as a 'village wise woman'. This woman was in complete charge of the delivery room both during and after birth. Flemming tells us that the *obstetrices* have also found themselves, rather unfairly, identified with *meretrices*, simply because of their knowledge of the female body rather than an abstract understanding of what each role

²² Todman (2007, 2008).

²³ Todman, (2007, 83).

²⁴ Flemming (2000); Jackson (1988); See also, Scarborough (1969); van der Eijk (2012); Retiefs and Ciliers (2005, 165–88); Israelowich (2015).

²⁵ French (1987).

²⁶ Herrmann-Otto (2013, 63).

entitled.²⁷ Her work, *Medicine and the Making of Women*, marks a significant entry point for the concerns underpinning this thesis, particularly regarding the role of female healers.²⁸ Finally, Lefkowitz and Fant have produced a sourcebook which contains numerous epitaphs from the first century which refer to midwives, nurses and doctors.²⁹ Lefkowitz and Fant are vital to a study such as this because the inscriptional evidence they provide will help to supplement the encyclopedic tradition.³⁰

Three recent theses have been fundamental in the development of key research on ancient female healthcare. These were produced by Susan Dowsing, Aleshia Bailey and Peter Dean.³¹ Dowsing examined the ancient and modern scholarship surrounding medical practises and devotes a reasonable amount of her thesis to Pliny's work. Bailey explored the relationship and representation of female healers in the domestic and non-domestic space. Finally, Dean investigated women's roles in healthcare and has compiled an invaluable appendix listing the various herbal treatments prescribed for medical conditions. It is hoped the work conducted in this study will enhance the finding of these three theses.

Walton Brooks McDaniel conducted the most significant compilation of remedies suggested by Pliny.³² He published a journal article, which explored the many remedies prescribed by Pliny with particular emphasis on the treatments related to menstruation, pregnancy and childbirth. The value of this early work cannot be overestimated. Similarly, Jerry Stannard has reviewed Pliny's work with a focus on the folkloric medicinal treatments present in the

²⁷ Flemming (2007, 274-275).

²⁸ Flemming (2000).

²⁹ For example, one epitaph reads, 'To Hygia [goddess of health]. [The tomb] of Flavia Sabina, midwife. She lived 30 years. Marius Orthus and Apollonius [put this up] to [Apollonius'] dearest wife.' *CIL* VI.6647.

³⁰ Lefkowitz and Fant (2005).

³¹ Dowsing (1999); Bailey (2012); Dean (2015).

³² McDaniel (1948).

HN. His work is not a complete study of Pliny's encyclopedia. Nevertheless, his work has been fundamental in developing the nucleus of this present study.³³

Finally, Amy Richlin has recently conducted pivotal research on the unheard voice of women. Her work, *Arguments with Silence: Writing the History of Roman Women*, attempts to provide a voice to an otherwise stifled gender. Her work is unparalleled in providing a third wave feminist perspective on sexuality and gender within women's medicine in the Roman Empire. Richlin argues that Pliny's sources are 'all made to speak directly from their bodies, their femininity,' and 'are all there to legitimate and sell certain types of information.'³⁴ Her work will be useful when the research conducted in this thesis is placed within a conceptual post-structuralist framework.

By addressing the issue of ancient female healthcare with the specific intent to focus on 'everyday' issues of gynaecology and reproductive health, it is hoped this thesis will build upon recent scholarship in the fields of ancient medicine, pharmacology, herbalism, gender studies and social studies. It will also inform the general reader. More specifically it is hoped this research may fill any gaps which have not yet been addressed by scholars such as Riddle, Walton and Beagon, who have all focused their work to some degree on either; Pliny, ancient conceptions of female healthcare or ancient medicine/pharmacopeia. The specific focus on three categories of remedies (efficacious, non-efficacious and folkloric) for women in the *HN* will also fill a yet unexplored *lacuna* currently present in the discipline.

Methodology & Approaches

Due to the sheer number of medical remedies present in the *HN* an efficient selection process will need to be established. This is centered upon the fact that my main source material is vast

³³ Stannard (1982).

³⁴ Richlin (2014); Richlin (2008; 275-6).

and an economical selection of the source material allows more in-depth examination for each remedy. This selection process will centre upon careful consideration of what each remedy can tell us about, either; ancient female medical practises, Pliny's androcentricism, a treatments efficacy, ancient women's place in medicine or the significant nature of a cited source. Only the modern scholarship most closely related to my study of efficacious and non-efficacious medical treatments, ancient medical conditions or women as healers will be examined, however, herbal compendiums and works dedicated to specific herbs, such as birthwort, for example, will need to be included as vital works for study.

In examining medical conditions this study will encounter a number of plants and their properties. This will require an interpretative framework with which to examine the efficacy of the treatment's prescribed by Pliny.³⁵ For example, in one instance Pliny suggests the herb named *linozostis* as a remedy to aid conception.³⁶ In order to determine its efficacy, first, its common name will be identified, in this case it is known as *mercurialis*. Secondly, its location may be ascertained: is it native to Italy or has been imported? *Mercurialis* is native to Europe and Asia Minor. Finally, we can identify what type of plant it is: in this case, it is a

³⁵ A definition of the three main categories used to classify Pliny's remedies may be of benefit to the reader. Efficacious means 'producing the effect intended' (Webster (1979, 578)), non-efficacious naturally means the oppose of efficacious and folklore medicine means 'the treatment of disease as practise traditionally among the common people, involving especially the use of herbs and other natural substances'. Webster (1979, 712).

³⁶ Plin. *HN*. 25.18.38.

succulent.³⁷ Having determined this basic information, an examination of its plant properties (if they are known) should show whether or not this prescription was an effective one.³⁸

The lack of distinctively female voices in the first century has in the past hindered (and continues to place barriers in the way of) scholarly research, particularly with regard to attempts to discern women's place in society. This research will be no exception, which is why it will be essential to incorporate a minor examination of non-literary resources, such as funerary inscriptions, which will be succinctly included in the final chapter. Additionally, the plant based remedies reviewed in this study will be placed in an appendix. It should be noted, the *HN* is being read in both isolation and in association with Pliny's near contemporaries, such as Celsus and Soranus.

In terms of methods, this thesis will be undertaken from a historical perspective, concentrating on the socio-cultural context of women and their subsequent involvement in medicine. This approach is essential as this thesis' ultimate aim is to determine the social role played by women in relation to medical practices. The research will also adhere to a post-structural approach, examining power relations in the ancient world and how they interact in Pliny's work.³⁹ By adopting a post-structuralist approach the cultural concepts surrounding

³⁷ Mills-Hicks (2003, 166).

³⁸ The efficacy of herbal remedies is vital to this study as it will produce a clearer image of traditional herbal history and uncover a pattern between modern and ancient plant based medicine. This is important as many contemporary people wish to avoid harmful ingredients used in many modern medicines. This is often addressed in modern media, so a study such as this which addresses specific medical conditions and offers a herbal 'drug' free alternative may be of interest to many societies and cultures. Davies (1987) Additionally, by examining the efficacy of Pliny's remedies from a modern perspective we can garner a greater appreciation for the ancients vast knowledge of medical cures.

³⁹ Post-structuralism can be neatly summarised by Jane Flax. Its concern, she writes, is on 'how to understand and (re)constitute the self, gender, knowledge, social relations, and culture without resorting to linear, holistic, or binary ways of thinking and being.' Flax (1990, 29). This idea is relevant to a study (such as this), which will examine gender, social relations and knowledge.

ancient female healthcare can be better understood within the present. Post-structuralists ‘concentrate on a single passage and analyse it intensively’, which is what will be done to Pliny’s work in this thesis, hence the selection criteria.⁴⁰ Thus, it is a necessary approach to adopt. Finally, this study has an empirical objective which it will pursue empirically.

A strictly male-centered discourse such as the *HN* requires a conceptual post-structuralist framework with which to examine Pliny's work; both in terms of Pliny's gender and the *HN*'s encyclopedic tradition.

Conversely, the overall task of all gender movements has been to demonstrate that gender is more than anything socially constructed and a product of a particular time period.⁴¹ Pliny’s androcentric, patriarchal discourse requires careful consideration when discussing women.⁴² The lack of distinctly female voices has impeded modern scholars and gender theorists in their attempts to discern women's place in society. This voicelessness has always been an issue for students of ancient history. The traditional view has been that the oppression and lack of female voices in ancient societies can be explained by a dominantly patriarchal society

⁴⁰ Nazer (3).

⁴¹ Clark and Annandale (1996, 19).

⁴² Two terms which will be used throughout this thesis to describe Pliny is androcentric and masculinist, as such these two terms need to be defined. ‘Androcentricism’ can be defined as ‘a tendency to think and write as if men represent the normal, ideal, and central kind of human, whereas women are somehow peripheral and marginal to that norm.’ Sharma (1987, 38). Similarly, ‘masculinism’ in the *Oxford English Dictionary Online* (3rd ed.) is defined as ‘advocacy of the rights of men; adherence to or promotion of opinions, values, etc., regarded as typical of men; (more generally) anti-feminism, machismo.’ These two terms are used throughout this thesis as they re-emphasise the male-ingrained rhetoric surrounding Pliny’s writing which in turn influences our interpretation of his text, particularly when he is describing female healthcare.

with men having the social, economic and political control over women.⁴³ The part that Foucault's theory will play in this thesis will be to provide a framework with which to interpret the work and person of Pliny the Elder, an androcentric. A psychoanalysis of feminist theory will not play a central role.⁴⁴

Thus, these two methods, historical and post-structuralism, have been chosen in deference to others since the central objective of this thesis is to interpret the socio-cultural representation of women, through the gendered eyes of an elite male. However, it should also be noted that this thesis will inadvertently incorporate a minor amount of comparative and evaluation methods, due the interpretative nature of this study.

Table of Contents

The first chapter will explore remedies pertaining to the promotion and easing of menstruation. It will explore the efficacy of ancient remedies and will determine the ancient's approaches towards a nearly taboo topic. In doing so it will attempt to ascertain an image of women's experiences of menstruating in the ancient world and demonstrate nuances and idiosyncrasies surrounding the subject.

⁴³ Arac (1988, 164). This is a view propagated by supporters of the second wave feminist movement. The same movement has links with the issues of health and illness, particularly reproductive health. Ellen Annandale and Judith Clark wrote an interesting article which follows the transition of second wave feminism to poststructuralist feminism within the context of healthcare. They saw that second wave feminist writing was concentrated on the lived social experiences of women. Annandale and Clark (1996).

⁴⁴ As well as Foucault the gender theorist, Joan Wallach Scott, will be considered. She argues, 'women's history does not have a longstanding and definable historiographical tradition within which interpretations can be debated and revised. Instead, the subject of women has been either grafted on to other traditions or studied in isolation from them.' Wallach Scott (1988, 16); The work of Pliny will be interpreted with this idea in mind. Naturally, gender theory has evolved since then, and more recent scholarship would need to be examined in a lengthier study, but her work is a great starting point. Additionally, Chris Weedon has produced a work, which provides a general outline of the post-structuralist theory. He details the key aspect of the theory and provides a clear overview of the debates surrounding post-structuralism. Weedon (1987).

The second chapter will address treatments relating to conception and abortion. In turn it will also examine the nature and misconceptions surrounding miscarriages and contraception in ancient Italy. It will assess the intertwined relationship between conception and contraception, abortions and miscarriage. It is hoped it will reveal the complex and often confused approach towards these four conditions.

The third chapter will explore pregnancy and childbirth. It will follow on from the previous chapters and explore the remedies prescribed for a safe birth, a healthy pregnancy and methods to withdraw a dead foetus. As with the first two chapters, it will examine ancient herbal remedies and interpret their effectiveness from a modern standpoint. This in turn may further our knowledge on traditional herbal practises, which can then be applied in a contemporary setting.

The fourth and final chapter will be two-fold. Firstly, it will examine remedies involving childrearing, in particular, the treatments prescribed for ill babies or ailing mothers. Secondly, it will concisely examine the types of roles available to women to practise medicine as interpreted through the remedies and passages found within the *HN*.

Chapter One: Ancient Notions of Menstruation

Introduction

Pliny had a particular fascination with menstruation, as a result he wrote prolifically on the subject. Indeed, out of all the female medical conditions addressed by Pliny, menstrual disorders are the most frequently mentioned.⁴⁵ His androcentric approach saw menstruation as the cause of chaos and destruction, but interestingly he also ascribes it with curative powers.⁴⁶ Pliny's attitude towards the subject should be viewed as a product of his time.

Pliny's Scientific Observations

Pliny's access to accurate medical knowledge will now be examined. On the age that women ended menstruation Pliny writes, 'a woman does not bear children after the age of 50, and with the majority menstruation ceases at 40.'⁴⁷ This deduction is, by any account, an accurate supposition and perhaps one of the few correct statements made by Pliny, concerning menstruation. Girls married at around the age of 14, which was presumed to be the age of *menarche*. The marriage occurred even if the girl had not begun menstruating. It was thought that exercise, food and massages would help bring about menstruation.⁴⁸

⁴⁵ Jackson (1988, 94).

⁴⁶ Plin, *HN*. 28.23.77-86.

⁴⁷ Plin. *HN*. 7.14.61.

⁴⁸ Sor. *Gyn*. 1.4.20; 1.4.24 Soranus assumes that menstruation starts at around the age of 14. He believes that the most common two indicators were that there was heaviness in the lower region and breast growth. The relationship between menstruation and fertility was unknown. Soranus notes that there was also confusion surrounding *amenorrhea*, which is a reaction to poor diet and stress. Sor. *Gyn*. 1.19.61.

On the occurrence of menstruation, Pliny argues that:

‘Not only does this pernicious mischief occur in a woman every month, but it comes in larger quantity every three months; and in some cases, it comes more frequently than once a month, just as in individual women it never occurs at all. The latter, however, do not have children, since the substance in question is the material for human generation, as the semen from the males acting like rennet collects this substance within it, which thereupon immediately is inspired with life and endowed with body. Hence when this flux occurs with women heavy with child, the offspring is sickly or still-born or sanious, according to Nigidius.’⁴⁹

Why does Pliny think menstruation is worse every three months? He does not provide any reasoning behind this suggestion. However, Pliny is correct in saying that women who never menstruate don’t bear children and that for some women it appears more than once in a monthly period. These valid claims are either the result of female testimony or a physician’s account, although Pliny does not disclose his source. On the other hand, he does cite a source for the second section of this passage. Nigidius Figulus was a scholar and friend of Cicero’s who lived during the Late Roman Republic.⁵⁰ Nigidius appears to be talking about a miscarriage. That said, it is not clear to what extent Nigidius possesses the authority to be making such claims, as he was not a doctor.

Plant/Animal Based Remedies

A thorough investigation of Pliny’s pharmacological prescriptions will now be conducted. It is hoped this will reveal the efficacious and non-efficacious nature of his remedies and provide an image of Pliny’s representation of women.

⁴⁹ Plin. *HN*. 7.15.66-67.

⁵⁰ Colish (1990, 342).

Pliny writes, ‘*elaterium* promotes menstruation but causes abortion when taken by women with child.’⁵¹ *Elaterium* is commonly known as squirting cucumber. Pliny is accurate in describing it as an abortive. Recent animal testing has found that *elaterium* acted as a contraceptive. The mice which were tested experienced a decrease in fertility when given an extract of both the whole and the flower alone. Their ovulation ceased, which indicates that this was probably a highly successful form of contraceptive utilised by the ancients.⁵² Along with *elaterium*, *silphium* was used extensively in the ancient world.⁵³ It was employed in both medicine and cooking. It belonged to the parsley family, and was grown at Cyrene.⁵⁴ Due to its popularity, *silphium* has since become extinct.⁵⁵ This occurred sometime between the third or fourth centuries, and was certainly extinct by late antiquity.⁵⁶ On the juice (known as *laser*) of *silphium*, Pliny writes:

‘In wine it [*laser*] is given to women, and on soft wool is used as a pessary to promote menstruation.’⁵⁷

⁵¹ Plin. *NH*. 20.4.9.

⁵² Farnsworth (1975, 549). Soranus confirms *elaterium*’s use in medicine among the ancients, particularly in connection with promoting menstruation. Sor. *Gyn*. 3.1.12.

⁵³ Pliny notes that by the time of Emperor Nero, ‘only a single stalk had been found there [in Cyrene] within our memory.’ Plin. *HN*. 19.15.40-41. Riddle (1997, 45-46). Riddle also notes that it was an expensive commodity, meaning only the wealthy were able to attain it. Riddle and Worth Estes (1991, 230).

⁵⁴ Mills-Hicks (2003, 868).

⁵⁵ Riddle (1997, 46).

⁵⁶ Riddle (1997,46). Celsus made a similar suggestion for promoting menstruation, which involves parsley (a *genus* of *siphium*) along with pennyroyal, white violet, catmint, savory and hyssop. This demonstrates that the knowledge Pliny acquired was similar to his other near contemporaries. Celsus, *Med*. 4.27. Similarly, Celsus also recommended that 0.66grams of *elaterium* be taken to induce menstruation Celsus, *Med*. 5.21.

⁵⁷ Plin. *HN*. 22.49.101.

The principle reason women may have wished to promote menstruation was to void an unwanted pregnancy. Pessaries were highly recommended by the ancient sources, although their effectiveness is questionable.⁵⁸

Another example of pessaries being employed in medicine is detailed below. In this case, Pliny recommends them for uterine problems. The use of pessaries is a recurrent theme in the *HN*, as we shall see as this study progresses. Pliny writes:

‘They recommend the decoction [*Linozostis*] to be given to women in food, with the plant itself, on the second day of menstruation for three successive days; on the fourth day after a bath intercourse is to take place. Hippocrates has bestowed very high praise on these plants for the diseases of women; no medical man recognises its virtues after this fashion. He used them as pessaries for uterine troubles, adding thereto honey, or oil of roses or of iris or of lilies, also as an *emmenagogue* and to bring away the after-birth.’⁵⁹

Once again we have the recurrent problem of Pliny’s unnamed authorities implicit in the first part of this passage. This problem will also become a pattern throughout this study. However, in this instance Pliny has also cited Hippocrates, which does add some integrity to the second part of Pliny’s prescription. It is clear that the first part of this passage is a remedy to promote conception. *Linozostis*, otherwise known as *mercurialis*, is native to Europe and Asia Minor. It is a succulent.⁶⁰ The addition of honey was probably to make the recipe more palatable. The same may be true for the presence of the oil of roses, iris and lilies. Of course, the taste of

⁵⁸ Celsus describes pessaries, he writes, ‘the Greeks call them *pessoi*. Their characterisation is that the component medicaments are taken up in soft wool, and this wool is inserted into the genitals.’ Celsus, *Med.* 5.21.

⁵⁹ Plin. *HN.* 25.18.40.

⁶⁰ Mills-Hicks (2003, 166).

these may not have been as pleasant as honey. If this remedy was effective, it should have induced conception. However, its efficacy is questionable and untested.

Pliny recommends wine and bay as beneficial to treat the effects and manage the onslaught of menstruation. The efficacy of such treatments is subjective. Certainly, wine may have eased the pain of menstrual cramps, merely as a result of its sedative properties, but it is entirely impossible for it to be considered an effective cure for the pain of menstrual cramps. Bay originates from the Mediterranean.⁶¹ While its leaves are predominately used in cooking, Pliny suggests that they can also be used to relieve cramps.⁶² If taken in tea, it may have been effective.

The following references from the *HN* may be identified as characteristic of ‘folk medicine’, which has been defined previously.⁶³ Pliny writes:

‘If door-posts are merely touched by the menstrual discharge, the tricks are rendered vain of the Magi, a lying crowd, as is easily ascertained.’

‘Ass’s dung applied fresh is said to be a wonderful reliever of fluxes of blood, as is also the ash of the same dung, an application which is also beneficial to the uterus.’⁶⁴

In regard to the final excerpt, there is (as we have already observed) no mention of the actual writer’s name – and this approach is readily inferred from the first two items, respectively of

⁶¹ Mills-Hicks (2003, 862).

⁶² Plin. *HN*. 23.24.46; 23.80.152.

⁶³ See *footnote 6*.

⁶⁴ Plin. *HN*. 28.23.84; 28.77.251-252. Dried dung may have had a reduced bacterial content but this bacterium could not have been eliminated completely, as such this is a dangerous recommendation. See French (1987, 81).

information and advice. These two quotes are the epitome of folk medicine and reinforce the encyclopaedic nature of the *HN*: namely, despite Pliny's dislike of the Magi and their remedies, he nonetheless includes them in his work as items of knowledge and information. Although, he does pointedly call them liars in the process. Finally, door-posts touched by menstrual blood is indicative of *superstitio*, additionally ass' dung would have done very little to relieve menstrual cramps and likely resulted in a bacterial infection instead.

To limit the flow of menstrual fluid, Pliny writes:

‘Excessive menstruation is checked by an application of *achillia* or a *sitz* bath in a decoction of it. To the breasts is applied henbane seed in wine—but to the uterus henbane root in a plaster—and also *chelidonia*.... Hysterical suffocations and delayed menstruation are relieved by *agaric* taken in doses of three oboli to a cyathus of old wine, by a pessary of *peristereos* in fresh lard, and by *antirrhinon* with rose oil and honey. The root also of Thessalian *nymphaea* cures uterine pain when used as a pessary; taken in dark-red wine it checks excessive menstruation; on the contrary, root of *cyclamen* is an *emmenagogue* if taken in drink or used as a pessary... Excessive menstruation again is checked by mandrake seed with live sulphur; on the contrary, menstruation is promoted by *batrachium*, taken in drink or food, a plant which, though when raw it has, as I have said, a burning taste, is made agreeable, when cooked, by salt, oil and cummin.’⁶⁵

This is a lengthy and detailed passage which needs to be deconstructed accordingly. Firstly, *Achillia*, commonly called yarrow or sneezewort, was reportedly named for Achilles. It is a

⁶⁵ Plin. *HN*. 26.90.153-179.

perennial native to Europe.⁶⁶ According to a recent study by Hoerhammer, yarrow improves the uterine tone which may correct excess menstruation which is due to uterine atony. Yarrow may also promote bleeding that is profuse due to spasm of the uterus.⁶⁷ Thus it is efficacious for the use Pliny describes.

Secondly, henbane seed is poisonous.⁶⁸ To be clear, henbane would indeed cause an abortion if ingested, but its effects when applied topically are less virulent. It cannot be deduced with any certainty that this would have hindered menstruation. *Chelidonia* is a perennial, originating from West Asia and Europe. It is a genus of poppy and is commonly called swallowwort. Swallowwort, like henbane, is poisonous, and its broken leaves can be extremely irritating to the skin, particularly in pessary form as it is recommended here.⁶⁹ *Peristereos* is a genus of vervain. It is commonly found in Europe, South America and North America.⁷⁰ Vervain mixed with lard as a pessary would likely not have been effective in bringing on menstruation or aid in hysterical suffocations. However, it may have been effective if taken orally. *Hysterike pnix*, or suffocation of the womb is described by both Pliny and later, Galen.⁷¹ Vervain can be poisonous in excessive dosages.⁷² As such, it is difficult to judge the efficacy of such a treatment. *Antirrhinum* is commonly called snapdragon. It is a perennial native to the western Mediterranean. Snapdragon is considered an anti-inflammatory.⁷³ *Agaric* – or as they are more commonly named, mushrooms – may have aided the promotion of menstruation to a minor degree, since mushrooms contain vitamin D,

⁶⁶ Mills-Hicks (2003, 99).

⁶⁷ Hoerhammer (2013, 578-588).

⁶⁸ A letter between two physicians during the 18th century tells us that the doctors recommended it be avoided by pregnant women due to its poisonous quality. Sloane (1737 – 1738, 446-448).

⁶⁹ Mills-Hicks (2003, 141).

⁷⁰ Mills-Hicks (2003, 283).

⁷¹ Plin. *HN*. 20.87.238; Gal. *De. Loc. Aff.* 17b.842-5.

⁷² Yaniv (2005, 25).

⁷³ Mills-Hicks (2003, 114).

which boosts the absorption of minerals, and improves the immunity.⁷⁴ However, this does not necessarily mean that menstrual cramps are less severe simply because a person is in good health with a strong immunity. It is also interesting to note that Pliny has included a dosage for this remedy which is uncommon in the *HN*.

Thirdly, Thessalian *nymphaea* is a water lily. It was named after the Greek goddess Nymphē.⁷⁵ Water lily petals are edible, but their medicinal properties are not overtly apparent. On the other hand, the seeds are high in protein and the oil may be beneficial.⁷⁶ Taken with red wine it could have been advantageous on menstrual pain or even to check excessive menstruation, again due to wine's sedative properties. *Cyclamen* is a perennial from the Mediterranean and South Asia. *Cyclamen* acts as an abortifacient and will cause purging if ingested due to its toxicity.⁷⁷ Thus this treatment is efficacious but only in oral form.

Finally, mandrake is a poison, rooted in folklore.⁷⁸ Pliny does not indicate the dosage required for this remedy so it is difficult to judge the extent to which it would have been dangerous or beneficial. Pliny mentions live sulphur. Sulphur's chemical properties have detrimental effects on the entire body.⁷⁹ It is no surprise that a combination of mandrake and sulphur would not only check excessive menstruation, but it may well have stopped it all together. *Batrachium* is a genus of *ranunculus*; it is more commonly known as buttercup. It grows worldwide and was

⁷⁴ Top 10 Foods Highest in Vitamin D, <https://www.healthaliciousness.com/articles/high-vitamin-D-foods.php>; accessed 21/6/16.

⁷⁵ Mills-Hicks (2003, 222-223).

⁷⁶ Peterson (1977, 22).

⁷⁷ Mills-Hicks (2003, 737).

⁷⁸ Lewis (1977, 423). One such example of mandrake's folkloric tradition can be found in Josephus. He writes, 'they dig a trench round about it, till the concealed part of the root is practically exposed, then a dog is tied to it, after which he who ties the dog must go away. When the dog tries hard to follow him, this root is easily plucked up, but the dog dies immediately instead of the man that would remove the plant.' Joseph. *BJ*. 7.6.3.

⁷⁹ Plin. *HN*. 27.67.110.

used in traditional folklore treatments for a variety of skin conditions.⁸⁰ Riddle argues that buttercup may have been an effective abortifacient. Interestingly, it is also mentioned as an antifertility agent in Indian folklore.⁸¹

The efficacy of the treatments mentioned above are questionable. The presence of so many poisonous plants immediately casts these treatments for menstruation in a negative light. Although they may have been effective in inducing and ceasing menstruation, the fact remains that many of these ingredients have some toxic properties and perhaps should not have been recommended in a text so widely circulated and whose claims were susceptible to indiscriminate acceptance and misinterpretation.

Pliny does not only prescribe plant-based remedies, but he also suggests some merits can be gained from marine animals. He writes:

‘The *pulmo marinus*, tied on, is an excellent promoter of menstruation, which is checked by living sea urchins pounded up and taken in a sweet wine or by river crabs beaten up and so taken. *Siluri* also, especially the African, are said to make easier the birth of children, crabs taken in water to arrest menstruation, taken in hyssop to promote it. If birth causes choking, the same medicament taken in drink is a help. Crabs, fresh or dried, are taken in drink to prevent miscarriage. Hippocrates uses them to promote menstruation and to withdraw a dead foetus; five crabs, root of *lapathum* and of rue, with some soot, are beaten up, and given to drink in honey wine.’⁸²

⁸⁰ Mills-Hicks (2003, 255).

⁸¹ Riddle (1992, 78).

⁸² Plin. *HN*. 32.46.130-132.

The *pulmo marinus* is otherwise known as a mollusc. There is a huge variety of this species, ranging from jellyfish to snails. In this case, Pliny is likely referring to some sort of sea creature since it is mentioned in conjunction with crabs and sea urchins. Pliny does not discuss how crabs or sea urchins should be consumed in liquid form, or how they will help to prevent miscarriage. Pliny mentions the catfish, called *siluri*, and primarily argues that African catfish are the best to arrest menstruation but does not elaborate or tell his audience how he knew that this type of marine creature was the best. The efficacy of this treatment is dubious. Next, Pliny draws on the knowledge of Hippocrates to argue that a drink made up of five crabs, *lapathum* and rue would expel a dead foetus. Tests on mice were conducted in 1961 to determine if rue was, in fact, an abortifacient.⁸³ Riddle argues that with the findings of these tests and in conjunction with another experiment conducted by the Chinese, he could conclude that this plant would have acted as an abortive.⁸⁴ The citation of Hippocrates may have alleviated certain readers' apprehension of testing this remedy due to his standing as a respected founding father of medical rhetoric. Seafood in recent times has been one of the many foods which pregnant women are advised against consuming. Illness usually occurs when it is eaten raw. However, Tam suggests that crab, being a low mercury fish, would have been safe for a pregnant woman to consume.⁸⁵ Ultimately, this remedy's efficacy is too ambivalent to judge.

The Female Perspective

In book twenty-eight Pliny recommends some remedies which are supposedly articulated by women:

⁸³ Saha (1961, 149-150).

⁸⁴ Riddle (1997, 49).

⁸⁵ Tam (2010, 342).

‘Lais and Salpe hold that the bite of a mad dog, tertians, and quartans are cured by the flux on wool from a black ram enclosed in a silver bracelet; Diotimus of Thebes says that even a bit, nay a mere thread, of a garment contaminated in this way and enclosed in the bracelet, is sufficient. The midwife Sotira has said that it is a very efficacious remedy for tertians and quartans to smear with the flux the soles of the patient’s feet, much more so if the operation is performed by the woman herself without the patient’s knowledge, adding that this remedy also revives an epileptic who has fainted. Icatidas the physician assures us that quartans are ended by sexual intercourse, provided that the woman is beginning to menstruate. All are agreed, that if water or drink is dreaded after a dog bite, if only a contaminated cloth be placed beneath the cup, that fear disappears at once, since of course that sympathy, as Greeks call it, has an all-powerful effect, for I have said that dogs begin to go mad on tasting blood.’⁸⁶

We shall begin by assessing the sources Pliny cites in this passage. Lais and Salpe are mentioned as two female authorities on menstruation. They argue flux on wool from a black ram enclosed in an amulet is a suitable cure for malaria. This is implausible. Lais will be examined in further detail in the next chapter. Salpe was an *obstetrix*. She may have been Greek, although we cannot be certain. She wrote on a variety of topics, some outside of midwifery.⁸⁷ However, her work does not remain, and her remedies only appear in the *HN* in paraphrased form. Likewise, Sotira was an *obstetrix*.⁸⁸ The only surviving mention of her is found in the *HN*. Sotira also recommends putting menstrual fluid on the feet of a person suffering from malaria to cure the affliction. The unknown source, Diotimus of Thebes, agrees with both Lais and Salpe. There is very little information on the life of Diotimus. He is

⁸⁶ Plin. *HN*. 28.23.83-86.

⁸⁷ Plant (2004, 115-116). See Bain (1997); Davidson (1995).

⁸⁸ Plin, *HN*. 28.23.83.

yet another source whose writings have otherwise been lost. Icatidas was an unknown doctor. Pliny associates him with a remedy, which insinuates that a quartan fever will vanish if men have sexual intercourse with a woman who has just begun menstruating. Instances of menstrual fluid in curing malaria also appear in Sicilian folklore and are likely derived from the ancient tradition.⁸⁹ Menstrual fluid is thus viewed as a cure-all by these five sources, both genders associate menstruation with curing malaria. Pliny suggests that dogs go mad when they smell menstrual blood. This is a recurrent theme throughout his work and will be discussed in more detail in this chapter. The efficacy of these treatments is non-existent, particularly when viewed from a modern perspective. The remedies almost seem desperate, as though all else has failed in their attempts to relieve or negate the effects of malaria.

As was mentioned in the *Introduction*, Pliny associates *meretrices* with *obstetrices*.⁹⁰ He writes:

‘The undoing of spells by the menstrual fluid, and the other accounts given not only by midwives but actually by harlots.’⁹¹

It is not made clear what sort of spells are undone by menstrual fluid. Harlot in Latin can be translated *meretrix*.⁹² In this passage, Pliny suggests that *obstetrices* are similar to *meretrices*. Pliny is not trying to offend when making this comparison as it is likely that midwives and prostitutes would have both been close occupations, at least in terms of medical experiences. Pliny is demonstrating how equally meritorious his sources are, regardless of their sex or occupation. This is an example of ‘incidental’ or normative androcentric representation. The

⁸⁹ Sallares (2002, 134).

⁹⁰ See *Introduction*, p. 7.

⁹¹ Plin. *HN*. 28.30.70.

⁹² Simpson (1968, 724).

meretrix is a highly charged term, and Pliny's readership would respond in particular ways to this inference. The *meretrix* in the ancient world was a morally repugnant occupation.⁹³ Being applied the label *meretrix* was an insult and this should also be taken into account despite the incidental nature of this reference.

Pliny relays another a remedy suggested by midwives, he writes:

‘Midwives assure us that a flux, however copious, is stayed by drinking the urine of a she-goat, or if an application is made of her dung.’⁹⁴

Urine is used extensively in ancient remedies. Similarly, dung or faeces were used considerably in antiquity.⁹⁵ At the very least, this ingredient may have had a placebo effect; at the worst, it could have caused infection and death. This is a remedy that may have been used regularly among most midwives, due to Pliny's use of the plural form when citing his source.

Another female authority cited by Pliny is Olympias of Thebes, Pliny writes:

‘The purgings of women are aided by bull's gall applied as a pessary in unwashed wool—Olympias, a woman of Thebes added suint and soda—by ash of deer's horn taken in drink, and uterine troubles by an application also of this, and by two-oboli pessaries of bull's gall and poppy juice.’⁹⁶

⁹³ Strong (2016, 7).

⁹⁴ Plin. *HN*. 28.77.255.

⁹⁵ Arthur Shapiro and Elaine Shapiro have dedicated an entire book to the placebo affects present in ancient medicinal practises, they too describe dung being used extensively. They describe its use in treating fever, malaria, colic, cholera, diabetes, meningitis and nymphomania to name a few. Shapiro (1997). See also, French (1987, 78).

⁹⁶ Plin. *HN*. 28.77.246.

The poppy, known by its scientific name *papaver*, is an annual, biennial or perennial species.⁹⁷ In ancient times the poppy was used as a dietetic, a soporific and a general analgesic. The Roman, or indeed ancient, use of the opiate may have caused addiction.⁹⁸ However, the dosage in this instance is very low, only two oboli which is equivalent to 0.2g. It would have been efficient in relieving abdominal and uterine pain, in the manner that Olympias of Thebes has prescribed.⁹⁹ Suint is the natural grease of sheep wool. It is sometimes called *oesypum* and it would have contained lanolin, as such it may have been effective in contraception due to its texture.¹⁰⁰ This prescription recommends an amulet be worn, this, of course, classifies it as a folk remedy. Amulets were worn as protection against spirits and were used frequently by ancient people across many cultures. They were made from a variety of different metals and clothes materials.¹⁰¹ Pliny mentions amulets prolifically, which is a pattern that will emerge as this study progresses.

The Destructive Nature of Menstruation

Pliny is vivacious in his criticism of the calamitous powers ascribed to menstruating women and dedicates a significant portion of the *HN* to relating this. These passages will now be examined. Firstly, Bithus of Dyrrhachium is cited as saying:

‘Bithus of Dyrrhachium says that a mirror which has been tarnished by the glance of a menstruous woman recovers its brightness if it is turned round for her to look at the back, and that all this sinister power is counteracted if she carries on her

⁹⁷ Mills-Hicks (2003, 229).

⁹⁸ Scarborough (1995, 4).

⁹⁹ Olympias of Thebes is mentioned on three occasion by Pliny. Plin. *HN*. 28.77.246; 28.77.253; 20.84.226. Her citation by name would indicate she was well-known in her field as a healer.

¹⁰⁰ Plant (2004, 121).

¹⁰¹ Rodkinson (1893, 3).

person the fish called red mullet. Many however say that even this great plague is remedial; that it makes a liniment for gout, and that by her touch a woman in this state relieves scrofula, parotid tumours, superficial abscesses, *erysipelas*, boils and eye-fluxes.’¹⁰²

Bithus of Dyrrhachium is an unknown source, although the name suggests a male. It is not clear how carrying around a specific type of fish will counteract the effects of a mirror being tarnished by a menstruating woman.¹⁰³ Here, the touch of a menstruating woman is taken to have curative powers, along with damaging ones. Indeed, it would appear that a menstruating woman can heal tumours, abscesses, boils and similar conditions. This is clearly a suggestion grounded in anecdote, custom or tradition, and probably based in folklore. It is symbolic of the encyclopedic tradition embedded in Pliny’s work.

Next, Pliny mentions a mysterious thing called a ‘mole’ found in the womb and he lists the ‘deleterious’ effects of a menstruating woman.¹⁰⁴ He writes:

‘Woman is, however, the only animal that has monthly periods; consequently, she alone has what are called moles in her womb. This mole is a shapeless and inanimate mass of flesh that resists the point and the edge of a knife; it moves about, and it checks menstruation, as it also checks births: in some cases, causing death... But nothing could easily be found that is more remarkable than the

¹⁰² Plin. *HN*. 28.23.82.

¹⁰³ Mary Beagon tells us that it would not be uncommon for a mirror to become tarnished in this period. The materials out of which mirrors were made (i.e., silver or bronze), are principally vulnerable to the effects of the elements. So, Pliny is suggesting that menstruating women would tarnish mirrors when in fact it is the influence of moisture and humidity which is damaging to these metals. See Beagon (2005, 232-3).

¹⁰⁴ Soranus also mentions this medical condition, he writes: ‘The so called – *mylē* – or *mylos* as others say – is a hardening of the uterus which arises because of a preceding inflammation, sometimes also because of a localised ulcer that has developed an excess of flesh.’ Sor. *Gyn*. 3.9.36.

monthly flux of women. Contact with it turns new wine sour, crops touched by it become barren, grafts die, seeds in gardens are dried up, the fruit of trees falls off, the bright surface of mirrors in which it is merely reflected is dimmed, the edge of steel and the gleam of ivory are dulled, hives of bees die, even bronze and iron are at once seized by rust, and a horrible smell fills the air; to taste it drives dogs mad and infects their bites with an incurable poison.’¹⁰⁵

Firstly, Pliny attempts to clarify what he thought moles were but seemingly fails. Moles form inside the uterus at the beginning of a pregnancy and render the pregnancy high risk.¹⁰⁶ Pliny’s identification of this condition must have come from a reputable doctor, despite the lack of a cited source. The question is, why would menstruating women make dogs go mad? Why would bees die? This quote reveals the breadth of Pliny’s personal belief system – or, at the very least, his predisposition to accepting such unnatural relationships at first glance – as well as the broader socio-cultural susceptibility to what may be described as the product of anecdotal tradition or local knowledge. This truly demonstrates the mind of an archetypal ancient Roman male. The encyclopaedic nature of the *HN* should be recalled.

In a similar passage we again encounter the ‘ruinous’ nature of menstruation, Pliny writes:

‘Wild indeed are the stories told of the mysterious and awful power of the menstuous discharge itself, the manifold magic of which I have spoken of in the

¹⁰⁵ Plin. *HN*. 7.15.63-65. A similar description of the malevolent effects of menstruation are recorded centuries later in the *Etymologies* of Isidore of Seville. 1.141. He basically quotes Pliny verbatim, he writes, ‘on contact with this gore, crops do not germinate, wine goes sour, grasses die, trees lose their fruit, iron is corrupted by dust, copper is blackened. Should dogs eat any of it, they go mad.’ Clearly Pliny’s work had a lasting legacy to be paraphrased in a text approximately half a millennium after his death. It is also clear that this passage had an oral tradition which was embedded in history as Pliny must have obtained this information from one of his sources or it was passed down through various cultures orally. See Prioreshi (2003, 152).

¹⁰⁶Hydatidiform mole, <https://medlineplus.gov/ency/article/000909.htm>; accessed 7/8/16.

proper place. Of these tales I may without shame mention the following: if this female power should issue when the moon or sun is in eclipse, it will cause irremediable harm; no less harm if there is no moon; at such seasons sexual intercourse brings disease and death upon the man; purple too is tarnished then by the woman's touch. So much greater then is the power of a menstruous woman. But at any other time of menstruation, if women go round the cornfield naked, caterpillars, worms, beetles and other vermin fall to the ground. Metrodorus of Scepsos states that the discovery was made in Cappadocia owing to the plague there of Spanish fly... Care must be taken that they do not do so at sunrise, for the crop dries up, they say, the young vines are irremediably harmed by the touch, and rue and ivy, plants of the highest medicinal power, die at once. I have said much about this virulent discharge, but besides it is certain that when their hives are touched by women in this state bees fly away, at their touch linen they are boiling turns black, the edge of razors is blunted, brass contracts copper rust and a foul smell, especially if the moon is waning at the time, mares in foal if touched miscarry, nay the mere sight at however great a distance is enough, if the menstruation is the first after maidenhood, or that of a virgin who on account of age is menstruating naturally for the first time.¹⁰⁷

This lengthy list on the nefarious impacts of menstruation on nature and men will now be analysed. In this passage Pliny attributes to menstruation a good deal which is negative. Many of these negative associations relate to meteorological occurrences. McDaniel notes that to the ancients menstruation was a 'mystifying phenomenon.'¹⁰⁸ This account of the 'power of menstrual fluid' reveals much about the character and thought of Pliny. Firstly, according to Pliny, eclipses – normal cosmological events – cause harm. In this context, he observes that,

¹⁰⁷ Plin. *HN*. 28.23.77-80.

¹⁰⁸ McDaniel (1948, 531).

if the act of intercourse occurs when there is no moon, this would cause death to the woman's partner. This is problematic for the modern reader for two reasons: (1) there is no logical relationship between a cosmological event and a fatal physiological response; (2) Pliny omits any reference to sources for this observation.

Secondly, Pliny states that menstruating women who walk naked through cornfields will cause crops to die. Even if we discount the fact that this large-scale impact on crops to be harvested must surely be coincidental, it seems far more likely that such crop failure would occur as a result of the season in which this event has been observed. Additionally, though not confirmed in the passage, if such an event occurred in summer then it may have coincided with a drought. Pliny would surely have been cognizant of these alternative explanations – and so we must understand this representation of the impact of menstrual blood on the cultivated landscape as serving a purpose additional to the simple communication of information. Pliny establishes a relationship between what these women choose to do – what can only be regarded as a socially unsanctioned act – and the disturbance of the natural order. The implication is clear: bringing menstrual blood in direct contact with the productive environment of the *villa rustica* or agricultural estate results in a comprehensively harmful consequence. So too, the image of naked, menstruating women dancing around cornfields challenges established socio-cultural norms relating to acceptable female behaviour. The overarching representation – unbridled female action is destructive and engenders chaos; unmanaged menstruation embodies (literally and conceptually) this relationship – is clearly articulated. Interestingly, Pliny authenticates his account by citing a specific, named source, Metrodorus of Scepsos. While, we know very little about this individual and what authority his name may have held, if Pliny is referring to the Metrodorus who belongs to the very late period in the history of Greek rhetoric, and one of the Greek men of letters whom Mithridates of Pontus drew to his court, then Pliny has ensured that his account of the effects incurred as a

result of menstruation would be received favorably by a readership familiar with the man well regarded by the likes of Strabo.¹⁰⁹ Finally, we encounter a lengthy list of the negative impacts of menstruation on nature. Bees leaving their hives can be rationalised as animal instinct. Blunt razor edges can occur with use over time. Brass will rust overtime when it incurs humidity or interaction with water and a foal miscarrying is circumstantial.

So, Pliny has – inadvertently or complicit with the prevailing discourse relating to the representation of women and female bodily functions – portrayed menstruating women in a negative light despite much of what he details above being circumstantial and associated with natural meteorological and cosmological occurrences. That said, to be fair to Pliny, ivy and rue are indeed potent medical herbs. Ivy (*Hedera helix*) is used to treat chronic bronchial conditions and rue along with ivy in large dosages are known to be poisonous (especially for children) but are used, nevertheless in antiquity for a variety of ailments and they act as abortives.¹¹⁰

Conclusions

Much of the information concerning menstruation in the *HN* is grounded in folklore and myth. There appears to have been much confusion and suspicion surrounding it. Even Pliny's female sources do not appear to know the full extent of the causes and effects of menstruation, particularly in regards to how it interacts with fertility.

The female sources he cites as authorities on menstruation suggest remedies which from a modern perspective appear folkloric and ineffective but a female source would not recommend them if she did not trust their efficacy. Thus what arises is a question of

¹⁰⁹ Strabo, *Geo.* 13.55

¹¹⁰ Lewis (1977, 49; 325).

pseudonymity. As a transmitter of information and knowledge it is unlikely that Pliny would have altered the accounts of these female sources but we can never know for sure.

Many of Pliny's references to the negative connotations of menstruation are intertwined with natural phenomena; both meteorological and cosmological, such as the sudden appearance of an eclipse or cause of crops dying. However, menstruation has also been associated with healing and was believed to have a variety of curative powers. Hence Pliny's representation of menstruation is disturbing. Whether intentional or not, Pliny, suggests that menstruation and in turn women represent destruction. While at times Pliny is surprisingly accurate with his description of menstruation, at other times his embellishment of menstruation in connection with its so called 'destructive' powers colours his otherwise surprisingly non-androcentric representation of this medical condition.

Pliny should be both rewarded and chastised for his representation of woman as patients. He is both positively unbiased in the face of such a taboo subject and also unfortunately critically biased at other times. The only comfort and rationale we can apply to this behavior is that Pliny was collating his work in a time period when female medical conditions were little understood (compared to contemporary society) and when women's voices and opinions were virtually unheard and certainly undocumented.

Chapter Two: Methods of Birth Control and Fertility Management

Introduction

Contraception, birth control and family limitations, according to our ancient evidence, were all linked, and indeed often amounted to the same thing.¹¹¹ Scholarship abounds on the subject of contraception and is often intertwined with discussions on ancient abortions.¹¹² There was no word for contraception in the Roman world: *non concipiat* or *ut non concipiat* were instead the verbal clauses used.¹¹³ This entanglement between the two terms may cloud our evidence. It should be noted that Pliny, at times, likens abortion to miscarriage, and this too will need to be considered when analysing his work. Moreover, he also confuses conception with contraception.

Contraceptives varied between pessaries, spermicides, magic, douches, abstinence and coitus interruptus.¹¹⁴ Our two ancient authorities on contraceptives are Soranus and Pliny, although not contemporaneous, they did live in at least the same century. Soranus was of Greek descent and his heritage ensured that he was able to receive proper Greek medical training.¹¹⁵ There is a clear distinction to be made between Soranus and Pliny. Pliny was not medically trained so

¹¹¹ Frier (1994, 318).

¹¹² It is not the intention of this thesis to compare ancient contraceptives and abortives with modern ones, but it is inevitable that these conclusions will be implicit or will arise as a result of my findings. It is necessary to consider the historical record and take it at its face value and accept that science will continue to deliver new information on the efficacy of abortifacients and contraception, and this will inevitably influence the results of future studies.

¹¹³ Caelius Aurelianus, *Gynaecia*, 1.83.

¹¹⁴ Clark (1981, 196).

¹¹⁵ Soranus is one of the few ancient sources who accurately established a clear distinction between abortion and contraception. He writes, 'a contraceptive differs from an abortive, for the first does not let the conception take place, while the latter destroys what has been conceived. Let us, therefore, call the one "abortive" (*phthorion*) and the other "contraceptive" (*atokion*). And an "expulsive" (*ekbolion*) some people say is synonymous with an abortive; others, however, say that there is a difference because and expulsive does not mean drugs but shaking and leaping.' Sor. *Gyn.* 1.19.60.

the dichotomy he displays between fertility and birth control practises is marked and reinforces that Pliny's occupation was with plants and their properties rather than medical cures. Pliny was drawing on all the material he had available to him at the time. It should be re-emphasised he was not concerned with the efficacy of the remedies he detailed but believed they were noteworthy, as informative data, to be recorded.

Coitus interruptus and child exposure were two practices thought to have been employed to control population growth in the Roman Empire. Hopkins and Harris have both written extensively on the subject.¹¹⁶ Harris tells us that child exposure was practised differently in Italy than it was in other cultures. He postulates that children were abandoned in an environment where they would be seen, such as a market. In Rome, children were often left under a particular column in the Velabrum.¹¹⁷ In that case, rather than dying they would often be raised as slaves. Boys, quite unsurprisingly, were more likely to be rescued than girls.¹¹⁸

When birth control failed, a woman who wished to limit her family's size or terminate an unwanted pregnancy would attempt to obtain an abortion.¹¹⁹ Abortion remained legal until the time of the Severi despite its moral ambiguity. The establishment of the *Lex Cornelia de sicariis et veneficis* made abortion a crime against the deceived husband, rather than an atrocity against the foetus.¹²⁰ The sale of abortifacients was, however, illegal.¹²¹ Watts tells us that abortion was indeed practised and likely contributed to the low birth rate in the empire, further it may have hastened the decline of some elite families.¹²² Pliny's view on abortion

¹¹⁶ Hopkins (1965); Harris (1994).

¹¹⁷ Wilkinson (1978, 450).

¹¹⁸ Harris (1994, 11).

¹¹⁹ On the subject of abortion, Soranus notes, 'it is much more advantageous not to conceive than to destroy the embryo.' Sor. *Gyn.* 1.19.61. His opinion on the practise is clear.

¹²⁰ *Digest*, 48.19.38.5; See Watts (1973, 92).

¹²¹ Wilkinson (1978, 452).

¹²² Watts (1973, 96).

was that it provided women with ‘unnecessary’ control over the life of an unborn child.¹²³ Pliny believed that women invented abortion.¹²⁴ His disfavour for the practice is made explicit, but he still mentions a few methods of attempting the process.

Remedies Related to Contraception and Conception: Plant and Animal Based

We will now examine the herbal prescriptions dealing with contraception detailed in the *HN*. Pliny writes:

‘Shameless beyond belief is the treatment prescribed by very famous authorities, who proclaim that male semen is an excellent antidote to scorpion stings, holding on the other hand that a pessary for women made from the faeces of babies voided in the uterus itself is a cure for barrenness; they call it meconium.’¹²⁵

Firstly, we do not know who these ‘famous authorities’ are. Perhaps there were none and Pliny was hoping to instil a sense of trust among his readers in his scientific knowledge. That said, the *HN* is an encyclopaedic work, and so the implicit authority of its author (as a compiler of knowledge and information provided by well-regarded practitioners of folk medicine, professionals in the treatment of female medical conditions, and ‘scholarly’ experts in the field of ancient medicine) should be borne in mind when making a statement such as this. The inclusion of the term ‘shameless’ when describing his source indicates even Pliny was aware of the absurd nature of these two remedies.

¹²³ Plin. *HN*. 7.7.43-44.

¹²⁴ Plin. *HN*. 10.83.172.

¹²⁵ Plin. *HN*. 28.13.52. The ancients also believed in the power of water for holding healing powers, in particular, for curing barrenness. Pliny writes that ‘in Campania too are the waters of Sinuessa, which are said to cure barrenness in women and insanity in men.’ Plin. *HN*. 31.4.8-9. Sinuessa was a town located in Campania, renowned for its hot baths and mineral waters. Campbell (2012, 340). Curative waters are recommended for healing throughout the world and across many cultures. Bramshaw (2009).

In order to conceive or prevent a miscarriage, Pliny writes:

‘They say that rubbing with ibis ash, goose grease and iris oil prevent miscarriage when there has been conception; that desire on the contrary is inhibited if a fighting cock’s testicles are rubbed with goose grease and worn as an amulet in a ram’s skin, as it also is if with a cock’s blood any cock’s testicles are placed under the bed. Women unwilling to conceive are forced to do so by hairs from the tail of a she-mule, pulled out during the animal copulation and entwined during the human.’¹²⁶

Pliny has classified this prescription as a method to avoid miscarriage, a method of conception and interestingly, an aphrodisiac. The phallic nature of a cock's testicle was probably thought to contain powers of fertility by practitioners of folk medicine. Animals and humans (depending on the type of animal) do have similar physiologies. However, the efficacy of the abovementioned remedy is implausible. The presence of an amulet suggests this may have been a psychological treatment, with the amulet acting as a placebo. Pliny’s phrasing in this passage is problematic, ‘women unwilling to conceive are forced to do so’, implies rape. This is a disturbing supposition and we cannot know for sure if this is a case of accidental or purposeful phrasing on behalf of Pliny. This casts a shadow on Pliny’s reputation as an impartial source of information.

To promote and avoid conception, Pliny writes:

¹²⁶ Plin. *HN*. 30.49.142-143.

‘...That barrenness in women is cured by an eye [hyaena] taken in food with liquorice and dill, conception being guaranteed within three days.... ; that the kidney sinews taken with frankincense in wine restore fertility lost through sorcery; that the uterus with the rind of a sweet pomegranate given in drink is good for the uterus of women; that the fat from the loins, used in fumigation, gives even immediate delivery to women in difficult labour... that the left foot, drawn across a woman in labour, causes death, but the right foot laid on her easy delivery.’¹²⁷

This lengthy section of the *HN* draws on a variety of prescriptions. Firstly, Pliny asserts that barrenness will be cured with a hyaena’s eye, liquorice and dill. Liquorice has properties which can act as an anti-inflammatory or an antiviral agent, and may aid in blood-pressure control.¹²⁸ Additionally, liquorice is beneficial for women suffering from polycystic ovarian syndrome and is useful in increasing fertility.¹²⁹ Interestingly, dill, native to Russia, West Africa and the Mediterranean, has a plethora of health benefits: it may boost digestive health, help with insomnia, act as an anti-inflammatory and may help regulate menstrual cycles.¹³⁰ Why is it mentioned here as a contraceptive and not in connection with menstruation? The answer is Pliny does not seem to have knowledge of its usefulness to regulate menstrual irregularities. Thus, reinforcing the ancients aforementioned confusion surrounding fertility practices.

Secondly, hyaena kidney sinews, in combination with frankincense and wine, will, according to Pliny, aid fertility. The medicinal properties of a hyaena are equivocal. However, the

¹²⁷ Plin. *HN*. 28.27.98-103.

¹²⁸ Farnsworth (1975, 718).

¹²⁹ Tadayyon (2014, 46).

¹³⁰ Mills-Hicks (2003, 854); Khan (2010, 246).

ancients accredited a variety of medicinal uses to it, although they ‘ascribed a bad nature’ to them.¹³¹ Wine is not known to increase fertility. Frankincense is unlikely to do so either. Romans believed resins such as frankincense had medicinal properties. They were derived from the Near East and used for a variety of ailments including, inflammation, fissures, piles, infections of the ear, nose and throat and again to induce menstruation.¹³² There is no scientific evidence to support the efficacy of this remedy.

On the other hand, pomegranate has had extensive studies conducted on its contraceptive properties, and the most notable of these was a set of experiments performed on rats in the 1980's. These tests found that fertilisation only occurred at 50%, and that pomegranates impact the estrogen levels.¹³³ Thus, depending on the part of the pomegranate which is consumed they may have been a successful contraceptive tool, although traditionally throughout history they have been associated with fertility.¹³⁴ Pliny may have been right to cite it as such. Additionally, there is one passage in which, Pliny argues it is beneficial for the uterus.¹³⁵ Prioreshi infers that the efficacy of ancient herbal abortifacient agents is highly questionable. He believes that recent contemporary developments in chemical agents are the only pharmacological tools capable of acting as an abortive and contraceptive.¹³⁶ However, it could also be contended that the scientific success of pomegranate acting as an anti-fertility agent calls his argument into question.

¹³¹ Kitchell (2014, 92).

¹³² Nigg (1992, 370).

¹³³ Prakas (1986, 23).

¹³⁴ Heber (2006, 199-207).

¹³⁵ See *Chapter Three*, p. 54.

¹³⁶ Prioreshi (1998, 657).

Pliny suggests that veal eaten with *aristolochia* would ensure a son.¹³⁷ *Aristolochia* commonly known as birthwort is an evergreen and is found in virtually any region.¹³⁸ John Scarborough and Andrea Fernandes recently wrote an article on ancient medicinal uses of birthwort. Birthwort, according to Scarborough, was used extensively in Greek, Roman and Byzantine times and was recommended to treat a vast variety of ailments, including, kidney problems, gout, snakebites, bladder stones and uterine complaints.¹³⁹ Similarly, Dioscorides wrote on birthwort; he argues that it was beneficial for women in labour.¹⁴⁰ Birthwort is discussed in greater detail in *Chapter Three*.¹⁴¹

Another example of an amulet remedy is detailed below:

‘There is also a third kind of *phalangium*, a hairy spider with an enormous head. When this is cut open, there are said to be found inside two little worms, which, tied in deer skin as an amulet on women before sunrise, act as a contraceptive, as Caecilius has told us in his *Commentarii*. They retain this property for a year. Of all such preventives, this only would it be right for me to mention, to help those women who are so prolific that they stand in need of such a respite.’¹⁴²

¹³⁷ He writes, ‘[I]f women about the time of conception eat roasted veal with *aristolochia*, they are assured that they will bring forth a male child.’ Plin. *HN*. 28.57.254.

¹³⁸ Mills-Hicks (2003, 882).

¹³⁹ Scarborough and Fernandes (2011, 3).

¹⁴⁰ Dios. *Mat. Med.* 3.4. Dioscorides also defines gender differences between male and female varieties of birthwort. He writes, ‘One kind is round (*strongylē*) and is called “female” ... the long or large birthwort is given the label “male” as well as the name *dactylitis*... and there is a third kind of birthwort, also large [or long] and it is named *klēmatitis*... it has very long and thin roots covered with a thick and aromatic bark’. This is not particularly pertinent to this thesis but is interesting in that it demonstrates ancient scientific ingenuity and accrued knowledge.

¹⁴¹ See *Chapter Three*, p. 63.

¹⁴² Plin. *HN*. 29.27.85.

Once again we have an example of Pliny recommending folk medicine. An amulet as birth control would certainly have been ineffectual. It is also not made explicit who this Caecilius is. However, given his heritage (C. Plinius Caecilius Secundus, aka C. Caecilius Cilo), we can infer that this Caecilius was a relative of Pliny. Further Pliny concedes that he has only passed on this information as a service to women who find themselves overly fertile and thus constantly pregnant.

At this point a pattern has begun to emerge. Much of the information Pliny gives us appears to have been passed on in the oral tradition. Most importantly, the contraceptives and conceptives documented by Pliny are mostly plant substances. Riddle tells us that, ‘plants have been thought incapable of producing complex animal molecule hormonal structures that affect fertility.’¹⁴³ However, it has become clear based on the evidence collected in this chapter – for example, the prescriptions concerning pomegranate and *aristolochia* – that a number of Pliny’s recommendations may have been moderately efficacious as fertility agents.

Remedies Related Abortion: Plant and Animal Based

Due to word limit restrictions, only a few treatments prescribed by Pliny will be examined in this section. However, it is hoped that these prescriptions will show the confusion inherent in Roman antiquity between contraception and abortion/miscarriage. We shall begin with the herbal remedies. Pliny writes:

‘A fumigation of it [*ammi*] with raisins or resin acts as a purge upon the womb. It is believed that those women more easily conceive who smell the plant during sexual intercourse.’¹⁴⁴

¹⁴³ Riddle (1991, 4).

¹⁴⁴ Plin. *HN*. 20.58.164.

Ammi, is a carrot-like perennial. *Ammi*'s common name is bishop's weed or bullwort, depending on the variety. It was renowned in ancient times for its medicinal properties and originates from the Mediterranean.¹⁴⁵ Pliny recommends that it is taken with wine to promote menstruation. It seems to have been a tool used when a woman was suffering from *amenorrhea*, or for young married girls who have not yet started their menstrual cycle. Pliny also recommends it as an abortifacient when mixed with raisins or resin. If bishop's weed could cause menstruation, it is unsurprising it would also act as an abortive agent. A study conducted in India in 1987 confirmed that consuming bishop's weed resulted in an abortion in 50 out of 75 pregnant women.¹⁴⁶ Thus, this is an efficacious remedy, although admittedly risky.

On *Asarum*, Pliny writes:

‘A draught of this [*Asarum*] is cleansing for women after miscarriage, and removes stitch in the side or stone in the bladder.’¹⁴⁷

Asarum or as it is commonly known, hazelwort is a variety of wild ginger. It is found throughout Europe. It is moderately toxic.¹⁴⁸ A draught of hazelwort (*asarum*) would probably not be as cleansing as Pliny suggests, as it could cause a miscarriage. Riddle confirms that *Asarum* was both an abortive and contraceptive.¹⁴⁹ In this instance it is unwise for Pliny to have detailed such a treatment due to its poisonous properties.¹⁵⁰

¹⁴⁵ Mills-Hicks (2003, 109).

¹⁴⁶ Boskabady (2014, 5).

¹⁴⁷ Plin. *HN*. 21.77.133.

¹⁴⁸ Mills-Hicks (2003, 642).

¹⁴⁹ Riddle (1997, 59).

¹⁵⁰ Yaniv (2005, 392).

Asplenon, or spleenwort, is a variety of evergreen found throughout the world.¹⁵¹ On it Pliny writes:

‘*Asplenon*... decoction of its leaves in vinegar, taken as a draught for thirty days, is said to reduce the spleen, the leaves being also applied locally. They relieve too hiccoughs. This plant, as it causes barrenness, must not be given to women.’¹⁵²

Spleenwort probably received its name because Pliny writes that it would relieve problems related to the spleen.¹⁵³ The recommendation that it should be taken for 30 days has no explanation attached to it, nor does Pliny detail the advised dosage size. The efficacy of spleenwort leaves mixed with vinegar is hard to judge. However, spleenwort is poisonous when consumed, so it may well have had the potential to cause sterility.¹⁵⁴

On *epimedion*, Pliny writes:

‘*Epimedion* is a stem, not large, with ten or even twelve leaves like ivy leaves. It never flowers, has a slender, blackish, evil-smelling root, and . . . This plant, which grows in damp soils, is one of those with bracing and cooling properties, and should be avoided by women. Its leaves, beaten up in wine, check the growth of maidens’ breasts.’¹⁵⁵

¹⁵¹ Mills-Hicks (2003, 947).

¹⁵² Plin. *NH.* 27.17.34.

¹⁵³ This Fern is thought to cure conditions to do with the spleen because the lobular milt-like shape resembles the spleen. Further its name *asplenium*, is derived from the Greek word meaning spleen. Botanical.com: A Modern Herbal, <http://www.botanical.com/botanical/mgmh/f/ferns-08.html>, accessed 6/8/16.

¹⁵⁴ Attard and Scicluna-Spiteri (2001, 46-53).

¹⁵⁵ Plin. *NH.* 27.53.76.

Epimedium, commonly known as barrenwort or horny goat weed, typically grows in China but can also be found in the Mediterranean.¹⁵⁶ Pliny does not confirm why women should avoid barrenwort. However, barrenwort naturally balances hormone function and may aid in thyroid problems. As such it may have been effective in the second function Pliny has detailed, i.e. to stop excess breast growth.¹⁵⁷

Next Pliny offers a description of various types of ferns, which have been included in the footnotes.¹⁵⁸ Having provided this description he ultimately concludes that, ‘neither fern should be given to women, since either causes a miscarriage when they are pregnant, and barrenness when they are not.’¹⁵⁹ There have been modern studies, which demonstrates that some ferns do indeed have abortifacient properties. A study conducted in India on rabbits indicated that pregnancy was prevented in 60 percent of the animals.¹⁶⁰ Pliny is correct to label some varieties of ferns as abortives and in turn antifertility agent.

The next prescription deals with a miscarriage. Pliny does not emphasise if this miscarriage occurs with intent. He writes:

‘They [the Greeks] describe the seed of *dracunculus* as hot, with so foul a stench that the smell causes pregnant women to miscarry.’¹⁶¹

¹⁵⁶ Mills-Hicks (2003, 647).

¹⁵⁷ Yance (2013).

¹⁵⁸ Pliny notes, ‘ferns are of two kinds, neither having blossom or seed. Some Greeks call *pteris*, others *blachnon*, the kind from the sole root of which shoot out several other ferns exceeding even two cubits in length, with a not unpleasant smell. This is considered male. The other kind the Greeks call *thelypteris*, some *nymphaea pteris*. It has only one stem, and is not bushy, but shorter, softer and more compact than the other, and channeled with leaves at the root.’ Plin. *NH.* 27.55.78-79.

¹⁵⁹ Plin. *HN.* 27.55.80.

¹⁶⁰ Kamboj and Dhawan (1982, 192).

¹⁶¹ Plin. *HN.* 24.92.143.

The *dracunculus* is indeed a foul smelling plant, which is pollinated by flies instead of bees. It originates from the eastern Mediterranean and is commonly called dragonwort. The foul smell alone could be why Pliny assumed it would cause miscarriage but it is also toxic.¹⁶²

On chicory, Pliny writes, ‘boiled down in water it [chicory] so helps the purgation of women as even to withdraw the dead unborn baby.’¹⁶³ Chicory is closely related to lettuce. It comes from Europe, western Asia and northern Africa.¹⁶⁴ It does act as a mild laxative and thus may be efficacious, although, it is doubtful.¹⁶⁵

The next two quotes represent one of the few sections in the *HN*, which relies upon the accounts of actual women, Pliny writes:

‘...Nor are women themselves immune to the effect of this plague of their sex; a miscarriage is caused by a smear, or even if a woman with child steps over it. Lais and Elephantis do not agree in their statements about abortives, the burning root of cabbage, myrtle, or tamarisk extinguished by the menstrual blood, about asses not conceiving for as many years as they have eaten grains of barley contaminated with it, or in their other portentous or contradictory pronouncements, one saying that fertility, the other that barrenness is caused by the same measures. It is better not to believe them.’¹⁶⁶

¹⁶² *Dracunculus vulgaris*, http://www.flowersofchania.com/html/body_dracunculus_vulgaris.html; (accessed 19/6/16).

¹⁶³ Plin. *HN*. 20.30.74.

¹⁶⁴ Mills-Hicks (2003, 837-838).

¹⁶⁵ Bellebuono (2012, 263).

¹⁶⁶ Plin. *HN*. 28.23.80-81.

Myrtle is an evergreen or deciduous shrub, which can be found in the Mediterranean.¹⁶⁷ *Tamarix*, or as it is more commonly known, tamarisk can be found in southern Europe and is a tough shrub.¹⁶⁸ Tamarisk has been used extensively throughout history to produce an abortion.¹⁶⁹ Thus it may have been efficacious. Myrtle is an antifertility agent and it was also used extensively in the ancient world.¹⁷⁰ Cato was exuberant in his praise of cabbage.¹⁷¹ It is apparent from modern medical studies that cabbage seeds may have acted as an abortifacient and a postcoital contraceptive.¹⁷² Notwithstanding, Pliny has recommended these three products be burned, rather than orally ingested, rendering the remedy ineffectual.

Pliny's multitude of sources and authorities cited within the *HN* are questionable, and their authenticity is often difficult to verify. Indeed, many of the authors Pliny cites have been lost which negatively colours our evidence. Regarding the intended audience of the *HN*, it is likely that Pliny was writing for the educated elite. However, the nature of his work could also suggest he compiled it for the benefit of any literate person, regardless of social circumstances and gender. Obviously, the audience to whom Pliny recommends medical prescriptions had an entirely different approach towards medicine than we do in the twenty-first century and this should certainly be borne in mind when interpreting his work.

Pliny's androcentricism is apparent in this passage as he suggests that his sources genders and subsequent agendas should not be trusted. He further adds insult to injury by referring to the female gender as a 'plague'. Lais and Elephantis are two of five accounts cited by Pliny that

¹⁶⁷ Mills-Hicks (2003, 406).

¹⁶⁸ Mills-Hicks (2003, 472).

¹⁶⁹ Bullough (2001, 23).

¹⁷⁰ Riddle (1992, 47).

¹⁷¹ On the medicinal qualities of cabbage, Cato writes, 'It is the cabbage which surpasses all other vegetables. It may be eaten either cooked or raw; if you eat it raw, dip it into vinegar. It promotes digestion marvelously and is an excellent laxative, and the urine is wholesome for everything.' Cato, *Agr.*156.1.

¹⁷² Farnsworth (1975, 561). See also Riddle (1992, 35).

were supposedly written by actual women. Pliny refers to Lais twice. Lais was a prostitute who was a native of Hycara in Sicily. She lived during the fifth century BC.¹⁷³ On the other hand, Elephantis was an author of erotica during the first century BC. Along with abortives she also wrote on cosmetics.¹⁷⁴ Together, Lais and Elephantis form contradictory views towards menstrual fluid, with Elephantis believing that it could cause barrenness and act as an abortifacient. On the other hand, Lais correctly saw menstrual fluid as promoting fertility. Neither source (during their time periods) really knew much about the scientific causes and effects of menstruation on fertility. Their information is likely derived from eyewitness accounts and personal testimony. As such, it must be assumed that these two women would have been recommending this treatment from personal experience, so it may well have been efficacious. This is the case when contrasted against modern medical studies which we now have access to. However, the information they record may well have been considered accurate in their time and so this writer has no right to judge their medical knowledge based on modern perceptions. If this passage reinforces anything, it is that despite Pliny's androcentric literary style, he did treat his sources as equally meritorious regardless of their sex. It is also significant that the women named here are *hetairai* (courtesans). As it demonstrates that Pliny was willing to concede that despite and perhaps because of their occupation they were valuable sources on abortifacients and contraceptives.

Conclusions

Pliny's non-biased selection process of his sources should be mentioned and reinforces the encyclopedic nature of his work. Pliny's representation of his information does not specifically say for whom these remedies are aimed at, rather it is assumed that his audience would know the intended recipient or use. There is one flaw in presenting his information in

¹⁷³ Plant (2004, 119).

¹⁷⁴ Plant (2004, 118).

this manner, in that we have very little records of dosages and this presents a danger to the intended patient, particularly in the case of abortives.

Pliny's citation of his female sources by name suggests that they were well known in antiquity. Lais, Elephantis, Salpe, Olympias of Thebes and Sotira were each engaged in medicine at various levels, in terms of both their social ranks and their medical experiences. These women were proficient in their professional field regardless of their sex and it is reassuring that they were able to practice their skills in such a patriarchal society. Pliny's representation of these women is idiosyncratic. The assumed presumption that an elite Roman male would feel morally disinclined to cite a *hetairai*, for example, is not present in his work and his equally meritorious approach to his sources is commendable.

Equally laudable/worrisome are the lengths women were willing to go to in order to ensure conception, secure an abortion or prevent a pregnancy. As patients', women of the first century were willing to try any sort of treatment to prevent or promote fertility, from amulet magic to bacterial ridden pessaries, thus confirming the experimental nature of many of Pliny's remedies.

Chapter 3: The Miracle of Life – Pregnancy and Childbirth

Introduction

Bringing life into the world was a dangerous undertaking before the invention of modern medicine. Surgical implements epitomise a families last hope, usually to save a child, demonstrating the harsh realities of ancient childbirth.¹⁷⁵ Pliny's encyclopedic text contains a plethora of remedies: 140 treatments intended to aid a woman in all areas of her pregnancy from inception through to birth.¹⁷⁶ Understandably there are far too many medicaments to examine effectively in the present study.¹⁷⁷ Pliny does not prescribe a comprehensive diet to be adhered to by a pregnant woman but does comment throughout the *HN* on beneficial foods and makes observations on the erroneous effects of a bad diet. These will be examined in greater detail in this chapter.

The overlap between remedies concerning pregnancy and labour found within the *HN* should not be underestimated. With this in mind, what follows aims to separate management of the two conditions, but at times the treatments provided by Pliny may coincide. Pliny's remedies focus on the health of the foetus and the mother. In contrast, much of the non-literary evidence we currently have concerning pregnancy and childbirth is connected with both the experiences of the mother and, more often, the role of the midwife. This is especially the case with visual representations, where the midwife is the central and prominent figure in relation to depictions of the child or mother.¹⁷⁸ In this regard, terracotta votives were employed as

¹⁷⁵ See Milne (1907) for a comprehensive overview of Roman surgery and medical instruments. Soranus wrote on surgery and describes the use of hooks to extract a foetus when in difficulty or when a woman has died in labour but the baby has not. Sor *Gyn.* 4.3.61.

¹⁷⁶ Richlin (2008, 261).

¹⁷⁷ See *Introduction*, p. 10 for selection criteria.

¹⁷⁸ One such example is Tomb 100 Isola Sacra from the second century AD. Graham (2013, 215-231).

offerings to ensure the proper health of a future child. The provenance of many of these votives originates from early Italy; additionally, a good selection is located in Etruria.¹⁷⁹

Anecdotes on Pregnancy

To begin this section, we shall consider one particularly interesting anecdote concerning the pregnancy of Julia Augusta. Pliny writes:

‘Julia Augusta in her early womanhood was with child with Tiberius Caesar by Nero, and being specially eager to bear a baby of the male sex she employed the following method of prognostication used by girls—she cherished an egg in her bosom and when she had to lay it aside passed it to a nurse under the folds of their dresses, so that the warmth might not be interrupted; and it is said that her prognostication came true.’¹⁸⁰

It is unclear how Pliny has unearthed this anecdote about Julia Augusta as he does not name his source. However, it is known that he dedicated his work to Emperor Titus, so perhaps his connections at court facilitated access to this information.¹⁸¹ With respect to the imagery used by Pliny, the egg is acting as a symbol for fertility. Julia did indeed give birth to a male, and perhaps this prophetic coincidence is why Pliny has included this particular anecdote in his work. It may appear surprising that an educated and literate elite woman would subscribe to a blatantly folkloric remedy. It demonstrates that folk remedies and treatments incorporating *superstitio* – which, as we have noted previously, should not be judged against our modern medical standards – were an accepted part of all social stratum in Roman society, even adopted by the elite. A similar remedy suggests:

¹⁷⁹ See Graham (2013).

¹⁸⁰ Plin. *HN*. 10.76.154. This became a common practise.

¹⁸¹ Meerdink (2015, 86).

‘If the uterus of the hare is taken in food, it is believed that males are conceived; that the same result is obtained by eating its testicles and rennet; that the foetus of a hare, taken from its uterus, brings a renewed fertility to women who are passed child-bearing.’¹⁸²

This passage presents a folk-like tale used to illustrate a method ensuring the birth of a particular gender. This is a pattern in Pliny’s work. Animal parts have been used in folklore medicine for an extensive period of time.¹⁸³ It is not completely illogical to imagine that by ingesting or employing animal parts or blood they (the ancients) would be imbued with that animals powers or health or – as in this instance – give birth to a son by eating male animal testicles or be invested with an animals fertility.

Remedies Related to Pregnancy: Plant Based

Pliny suggests a variety of fruits and vegetables be eaten during pregnancy. Hippocrates recommends radish to relieve uterine pain. Hippocratic medical practices define themselves as rational. Quite apart from Pliny’s willingness to include magical remedies, an adherent to Hippocratic medicine would normally eschew such practices, although it was a usual component of antique medicine.¹⁸⁴ On radish, Pliny writes:

‘For these purposes and for spitting of blood Medius prescribes that they should be given cooked, as well as to women lying-in to increase the supply of milk;

¹⁸² Plin. *HN*. 28.77.248-249.

¹⁸³ Hand (1980, 188).

¹⁸⁴ Gaillard-Seux (2014, 201).

Hippocrates that radishes should be rubbed on the head of women when the hair falls off, and that they should be placed on the navel for pains in the womb.’¹⁸⁵

Hippocrates, the father of medicine, is one extremely credible source frequently cited by Pliny. On the other hand, Medius is an unknown source. This is not to say that Hippocrates is a more credible source than Medius. Radish has been used extensively throughout history and is available in most regions worldwide.¹⁸⁶ Radish may help with underactive thyroid issues which can affect a woman’s hormones.¹⁸⁷ They contain phytochemicals which should be consumed more regularly by pregnant women.¹⁸⁸ Thus this remedy may be beneficial for stomach pain during pregnancy. However, Hippocrates has recommended it be applied topically thus rendering its benefits essentially useless. As well as vegetables, fruit is often suggested to ease nausea during pregnancy, Pliny writes:

‘Their pips [citrons] are prescribed to be eaten by women for the nausea of pregnancy.’¹⁸⁹

Citrons are useful on nausea. They are still prescribed to women today as an herbal alternative. Citrons have been used throughout folklore medicine; for example, women were advised to place it under their pillow during childbirth to ease labour.¹⁹⁰ Similarly, a prescription involving pomegranates is suggested for nausea:

¹⁸⁵ Plin. *HN*. 20.13.27.

¹⁸⁶ Mills-Hicks (2003, 849).

¹⁸⁷ Yaniv (2005, 392).

¹⁸⁸ Nigg (2013, 221).

¹⁸⁹ Plin. *HN*. 23.56.105.

¹⁹⁰ Sonnemann (2013, 20).

‘It [pomegranates] is in request for easing the nausea of women with child since by a taste the foetus is quickened.’¹⁹¹ Pliny also writes, ‘... that the uterus [hyaenae’s] with the rind of a sweet pomegranate given in drink is good for the uterus of women.’¹⁹²

These are relatively pragmatic treatments as pomegranates are high in vitamin C, antioxidants and are overall good for ones health.¹⁹³ As such, it is reasonable to assume they would be beneficial against the detrimental effects of nausea. Pliny frequently mentions pomegranates, and he believes they were a credible cure for a variety of ailments.¹⁹⁴

Pliny includes a warning against bay being used in food for pregnant women. He writes; ‘the skin of the root [bay] is to be avoided by women with child.’¹⁹⁵ Bay has been mentioned in the previous chapter in relation to promoting menstruation.¹⁹⁶ As such it should come as no surprise that Pliny warns it should be avoided by pregnant women.

Next, Pliny writes:

‘Unsaited axle-grease used as a pessary nourishes the foetus when there is the threat of a miscarriage.’¹⁹⁷

¹⁹¹ Plin. *HN*. 23.57.107.

¹⁹² Plin. *HN*. 28.27.102.

¹⁹³ Heber (2006, 70).

¹⁹⁴ See *Chapter Two*, p. 40.

¹⁹⁵ Plin. *HN*. 23.80.153.

¹⁹⁶ See *Chapter One*, p. 19.

¹⁹⁷ Plin. *HN*. 28.37.139.

Unsaited axle-grease is a type of lubricant. Pliny suggests that it may be 'nourishing' as a pessary. Although it is unclear how axle-grease is meant to prevent a miscarriage during pregnancy, it has been used extensively throughout folk medicine history.¹⁹⁸ As we have seen pessaries were often more harmful than beneficial, as they could cause infection, and they were employed mainly to act as an *emmenagogue*.¹⁹⁹ Therefore it is unreasonable to assume this treatment would prevent miscarriage.

Animal Based Remedies

Along with herbal remedies, animal based medicaments play a large role in folk medicine and are found extensively employed as treatments related to pregnancy and childbirth. As such Pliny's work contains a surfeit of these remedies. There is an especially fascinating reference to an item labelled 'eagle stones'. Pliny writes:

'Eagle stones, wrapped in the skins of animals that have been sacrificed, are worn as amulets by women or four-footed creatures during pregnancy so as to prevent a miscarriage. They must not be removed except at the moment of delivery: otherwise, there will be a prolapse of the uterus. On the other hand, if they were not removed during delivery no birth would take place.'²⁰⁰

Eagle-stones can simply be described as a hollow stone with another smaller stone inside it.²⁰¹ They are representative of fertility, of a mother carrying a foetus. In Western Europe, they were used as an amulet to protect both mother and child during childbirth. Indeed, they were

¹⁹⁸ Hatfield, (2004, 264).

¹⁹⁹ Kapparis (2002, 21).

²⁰⁰ Plin. *HN*. 36.39.151.

²⁰¹ Dasen (2013, 29).

employed up until the nineteenth century.²⁰² A similar practice is reportedly conducted by deer.²⁰³ It is unclear why a prolapse of the uterus would occur if such an amulet was removed. Clearly, however, this is another example of an amulet providing moral support during a physically draining time.

The next two remedies also involve amulets. The approach adopted in relation to this category of treatment reflects Pliny's conformity to the principles of the encyclopedic genre in that he includes remedies from the folkloric tradition without reservation and often without comment.

He writes:

‘Of the Roman authorities some have given this fish the Latin name of *mora* and a marvel is told by some Greeks, who have related, as I have said, that worn as an amulet it arrests miscarriage, and by reducing procidence of the uterus allows the foetus to reach maturity; others say that preserved in salt and worn as an amulet it delivers pregnant women, this being the reason why another name, *odinolytes*, is given to it.’²⁰⁴

Odinolytes were understood as bringing about the speedy delivery of a woman in labour.²⁰⁵ Again the issue of *auctores* arises. ‘Roman authorities’ is ambiguous and does not provide us with a singularly reliable source. Although, Pliny also credits the Greeks for this treatment, which in the *HN* is a more common occurrence than Roman endorsements. It is evident and

²⁰² Dasen (2014).

²⁰³ Pliny writes, ‘it is reported that hinds when they realise they are pregnant swallow a little stone which, found in their excrements or the uterus prevents miscarriage if worn as an amulet.’ Plin. *HN*. 28.77.246-247. A person observing this behaviour may have adapted it for human use. This is a clear indicator of the close relationship between animals and humans and is evidence of humans having evolved by surveying animal behaviour.

²⁰⁴ Plin. *HN*. 32.1.6.

²⁰⁵ Plin. *HN*. 32.1.6. Pliny's reference to *odinolytes* is the only one in antiquity.

often reiterated by Pliny, that he places higher confidence in Greek sources than Roman.²⁰⁶ In a similar fashion to the treatment expounded in this passage, an amulet found in Oxford was inscribed with a magical text which was meant to aid a woman named Fabia during childbirth.²⁰⁷ Much like the amulet found in Oxford, amulets concerning childbirth almost always ask for the protection of both mother and child. The amuletic nature of this remedy immediately casts its efficacy into obscurity.

Marine life is also referenced frequently in the *HN*. This is likely a result of Italy's location on the Mediterranean. Pliny writes:

‘No less wonderful things are related of the sea-hare. To some it is poison if given in drink or food, to others if merely seen, since pregnant women, if they have but looked at one, the female, that is, of the species, at once feel nausea, show by regurgitation signs of a disordered stomach, and then miscarry. The remedy is a male specimen, specially hardened for this purpose with salt, to be worn in a bracelet.’²⁰⁸

Pliny suggests that when threatened, sea-hares release a purple dye.²⁰⁹ It is though this dye's purpose was to paralyse or offend the sense of smell of an enemy.²¹⁰ This may well have

²⁰⁶ Pliny's praise is reserved for Greek physicians in deference to Roman abilities. He writes: ‘medicine alone of the Greek arts we serious Romans have not yet practiced; in spite of its great profits only a very few of our citizens have touched upon it, and even these were at once deserters to the Greeks; nay, if medical treatises are written in a language other than Greek they have no prestige even among unlearned men ignorant of Greek, and if any should understand them they have less faith in what concerns their own health.’ Plin. *HN*. 29.8.17.

²⁰⁷ This text is characteristic of the type of amulets that would have been readily available throughout the Roman world. It reads, ‘Characters. Magical Names. Make with your holy names that Fabia whom Terentia, her mother bore, being in full fitness and health, shall master the unborn child and bring it to birth; the name of the Lord and the Great God everlasting.’ (Tomlin, 2008, 222)

²⁰⁸ Plin. *HN*. 22.3.8.

²⁰⁹ Tunnell (2010, 52).

made pregnant women nauseous but probably would not have resulted in a miscarriage. Secondly a male species worn in amulet form would have only served, to borrow from Soranus, to restore moral energy in women.²¹¹ The use of an amulet suggests a placebo effect. It is interesting to note that only a male sample could prevent miscarriage, this may be indicative of Pliny's male-centric perspective.

Remedies Related to Childbirth

Pliny's image of childbirth is scary. Firstly, Pliny notes, '...if women with child eat a raven's egg they bear the infant through the mouth.'²¹² This is particularly poignant – and the reason why the quotation featured as an epigraph to this discussion in the *Introduction* – as it demonstrates Pliny's attitudinally androcentric and generically folkloric approach towards the female medical conditions he discusses. Such advice could make anyone fearful of childbirth, not least when that birth is taking place in a pre-modern society without the modern medical advances accessible to contemporary societies. Pliny also worryingly says it is a better omen for the mother to die in childbirth than for the child to be born fee first, which is seen as an ill-omen.²¹³ He also assumes that the surgical procedure, known as a caesarian, derived its name because the first Caesar to be born arrived in this manner. This is a legend, and there is no evidence to support this. In fact, it is more likely that the term 'caesarian' is derived from the Latin *caedere*, meaning 'to cut open'. Further, Pliny recounts that the birth of quadruplets in Ostia during Augustus' time foreshadowed a food shortage.²¹⁴ Thus births could often be associated with portents. Finally, it should be noted that there are no ancient female sources

²¹⁰ Berrill (1957, 102).

²¹¹ Sor. *Gyn.* 3.12.46; See Gaillard-Seux (2004, 202).

²¹² Plin. *HN.* 10.15.32.

²¹³ Plin. *HN.* 7.9.47. It was seen as a good omen when women birthed multiple children. Pliny cites the examples of Scipio Africanus and Julius Caesar. Similarly, Fausta from Ostia gave birth to two twins; one lot boys, the other girls. Thus, Births involving multiple children could often be imbued with magical portents.

²¹⁴ Plin. *HN.* 7.3.33.

that have written about the ancient experience and procedure of childbirth from a first hand experience.²¹⁵

Pliny's anecdotes almost always refer to members of the elite. He records one such story concerning the *gens Lepida* which, as it is lengthy, has been included in the footnote.²¹⁶ The first part of this passage describes a medical phenomenon called caul. This condition occurs when the amniotic sac does not rupture during the labour process as it normally would. In

²¹⁵ In Ovid's *Metamorphoses* he decries the birth process at length and demarcates the *superstitio* nature of the process. Ovid relays the birth of Hercules by his mother, Alcmena. It is lengthy but worthwhile to include due to its rare nature as an ancient account on childbirth. Ovid writes, 'Nay, even now as I tell it, cold horror holds my limbs, and my pains return even as I think of it. For seven nights and days I was in torture; then, spent with anguish, I stretched my arms to heaven and with a mighty wail I called upon Lucina and her fellow guardian deities of birth. Lucina came, indeed, but pledged in advance to give my life to cruel Juno. There she sat upon the altar before the door, listening to my groans, with her right knee crossed over her left, and with her fingers interlocked; and so she stayed the birth. Charms also, in low muttered words, she chanted, and the charms prevented my deliverance. I fiercely strove and, mad with pain, I shrieked out vain revilings against ungrateful Jove. I longed to die, and my words would have moved the unfeeling rocks. The Theban matrons stood around me, appealed to heaven, and strove to stay my grief. There was one of my attendants born of the common folk, Galanthis, with hair of reddish hue, active always in obedience to my commands, well loved by me for her faithful services. She felt assured that unjust Juno was working some spell against me; and as she was passing in and out the house, she saw the goddess seated on the altar holding her clinched hands upon her knees, and said to her: 'Whoever you are, congratulate our mistress: Argive Alcmena is relieved; her prayers are answered and her child is born.' Up leaped the goddess of birth, unclined her hands and spread them wide in consternation; my bonds were loosed and I was delivered of my child.' *Ov. Met.* 9.294. Taken in conjunction with the lengthier description from Ovid, the following excerpt from Euripides, *Medea*, is the closest reference to the experience of childbirth from a 'female perspective'. It says, 'I would rather serve three times in battle than give birth once.' *Eur. Medea.* 248-251. However, this is also eclipsed by the fact that a Greek male wrote the *Medea*.

²¹⁶ '(We are told that in the Lepidus family three children were born, though not all in succession, with a membrane over the eyes); and indeed that other children have resembled their grandfather, and that also there has been a case of twins of which one resembled the father and the other the mother, and one of a child who resembled his brother like a twin although born a year later. Also that some women always bear children like themselves, some bear children like their husbands, some children with no family likeness, some a female child like its father and a male child like themselves. One unquestioned instance is that of the famous boxer Nicaeus, born at Istanbul, whose mother was the offspring of adultery with an Ethiopian but had a complexion no different from that of other women, whereas Nicaeus himself reproduced his Ethiopian grandfather.' *Plin. HN.* 7.12.51.

many cultures this is considered lucky, and thought to imbue the child with a second sight.²¹⁷ This passage shows that, while the scientific concept as we understand it was unknown to him, Pliny had a grasp on the broad principles framing genetics or at least the fundamentals of genetics. In this sense, we may say that Pliny acknowledged and recognised what in terms of the ancient pharmacopeia could be viewed as medical issues, while also incorporating magical components with his work. As a result, Pliny's approach once again reinforces the encyclopedic nature of his work. In this regard, the account of Nicaeus is interesting, although it is not clear why he has singled out the boxer. It could be inferred that Pliny was a fan of the boxer, who was well enough known to be cited by name. It is not that uncommon for children to resemble their grandparents, so perhaps Nicaeus' resemblance was especially stark to be singled out by Pliny.

As well as identifying genetics. Pliny also notes that there were variances between gestational times: 'Certain women are always delivered prematurely, and those of this class [patrician], if ever they succeed in overcoming this tendency by the use of drugs, usually bear a female child.'²¹⁸ This may be a conclusion sought from circumstantial and eyewitness testimony. Pliny's inherent dislike of unnatural drugs, or more generally the doctoring profession, is demonstrated in this instance. He postulates that taking drugs during delivery would almost definitely ensure that a woman would bear a female, rather than the more sought after male offspring. This could be construed as an androcentric notion. It is almost as though Pliny is inferring that women who succumb to drugs during delivery will only bear children of the 'weaker' female sex, while women who refrain from drugs will ensure a member of the 'stronger' male sex.

²¹⁷ Rothman (1993, 51).

²¹⁸ Plin. *HN*. 7.13.57-58.

Finally Pliny notes, ‘it is certain that sterility may result from sufferings at childbirth.’²¹⁹ This is an accurate statement as there have been studies on the subject. Secondary sterility is a condition, which can occur during childbirth. It is often a result of puerperal infection.²²⁰ In pre-modern societies, for example in the 17th and 19th centuries, it was estimated that infertility as a result of childbirth occurred at a rate of approximately 2-5%.²²¹ Ancient Roman rates may have been comparable to these pre-modern statistics.

Plant Based Remedies

Here we return to the herbal based pharmacopeia present in the *HN*. Pliny observes:

‘Hippocrates prescribed twice-boiled cabbage and salt for coeliac trouble and dysentery, also for tenesmus and kidney troubles, holding also that its use as food gave a rich supply of milk to lying-in women and benefited women’s purgings.

The stalk indeed eaten raw brings out the dead unborn baby.’²²²

Cabbage is beneficial both during and after pregnancy. It is described as a cure-all and can be used to reduce morning sickness and to ease breast swelling. In terms of the efficacy of this remedy, the later is accurate the former is erroneous as cabbage can bring on morning sickness in some people.²²³ Cabbage contains folate, which is nutritious for foetuses.²²⁴ Thus it is both an efficacious and non-efficacious medicament on Hippocrates part.

²¹⁹ Plin. *HN*. 28.77.253.

²²⁰ Gaselli (2006, 460).

²²¹ Leridon (1977).

²²² Plin. *HN*. 20.34.86.

²²³ Trevathan (2010, 77).

²²⁴ Marriott (2015).

Again we see reference in the *HN* to the use of amulets, Pliny writes:

‘The leaves [*anagyros*] are placed on gatherings, and tied as an amulet on women in difficult labour, care being taken to remove them immediately after delivery.’²²⁵

Anagyros is also mentioned by Dioscorides for difficulties during childbirths.²²⁶ It isn’t clear what Pliny means by ‘placed on gatherings’. This remedy is not credited with a source and is likely a result of orally transmitted information. It’s non-efficacious in an amulet form.

Pliny also mentions one plant, mysteriously called ‘tongue’:

‘If the plants [tongue] that sprout up inside a sieve thrown away on a cross-path are plucked and used as an amulet, they hasten the delivery of lying-in women.’²²⁷

Pliny ascribes the name ‘tongue’ to this plant. A plant of a similar name and description is mentioned in a Babylonian source in aiding both pregnancy and birth. This source is a clay tablet with pharmaceutic *vademecum* written in three columns.²²⁸ In its amuletic setting this remedy would have been entirely ineffectual.

²²⁵ Plin. *HN*. 27.13.30.

²²⁶ Dios. *Mat. Med*, 3.150.

²²⁷ Plin. *HN*. 24.109.171.

²²⁸ Stol (2000, 53).

Aristolochia, commonly known as birthwort, was traditionally thought to be valuable for pregnant women. Its name was likely derived from the manner of its use in ancient times.²²⁹

Pliny writes:

‘Among the most celebrated plants *Aristolochia* received its name, as is clear, from women with child, because they considered it to be λεχούσαις, that is, “excellent for women in childbed.”’²³⁰

It has become apparent, from animal testing, that birthwort acted as both a contraceptive and abortifacient.²³¹ A dose of 50mg/kg tested on mice blocked fertilisation and a dosage of 60mg/kg terminated a pregnancy.²³² This would not have been a pragmatic recommendation for women in childbirth as, while it may have aided in the birth process it would have been gravely dangerous for the baby.

Finally, we reach our last passage concerning plants. It mainly details methods used to expel a dead foetus. There is much to deconstruct in the following. Pliny writes:

‘*Polemonia* taken in wine forces out the after-birth... juice of the lesser centaury taken in drink or used as a fomentation is an *emmenagogue*, and the root of the greater centaury, employed in the same ways, is good for uterine pains, while if it is scraped and applied as a pessary, it brings away a dead foetus...Very many however are the ways in which *Aristolochia* does good, for it is an *emmenagogue*, hastens the afterbirth, and brings away a dead foetus; myrrh and pepper being

²²⁹ Birthwort has already been mentioned in connection with ensuring the conception of a male. See *Chapter Two*, p. 41.

²³⁰ Plin. *HN*. 25.54.95.

²³¹ De Laszlo and Henshaw (1954, 627); Riddle (1992, 39).

²³² Sati (2011, 652).

added it is taken in drink or used as a pessary. *Hippuris*, made in drink and applied as a pessary, purges the uterus, as does polygonus taken in drink. The root of *alcima* too is an *emmenagogue*, leaves of plantain a violent one, as is also agaric in *hydromel*. *Artemisia* beaten up is good for the uterus, applied as a pessary in iris oil or with fig or with myrrh. Its root taken in drink purges the uterus so violently that it expels a dead foetus.²³³

Firstly, *polemonia* is Greek valerian and acts as a mild soporific.²³⁴ Due to its sedative properties, it may help to relax a woman's body and allow the after-birth to emerge. Centaury is the common name for *centarium erythraea*. It is a biennial and is used as a modern tool to combat dyspeptic discomfort, as such it may have been effective on uterine pain.²³⁵ However, there is no circumstantial evidence which proves this was a successful *emmenagogue*. *Aristolochia*, as previously noted, is poisonous to humans and can induce an abortion.²³⁶ Birthwort would most certainly act as an *emmenagogue*. It is cited correctly by Pliny in this instance. Myrrh acts as a contraindication.²³⁷ It should not be consumed when pregnant but in this scenario would have effectively drawn out a dead foetus.²³⁸ *Hippuris* is an angiosperm. Angiosperms have toxic properties that may cause purging.²³⁹ Taken in drink, it would likely have acted as a purgative but would not have worked as well in a pessary form.

Secondly, *Agaric* (mushrooms), depending on the type (which is not given), may have acted as an *emmenagogue* if it had poisonous properties. Although could have been fatal if

²³³ Plin. *HN*. 26.90.152-159.

²³⁴ Gehrmann (2005, 197).

²³⁵ Khan (2010, 168).

²³⁶ Lewis (1977, 28).

²³⁷ Khan (2010, 461-2).

²³⁸ Gehrmann (2005, 138).

²³⁹ Lewis (1977, 28).

consumed in large dosages.²⁴⁰ The leaves of the herb plantain act as a diuretic and stimulant, in turn it could have been employed as an *emmenagogue*. *Artemisia*, commonly known as wormwood, has historically been used to treat malaria and has some poisonous properties.²⁴¹ Wormwood again falls into the angiosperm category. It is a known abortifacient.²⁴² In this case Pliny recommends it is used with iris oil, fig or myrrh in a pessary form. To reiterate, pessaries often cause more harm than good and were likely unsatisfactory for the use stated in this passage. Myrrh is known as an *emmenagogue* and would have acted as one.²⁴³ Overall, measured against modern standards, much of the advice provided in this passage would have been effective for their intended use. Without proper measurements, however, it is impossible to judge their practical roles in aiding uterine pain or acting as an *emmenagogue*.

Animal Based Remedies

Animals, as has been seen in previous chapters, were often associated with healing, due to their close biological properties to humans. Pliny depicts a few remedies to take during pregnancy that are beneficial for a woman during delivery. Pliny notes:

‘There are also found in the heart and in the uterus little bones [hyaena] that are very useful to women who are pregnant or in child-bed.... The uterus is softened by an application of wolf’s fat, pains there by wolf’s liver, but to have eaten the flesh of the wolf is beneficial for women near delivery, or at the beginning of labour the near presence of one who has eaten it, so much so that sorceries put upon the woman are counteracted. But for such a person to enter during delivery

²⁴⁰ See *Chapter One*, p.21.

²⁴¹ Mills-Hicks (2001, 158).

²⁴² Riddle (1992, 48).

²⁴³ Riddle (1992, 105).

is a deadly danger... Fumigation with ass's hoofs hastens delivery, so that even a dead foetus is extracted.'²⁴⁴

Firstly, it is unclear how small bones found within a hyaena's uterus will be useful for women who are pregnant or about to give birth. By our modern standards, this is clearly an example of *superstitio*. According to Pliny's account pain may be subdued by the application of wolf's fat and it is beneficial for women to eat during labour. Wolves are strong creatures; this recommendation may symbolically imply that by eating a part of an enduring and survivalist animal, the woman herself will be strong and abide the birth more easily. Secondly, why does Pliny single out women having curses placed upon them? Why not men? *Superstitio* plays a role here. It may be the case that Pliny is simply transmitting a piece of information, or there may be a male-centric undertone to this statement. Pliny also argues that honey wine with sow's milk will ease childbirth, which it may well have done due to both honey and wine's sedative qualities.²⁴⁵ Finally, fumigation with an ass's hoof will hasten delivery in Pliny's opinion. Fumigation would probably do very little to expel a foetus, in fact it could have created an infection and done more harm than good.

The medicinal properties of smaller animals are also taken into consideration by Pliny:

'The foetus is retained by taking in drink the ash of porcupines, brought to maturity by drinking bitch's milk, and withdrawn by the afterbirth of a bitch, which must not touch the earth, laid on the loins of the woman in childbed. Rubbing the woman all over with the ash of hedgehogs and oil prevents miscarriage. The delivery of those is easier who have swallowed goose . . . with two cyathi of water, or the liquids that flow from a weasel's uterus through its

²⁴⁴ Plin. *NH.* 28.77.247-251.

²⁴⁵ Khan (2010, 358).

genitals. There are also little worms found in grass; these, tied round the neck as an amulet, prevent a miscarriage, but they are taken off just before the birth, otherwise they prevent delivery... Snails taken in food hasten delivery, and conception too if applied with saffron. An application of snails in starch and *tragacanth* arrests fluxes... If a woman with child step across a viper she will miscarry.²⁴⁶

There is much to unpack in this passage. Firstly, Pliny describes ash of porcupines, which when placed upon a woman is meant to retain a foetus. This may have been thought to reduce the occurrence of a miscarriage. It may also have been used to prevent premature birth. It is unknown if such a remedy would have worked, it is unlikely. Animal oils were often used in folklore medicine, particularly that of hedgehogs.²⁴⁷ Once again it is not clear how oil applied topically will induce a miscarriage. The liquid from a weasel's genitals is also mentioned; it may have acted as a lubricant to aid during childbirth. Correspondingly, there is a reference to goose fat being used as a lubricant by American midwives during the 18th century.²⁴⁸ Thus there is an argument to be made for the efficacy of this remedy as it was in use for more than a millennium. Pliny also advises that women who wear worms, placed in an amuletic setting will prevent miscarriage. Beyond acting as a psychological tool, it is certain this would have been ineffective. Another remedy calls for snails. Snails were not only used by the Romans but also the Aztecs, who in a similar fashion to Pliny prescribes their use for conception and childbirth.²⁴⁹ The recommendation of saffron to be taken with snails represents a somewhat dangerous but rather effective remedy as saffron acts as an *emmenagogue* as well as a

²⁴⁶ Plin. *HN*. 30.93.123-128.

²⁴⁷ Hatfield (2004, 130).

²⁴⁸ Wertz (1977, 17).

²⁴⁹ Talalaj (1994, 43).

conceptive tool.²⁵⁰ Finally, Pliny writes that a viper crossing a pregnant woman's path (even dead) would cause her to miscarry. This would only have been possible if the snake bit the woman, as they are venomous.²⁵¹ This folkloric remedy must have come from an eyewitness account.

On *castoreum*, Pliny notes:

‘It [*castoreum*] also arouses, by the smell of fumigation, sufferers from coma and hysterical, fainting women, the latter also by a pessary; it is an *emmenagogue* and brings away the after-birth if two drachmae are taken in water with pennyroyal.’²⁵²

Three medical conditions are detailed here: comas, hysteria and expelling the afterbirth. *Castoreum* is produced from the anal secretions of beavers. *Castoreum*, interestingly, is used as a flavour additive in many modern foods; such as frozen dairy products, alcoholic and non-alcoholic beverages and candy.²⁵³ Burning a product with such an intense vanilla flavour would have been fragrant, to say the least, and may well have functioned as a stimulant.

²⁵⁰ Khan (2010, 548).

²⁵¹ Simon (2012, 40).

²⁵² Plin. *HN*. 32.13.28-29.

²⁵³ Khan (2010, 157-158).

Pennyroyal is known as an antifertility agent and would certainly act as an *emmengogue*.²⁵⁴ However, combined these two ingredients would have had a high risk of doing damage to an embryo, so it is fortunate that Pliny only recommends it to bring away the after-birth.²⁵⁵

Finally, Pliny describes a markedly folkloric remedy for women during childbirth:

‘A snake’s slough, tied to the loins as an amulet, makes childbirth easier, but it must be taken off immediately after delivery... A stick with which a frog has been shaken from a snake helps lying-in women.’²⁵⁶

The reasoning behind the first part of this passage is unclear. What does Pliny or his source, believe will occur if the amulet isn’t removed immediately after delivery? This is not perspicuous. However, it is clear that the amulet is acting as a placebo against the psychological and physical pain of childbirth. The final section of this passage is confusing and is clearly folkloric in nature. This passage, in its entirety, is symbolic of Pliny’s willingness to accept amuletic and magical remedies without particular commentary or reservations.

²⁵⁴ Riddle (1997, 47). Pliny also provides a contrary recommendation, asserting that *castoreum* is beneficial for menstruation. He writes, ‘beaver oil taken in honey wine is good for menstruation, as also for troubles of the uterus if given to smell with vinegar and pitch, or made into tablets for a pessary.’ Plin. *HN*. 32.46.132-133. Further, Pliny recommends beaver oil for bring away the afterbirth and warns against pregnant women coming into contact with it. He writes, ‘to bring away the afterbirth it is also useful to use beaver oil with panaces in four cyathai of wine, and three oboli doses for those suffering chill. If, however, a pregnant woman steps over beaver oil or a beaver, it is said to cause a miscarriage, and a dangerous confinement if it is carried over her.’ Plin. *HN*. 32.46.133. These contrasting recommendations are emblematic of Pliny’s encyclopedic tradition and representative of the confusion surrounding fertility.

²⁵⁵ Mills (2005, 534)

²⁵⁶ Plin. *HN*. 30.94.129.

Conclusions

Based on the evidence we can glean a clearer understanding of Pliny's perspective on and approach to medical treatments for women approaching childbirth. Pliny's depiction of childbearing women is fairly neutral and non-androcentric. This is a surprising revelation. The claims that were made in the *Introduction* of this thesis, which labelled Pliny as an androcentric, are beginning to appear false and unjustified.

Although it would be a grave mistake to declare the *HN* a vital medical text, many of the remedies Pliny prescribes, outside of those imbued with magic or composed of animal organs, appear efficacious. Indeed, it is unexpected to note that the vast corpus of treatments Pliny cites in relation to pregnancy and childbirth were compiled in such a limited two-year period. This reveals Pliny's seemingly implicit thirst for knowledge.

Finally, these remedies reveal that women in ancient Italy had a whole team behind them throughout pregnancy and during labour. There must have been at least one if not more family members, friends or hired help to aid during the birth process whether they were fumigating, applying amulets or oils or simply attending to the needs of the would-be mother. This must have been a psychological and physical relief for a woman undertaking such a hazardous process. The appearance of such a large corpus of amulet remedies suggests that faith played an indispensable role in the delivery room. However, the presence of animal parts and dangerous herbs, among others, would only serve to have increased the likelihood of contracting an infection or inducing a miscarriage. Thus reinforcing the statement made at the beginning of this chapter about the hazardous nature of childbearing in the ancient world.

Chapter 4: Childrearing Remedies

Introduction

Infant mortality rates were unprecedentedly high during antiquity. In fact, the ancient evidence has focused on care of the mother in preference to the child. This is not overtly astounding in an unhygienic, pre-modern time period, where infant mortality was rampant. This chapter will explore the following evidence in the *HN* that speaks to the roles of women as healers and dispensers of medicine: this includes remedies related to the early stages of childrearing, principally nursing and midwifery.

Medicinal Benefits of Milk

A woman's milk in the ancient world was considered the most efficacious tool against diseases that babies/children could contract. This is why the vast number of remedies prescribed to a mother after birth and to her child involve her milk, or at least some sort of animal milk. This makes sense, as it is commonly known calcium is a vital property for good health, particularly in children. As such there is a garden variety of remedies which suggests both human and animal milk were used comprehensively in ancient medicine. On milk, Pliny writes:

‘...a woman's milk does not go bad while she is suckling a baby if she has become pregnant again from the same male.’²⁵⁷

Firstly, if a woman were to get pregnant with another man her milk would likely remain nutritionally the same. Secondly, what emerges in this passage is one example of Pliny's androcentrism. There is a connotation that implies becoming pregnant to another man (who is

²⁵⁷ Plin. *HN*. 7.16.67.

not the woman's husband) soon after giving birth is immoral and even dangerous to her child. Gender divisions also arise when Pliny discusses milk in connection with breastfeeding. He writes:

‘For all purposes, moreover, a woman’s milk is more efficacious if she has given birth to a boy, and much the most efficacious is hers, who has borne twin boys and herself abstains from wine and the more acrid foods.’²⁵⁸

This passage embodies some paternalistic undertones. Why would a woman’s milk be better if she has had a boy? There would be no nutritional differences in milk based on a baby’s gender. This is clearly an instance of Pliny subscribing to the ill-informed stereotype ascribed to ancient males. However, he is correct in asserting that abstaining from large quantities of wine and acrid foods will produce more wholesome milk.²⁵⁹

Ancient babies suffered from the same diseases as contemporary ones, for example Pliny refers to what we would term ‘nappy rash’. Use of this term is not appropriate in an ancient Roman context. So, too, etymology for the word ‘diaper’ may be traced back only as far as Medieval Greek and Latin. *Sinus* (referring to a fold of cloth) is a far more suitable term.²⁶⁰

Pliny details one method of relieving symptoms of this ailment:

‘To give to children before food a hemina of ass’s milk, or failing that of goat’s milk, and if the rectum smarted at stool, the ancients held to be one of their secrets.’²⁶¹

²⁵⁸ Plin. *HN*. 28.21.72-73.

²⁵⁹ Schmidt (2009, 38).

²⁶⁰ *CLD* (1997, 201).

²⁶¹ Plin. *HN*. 28.33.129-130.

A *hemina* is the equivalent of half a pint.²⁶² Nappy rash can occur when a baby begins to be weaned.²⁶³ In this case, it is not clear whether milk is to be ingested or placed upon the affected area to soothe it. In either form it was likely efficacious.

Further, Pliny writes:

‘By drinking sow’s milk with honey wine child-birth is eased, while taken by itself it refills the drying breasts of nursing mothers. These swell less if rubbed round with a sow’s blood. If they are painful they are soothed by drinking ass’s milk, which taken with the addition of honey is also beneficial for the purgings of women....’²⁶⁴

Sow’s milk and the sedative properties of wine may have helped to ease the pain of labour but Pliny thought it could also refill the breasts of mothers. This may be an example of the aforementioned placebo effect, i.e. drinking milk to replenish milk.²⁶⁵ Moreover, cooling properties may have been soothing if applied topically but were less effective when orally ingested. Again the recommendation of animal blood for medicinal cures was not uncommon in antiquity, although its efficacy is difficult to judge.²⁶⁶

Milk is also thoroughly advocated as a cure for poisonous bites, Pliny writes:

²⁶² Nuttall (1840, 264).

²⁶³ Owen (2012, 506).

²⁶⁴ Plin. *HN*. 28.77.250-251.

²⁶⁵ Soranus also believes sustenance produced by a mother was the best type of sustenance, he writes; ‘Its whole body is full of maternal food which it ought to digest first.’ Sor. *Gyn*. 2.7.17.

²⁶⁶ Hand (1980, 188).

‘A draught of woman’s milk is especially efficacious against the poison of the sea-hare, of the *buprestis*, or, as Aristotle tells us, of *dorycnium*, and for the madness caused by drinking henbane.’²⁶⁷

It is reasonable to assume any sort of sting/bite may be cooled and soothed by a dairy-based product. Pliny reveals that he was aware of the poisonous properties found in henbane but he still recommends it.²⁶⁸ Pliny’s source for this information comes from one of our most reliable sources on ancient medicine, Aristotle. Despite such a credible source it is debatable how effective this treatment would have been.

Next, Pliny writes:

‘It is asserted that one who has been rubbed with the milk of mother and daughter together never needs to fear eye trouble for the rest of his life.’²⁶⁹

This is a peculiar recommendation. It is also a little disconcerting. It suggests that both a mother and her child needed to be lactating at the same time. It could be argued that due to the timely and rare likelihood of such an occurrence it was thought to be efficacious.

Further, Pliny writes:

‘The milk of a woman, however, who has borne a girl is excellent, but only for curing spots on the face. Lung affections also are cured by woman’s milk, and if

²⁶⁷ Plin. *HN*. 28.21.74.

²⁶⁸ Similarly, Pliny was also aware that mandrake and opium had analgesic and narcotic properties. Plin *HN*. 20.76.198-201.

²⁶⁹ Plin. *HN*. 28.21.73

Attic honey is mixed with it and the urine of a child before puberty, a single spoonful of each, I find that worms too are driven from the ears. The mother of a boy gives milk a taste of which, they say, prevents dogs from going mad.²⁷⁰

There are some serious masculinist undertones present in this passage. If milk was as beneficial as Pliny believes, then surely there would be no nutritional differences between genders. With this in mind, we must also ask why Pliny suggests that only the milk of those nursing a boy could prevent dogs going mad? There are some androcentric nuances present in this passage and a division between the so-called weaker and stronger sexes is apparent. Contrary accounts are represented here. Is this accidental or purposeful? It is likely accidental and is a product of the *HN*'s encyclopedic tradition.

Pliny suggests the use of Attic honey with milk and a child's urine will supposedly ensure worms found in the ears die. Interestingly, due to the presence of the personal pronoun this passage implies Pliny's direct involvement in applying such a treatment and observing the results. On first glance this is not the type of remedy one would think would be useful, evidently it was as Pliny tested it on himself.

Pliny's praise of human milk continues unabated; he writes:

'Mother's milk is for everybody the most beneficial. [It is very bad for women to conceive while nursing; their nurselings are called *colostrati*, the milk being thick like cheese. But *colostra* is the first milk given after delivery, and is thick and

²⁷⁰ Plin. *HN*. 28.21.75. In addition to the medicinal qualities of milk, Pliny believes that butter was also beneficial. He writes, 'For babies nothing is more beneficial than butter, either by itself or with honey, especially when they are troubled with teething sore gums or ulcerated mouth.' Plin. *HN*. 28.78.257. This may well be an accurate supposition as butter and honey could act as soporific ingredients.

spongy. But any woman's milk is more nourishing than any other kind, the next being that of the goat; this perhaps is the origin of the story that Jupiter was nursed in this way. The sweetest milk after woman's is that of the camel, the most efficacious that of the ass²⁷¹

First of all, Pliny argues human milk is good for all. This implies that even adults used human milk for medicinal purposes. This may be a deplorable image to modern observers. However, this was clearly not the case among the ancients. For example, the ancient Greeks thought that human milk mixed with rue aided eyesight.²⁷² The Egyptians also prescribed women's milk for a variety of ailments.²⁷³ Pliny lists an assortment of other milks and explains their nutritional attributes. Here it is interesting to note that while he considered all milk good, he is at pains to note that every type has specific tastes and uses. Hatfield confirms that Pliny is correct in identifying the nutritional benefits of different types of breast milk.²⁷⁴

Animal/Plant Based Remedies

Pliny recommends a few remedies for breast pain while nursing. He writes:

‘The breasts after delivery are safeguarded by goose grease with rose oil and a spider's web. The Phrygians and Lycaonians have found that the fat of bustards is beneficial for teats disordered by childbirth. For uterine suffocation beetles also are applied. Ash of partridge egg-shells mixed with cadmia and wax keeps the breasts firm. They also think that breasts do not droop if circles are traced round

²⁷¹ Plin. *HN*. 28.33.123.

²⁷² Nic. *Alex*. 3.1. See St. John (1842, 330).

²⁷³ Manchip White (1970, 105).

²⁷⁴ Hatfield (2014, 336).

them three times with the egg of partridge or quail, and that if this egg is swallowed it also produces fertility and an abundant supply of milk as well, that it lessens pains in the breasts if they are rubbed with it and goose grease.²⁷⁵

The first part of this passage may have been efficacious due the products lubricant textures. Similarly, fat may have been soothing for women who were breastfeeding. Secondly, Phrygia and Lycaonia did have Greek influences so it should come as no surprise that Pliny cites these peoples as a credible source of information, since – as we have seen – Pliny held his Greek sources in higher regard than their Roman counterparts. Thirdly, Pliny argues that breasts will not droop if an egg encircles them three times and they produce abundant milk when these eggs are eaten. These represent an attempt to preserve beauty and enhance breast milk production but their efficacy is unclear. Finally, the last remedy calls for ash of partridge, eggshells, cadmia and wax. It is not clear why breasts need to be firm: vanity is likely a factor.

We will now return to herbal based remedies. On the plant called hellebore, Pliny writes:

‘Hellebore is never prescribed for old people or children, or for those who are soft and effeminate in body or mind, or for the thin or delicate; for women it is less suited than for men.’²⁷⁶

Hellebore is toxic.²⁷⁷ Pliny identifies old people, women and children as being the only groups unable to consume hellebore. His exclusion of his own gender implies only men were

²⁷⁵ Plin. *HN*. 30.45.131.

²⁷⁶ Plin. *HN*. 25.25.61. Soranus confirms hellebore’s use in medicine among the ancients, particularly in connection with promoting menstruation. Sor. *Gyn*. 3.1.12.

²⁷⁷ Lewis (1977, 31).

capable of ingesting this poisonous substance. The alleged immunity of the adult male provides another instance where Pliny (deliberately or incidentally) represents the physical and moral superiority of his own gender over all other women and categories of person (namely, young and old persons, whether male or female).

On hemlock, Pliny notes:

‘What is certain is that an application of hemlock to the breasts of women in childbed dries up their milk.’²⁷⁸

Hemlock is commonly used in herbal medicine to treat colds as it induces sweating, thereby breaking up the cold. It is also used to heal wounds and stop bleeding.²⁷⁹ It may have helped to dry up milk. However, this is an ill-advised recommendation due to henbane’s toxicity, at the least it would have caused a rash. However, this is the best-case scenario.

On vervain, Pliny records:

‘The root of vervain, taken in water, is a sovereign remedy for all troubles at or after child-birth.’²⁸⁰

French identifies vervain as a cure-all. Its medicinal properties have been used to aid colds, fevers and nervous disorders.²⁸¹ Vervain can also be used as a diuretic and would have been successful in expelling afterbirth.²⁸²

²⁷⁸ Plin. *HN*. 25.95.154.

²⁷⁹ Lewis (1977, 306).

²⁸⁰ Plin. *HN*. 26.90.160-161.

²⁸¹ French (1987, 81).

On hazelwort, Pliny writes:

‘The hazelwort used in medicine is called “perpressa” by some Roman authorities... It is applied to breasts swollen after child-birth.’²⁸³

Hazelwort, is similar to birthwort which has been mentioned extensively throughout this study. Its efficacy is unknown for the function Pliny has suggested. Roman authorities differ significantly from their Greek counterparts. Pliny appears to hold Greek authorities in higher regard than Roman. Nutton argues that Pliny often refers to Greek authorities in order to ensure Romans administering a remedy were doing so in a manner which would safeguard its ‘proper and effective use’. Essentially, by applying a moral viewpoint to the remedy (i.e. referencing Greeks), Nutton posits that Pliny wishes to show his readers that Roman possession of Greek knowledge could produce a more efficacious type of medicine.²⁸⁴ Next, Pliny notes:

‘For affections of the breasts the *aizoim* I have *calleda digitillum* is an outstanding remedy. *Erigeron* in raisin wine makes the breasts richer in milk, as does *soncum* boiled with emmer wheat; the plant called *mastos*, however, is applied as liniment.’²⁸⁵

There is no mention of *aizoim* or *calleda digitillum* outside of Pliny. Despite this singular point of reference, the ingredient must have been commonplace or at least well known enough

²⁸² Lewis (1977, 193).

²⁸³ Plin. *HN*. 21.77.132.

²⁸⁴ Nutton (2013, 169).

²⁸⁵ Plin. *HN*. 26.92.163.

to be mentioned in his work. *Erigeron* otherwise known as fleabane has interestingly been used to hasten uterine contractions.²⁸⁶ However, it may not have made milk richer. *Soncum* is an unknown substance so its efficacy cannot be deduced. *Mastos* means ‘breast’ in Greek.²⁸⁷ While there is very little information on the substance, its etymological origins are interesting, and it may be that the plant derived its name from its primary medicinal use. There are also a collection of Greek vases that are shaped in a similar shape to breasts called *mastos*.²⁸⁸

Women’s Role in Medicine: Midwives

Much has been written on the roles available for Roman women to practice medicine.²⁸⁹ As such, the focus of this final section will be to briefly summarise these roles based on the remedial evidence proposed by Pliny in the past four chapters. Firstly, it is clear that it was the paramount role of women to aid other women and children. Hence, midwifery is the most well-documented occupation, closely followed by nursing. The latter occupation required less education than the first but was still a respected profession.

A midwife played a vital role during and after childbirth. Not only did a midwife aid in the delivery room but she also decided if the child should be exposed or not. The survival of a mother and her child/children deeply depended on the medical expertise and experience of the midwife and her attendants. Our leading scholar on the topic, Rebecca Flemming, is openly positive towards *obstetrices*. She credits them with practising medicine in a surprisingly equal capacity with men. This is wonderfully refreshing for a society dominated by males.²⁹⁰

²⁸⁶ Mills-Hicks (2003, 648); Lewis (1977, 322).

²⁸⁷ Roberts (2014, 180).

²⁸⁸ Schreiber (1999, 195).

²⁸⁹ Laskaris (2008); Flemming (2000, 20007); Israelowich (2015).

²⁹⁰ Flemming (2007, 258).

Galen confirms that the midwife was in complete control during the birth. However, he concedes that when in difficulty she did converse with a physician.²⁹¹ Hence these women played a crucial role in the survival of a child. Soranus identifies three grades of midwifery.²⁹² Salpe is one midwife, referenced by Pliny, who likely fell into this last category. Pliny and Soranus both transmit contrasting accounts on midwifery and nursing. Since the literature on both midwifery and nursing are exclusively written by men these accounts are thus biased by gender and sex as is often the case with Pliny.

There are sixteen midwives depicted in the inscriptions of Rome, nine are taken from the *columbaria*, the burial chambers for the dependants of the imperial/upper-class families. These attest to the value and confidence placed upon midwives, and confirms the fact that such women served a central role in relation to a ubiquitous facet of family life in the *domus Caesaris* and elite households of imperial Rome. Laes tells us that there are in total 31 inscriptions which mention individual midwives. Their ages range from between 21-75. The inscriptions do not reveal a connection between the roles of midwifery and nursing despite some modern scholars suggesting this.²⁹³

²⁹¹ Gal. *Nat. Fac.* 3.3.

²⁹² The first was ‘technically proficient’, the next was educated in gynaecology and obstetrics, but the third was a specialist who had received in training ‘in all branches of therapy’. Sor. *Gyn.* 1.2.4. Soranus also recommends midwives be hygienic, consistent in their methods if symptoms change, be unafraid in the face of danger, be robust, sober, disciplined, frugal, free from superstition, and they should keep their hands soft but did not necessarily need to have given birth to any children themselves. He also offers advice to midwives to aid them in deciding if a child should be raised. His advice entails placing the child on the ground to determine the child’s gender at which point the child should cry ‘with proper vigor’. Further, the child’s mother should deliver on time, i.e. nine months from conception and she should have had a healthy and stable pregnancy. Finally, the baby should be physically fit and whole. Soranus details a test to determine a baby’s physical health. He writes, ‘... that it has due size and shape and is properly sensitive in every respect. This we may recognise by pressing the fingers against the surface of the body, for it is natural to suffer pain from everything that pricks or squeezes.’ Sor. *Gyn.* 2.10.79.

²⁹³ Laes (2011).

The majority of midwives were slaves or freedwomen. Slave girls may have followed their mothers' professions, with their training commencing from a premature age. One example of an epitaph records the death of an *obstetrix*, Publicia Aphe, at the age of 21.²⁹⁴ Midwives were paid for their services and this may have made the profession desirable.²⁹⁵ A woman's socio-economic background was not necessarily relevant, although it may have been considered in the selection process.

Nurses

Nursing developed as a result of a hierarchical society.²⁹⁶ Originally, in early Rome women nursed their own children. Joshel equates this transition towards the practise of employing a nurse with moral decay. She notes that ancestors reared their own children rather than passing them off to a slave.²⁹⁷

Bradley tells us that the profession of nursing wasn't specific to the female sex. Of course, females were more common but there were male nurses as well who aided in a child's development during their formative years.²⁹⁸ A male *nutrix* and a *pedagogus* may have been a joint occupation if a family could not afford two separate people to complete these jobs. Thus, as with the midwife the moral and physical integrity of the person would need to be examined. Soranus details instructions to choose a suitable nurse, in a similar fashion to his

²⁹⁴ It reads, 'Publicia Aphe, midwife, freedwoman of Gaia. May your bones rest peaceful. She lived 21 years.' *CIL* VI.9723. There are five more inscriptions dedicated to midwives during the 1st/2nd centuries in Rome. These are; *CIL* VI.6325, 6647, 8192, 9720, 9721, 9722, 9723.

²⁹⁵ French (1987, 73).

²⁹⁶ Bradley (1992, 216).

²⁹⁷ Joshel (1986, 7).

²⁹⁸ Bradley (1985).

recommendations for selecting a midwife.²⁹⁹ A nurse required a higher level of education in order to deal with any diseases which a child was likely to contract.

Plutarch disliked wet-nursing because he believed it prevented emotional bonding between mother and child.³⁰⁰ However, opposition to the practice in the imperial period numbered a small minority.³⁰¹ Although maternal death was the main reason to hire a wet-nurse among the lower classes, it is unreasonable to assume that this was the only reason. Another major contributing factor for infant mortality among the lesser classes was a direct result of close living quarters in *cubicula*.³⁰² This mortality rate was also caused by poor hygiene, dietary insufficiencies, and inadequate medical knowledge. Further, pre-mastication of solid food by nurses was thought to have been practised which furthered the spread of diseases among infants.³⁰³ Other factors that explain why a nurse may be employed include child exposure, a mother's physical/emotional inability to care for a child, and milk inadequacy.³⁰⁴ Thus it is clear that mothers and nurses played a central role in the socio-economic improvement of the family.³⁰⁵

Nurses came from the servile ranks. Slaves from a variety of ethnicities were thought to make superior nurses over others. Each cultural background afforded a variety of beneficial

²⁹⁹ Soranus recommends that a wet nurse should be between the age of 20 or 40, have given birth more than once, be self-controlled, sympathetic, Greek and tidy. Soranus' background as a Greek would no doubt have influenced his advisement to select a Greek woman. He also advises that bodily, she should be healthy, have medium sized breasts, be of large frame and be of good colour. Sor. *Gyn.* 2.19.88.

³⁰⁰ Plut. *De Lib. Ed.*, 5.

³⁰¹ Bradley (1992, 215).

³⁰² Clark (1981, 198).

³⁰³ Bradley (1992, 219).

³⁰⁴ Bradley (1992, 210). It is possible that postpartum depression was also a significant factor in the need for a nurse, if a mother was emotionally incapable of caring for her child due to this condition. Any sort of prolonged depression in the ancient world was termed 'melancholia' by Hippocrates. Hipp. *Aph.* 6.23.

³⁰⁵ See Frascetti (2001, 52).

attributes. Dasen has compiled a list of these attributes. For example, Egyptians were affectionate towards children, Thracians were vigorous and dedicated and Spartans were tough.³⁰⁶ Although from servile rank, they could sometimes become vital members of the family, forming familial bonds with his/her charge.³⁰⁷ This is likely because children had limited contact with their parents during their malleable years. This raises the excellent point that parents may have been attempting to emotionally distance themselves due to the high infant mortality rate. Thus, the child relied upon the nurse for food, physical care and emotional support. Hence, a nurse – as with the midwife – had significant control over a new heir.³⁰⁸ As such a bond, in some cases, could be formed between the child and his/her carer epitaphs exemplify this connection.³⁰⁹ Pliny the Younger even bought a farm for his nurse. This purchase demonstrates the reversal of power from the nurse in Pliny's early years to his control during his nurse's twilight years.³¹⁰ This bequest exemplifies that it was possible for close familial bonds to form between a nurse and her care during a child's formative years, which lasted, well into adulthood.³¹¹

Conclusions

Firstly, many of the post-childbirth remedies relayed by Pliny focused on the care of the mother, particularly in relation to breastfeeding. Diseases among children are addressed but on a much smaller scale. This may not be that unexpected, as breast milk was considered the cure-all for earliest childhood diseases. The curative powers ascribed to women's milk are

³⁰⁶ Dasen (2011, 308).

³⁰⁷ Bradley (1985, 515).

³⁰⁸ Joshel (1986, 10).

³⁰⁹ For instance, 'Cornelia Prima nurse of Scipio.' *CIL* VI.16128.

³¹⁰ Plin. *Ep.* 6.3.

³¹¹ On the contrary, Gawthorne-Hardy argues that wet-nursing, as part of a hierarchical system, meant that children may have learnt to view their nurses from a socially detached perspective. Gawthorne-Hardy (1972, 78-8). This is an excellent point although it may not be accurate for all children as it is clear from the epitaphs that many developed a social relationship with their nurses.

comparable to the curative effects of menstruation described in *Chapter One*. The cure-all powers of a woman's milk placed all women in the unique position of healer. Sanitary conditions in the ancient world meant the safest sustenance for a newborn was a mother or wet-nurse's milk. The implication of this was that women played an essential role in the socio-domestic space.

Secondly, Pliny's evidence confirms that midwifery and nursing were the two main professional roles available for women to practise medicine professionally. There is no mention of Roman female doctors in his work, although it is known that there were some female doctors throughout antiquity.³¹² Midwives' roles extended beyond the delivery room: they were fundamental in declaring whether a child was worthy to be raised or whether it should be exposed. Thus the midwife essentially had power over the life or death of a potential heir. Sotira and Salpe are the only two midwives mentioned by name in the *HN*. The fact that their names appear without explanation indicates their renown and their relatively important and respected role in society.

Similarly, nurses were also vital in the ancient world, given the endemic nature of childbirth mortality. However, it was not simply out of necessity that this profession developed: it was also as a result of a deeply entrenched hierarchical society. Nurses mainly came from the servile class but could form close social bonds with the recipients of their care which could facilitate material wealth and even a place in the *columbaria*.

³¹² References to female doctors are fragmentary. There are nine inscriptions which commemorate female physicians. From Tlos, Antiochis (Pleket 12.G), from Rome, Primilla (*CIL* VI.7581), Terentia (*CIL* VI.9619), Julia Pye (*CIL* VI.9614), Minucia Asste (*CIL* VI. 9615), Venuleia Sosis (*CIL* VI.9617), Melitine (*CIL* VI.6851), from Perganum, Panthia (Pleket 20. G) and from Neoclaudopolis, Domnia (Pleket 26.G). See Leftkowitz and Fant (2011, 264-265).

Conclusions

This study has uncovered a generous number of findings which will now be highlighted.

It is clear that as patients, Roman women were adventurous with the types of treatments they were willing to experiment with. *Chapter One* has shown the *superstitio* surrounding menstruating women and has equated them with causing meteorological and cosmological devastation. Menstruating women are blamed for triggering draughts and infecting animals with madness and death. Conversely, menstrual fluid is also credited with curative powers. Thus demonstrating the idiosyncrasies surrounding menstruation. It is clear from the evidence analysed in this study that rhetoric permeating menstruation in the ancient world was embedded in an oral tradition passed down through cultures, these cultures understood little on the subject, particularly in regard to its connection with fertility.

Chapter Two and *Three* has revealed the dangerous and experimental nature of birth control, conception and childbirth. Remedies were rooted in folklore and often involved the use of pessaries and amulets, which when viewed from a neoteric perspective seem archaic. These folkloric treatments reveal the faith placed on placebos acting as a psychological relief for women during an arduous time. However, the employment and presence of pessaries, animal parts and fumigations in the delivery room likely facilitated a greater chance of infection, thus rendering their benefits as a placebo or emotional support useless. The inherent ambiguity surrounding conception and abortion has also become apparent. The remedies reviewed in this study embody a folkloric tradition, which is representative of 'everyday life' medicine. It demonstrates ordinary ancient female Italians acting in the unique position of both patient and healer when unable to afford or unwilling to trust the expertise of a physician.

In *Chapter Four* we discovered the value placed on human and animal milk as a cure-all, prescribed to newborns, children and adults alike. The emphasis on lactating women embodying a curative natural product is at times disturbing, especially when the milk of a mother and her daughter is called for. We also highlighted that the role of midwife was fundamental in a society which viewed the treatment of women as being the prerogative of other women. Although, traditionally the *paterfamilias* was viewed as the dispenser of medicine it was inevitably the providence of women to treat any medical conditions specific to those addressed in this study.³¹³ Her duties went beyond overseeing the safe arrival of a baby, she also played a crucial role in determining whether a child was fit to be raised. This meant that in a male-centric and patriarchal society women held a substantial amount of power over the life of a newborn. The lack of proper hygiene in the delivery process likely contributed to both infant and maternal mortality thus necessitating the employment of a nurse. The hiring of a nurse was a direct result of the development of a hierarchical societal system and was linked with unhygienic practises during birth, resulting in the death of the mother. Some nurses were able to sustain familial bonds with their care, resulting in their own socio-economic improvement and this is obvious from the inscriptional evidence.

The remedies we have reviewed in the *HN* can be placed within three categories. These are efficacious, non-efficacious and folkloric treatments. In terms of herbal medicaments, a surprisingly large amount of them appear, efficacious. Regarding the plant based remedies which have been reviewed in this study, approximately 38 of the ingredients and their subsequent treatments cited by Pliny would have been efficacious for the manner in which Pliny has recommended them, 9 ingredients would have non-efficacious and 16 ingredients are untested, or too vaguely described by Pliny and thus unknown.³¹⁴ However, most of the ingredients that have been cited as efficacious were also toxic such as hellebore, henbane,

³¹³ Prioreschi (1996, 45).

³¹⁴ See *Appendix*, p. 100

mandrake and rue, to name a few. This greatly impacts their worth in the mind of a modern observer. It is hoped that the pharmacopeia related findings inherent in this study coincide and enhance the work previously conducted by the likes of Riddle, McDaniel and Stannard. Pliny's recognition of modern medical conditions is commendable and indicates that ancient people were aware of scientific and genetic conditions as we are in contemporary society.

The assumption made in the *Introduction* of this study which implied Pliny's place in society would automatically categorise him as an androcentric has to be re-evaluated. Pliny's representation of women as healers is idiosyncratic. The stereotypical elite ancient male is often not represented in the passages we have discussed. Instead we find a mostly neutral and bland transmission of information, which is indicative of the encyclopedic tradition embodied by the *HN*. There are exceptions to this rule, and these critiques and negative commentaries usually arise when Pliny discusses menstruating or lactating women. However, overall, the encyclopedic genre is blatantly obvious when examining medical conditions and remedies due to the lack of proper dosages and methods, which re-enforces Pliny's pre-occupation with the properties of plants rather than medicinal cures.

Pliny's citation of his sources is sporadic at best. He rarely cites a source when describing medical conditions and when he does he uses the ambiguously vague term '*auctores*'. However, we are fortunate that he does credit five female sources; Elephantis, Lais, Olympias of Thebes, Salpe and Sotira. He treats his female sources as equally meritorious with their male counterparts and as such he should be commended for his neutral textual approach when citing them. Their citation by name, rather than simply ascribing the label '*obstetrix*' or lumping them into some other category, suggests women were able to attain social standing and prominence within their medical fields.

Finally, there are a number of facets of this thesis, which may be examined, in a future study. This dissertation has only been able to analyse a limited portion of the remedies in the *HN*. A future study could examine, in its entirety, all remedies related to women found in the *HN*. A future investigation may also be undertaken to reveal a pattern between the efficacy of ancient and medieval treatments for female medical conditions, since medieval medicine is mostly – not to generalise – derived from the ancients. A comparative study incorporating the works of Celsus, Soranus and Dioscorides may also be accommodated. Additionally, the inclusion of a thorough examination of the epigraphical and inscriptional evidence would further supplement this study.

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Appendix: List of Plant Ingredients Reviewed

Ingredient	Medicinal Use	Dosage (if cited)	Source (if cited)	Effective?
<i>Achillia</i> (yarrow)	Checks excessive menstruation			Yes
<i>Agaric</i> (mushrooms)	Hysterical suffocations	Taken in doses of three oboli to a cyathus of old wine		Yes
	Delayed menstruation			Unknown
	<i>Emmenagogue</i>			Unknown
<i>Aizoium/ calleda digitium</i>	<i>Affections of the breast</i>			Unknown
<i>Alcima</i>	Emmenagogue			Unknown
<i>Anagyros</i>	Aid during delivery	Amulet		No
<i>Anethum graveolens</i> (dill)	Cure for sterility	With Hyeana's eye and liquorice		Yes
	Conception			Yes
<i>Antirrhinon</i> (snapdragon)	Hysterical suffocations	With rose oil and honey		Unknown
	Delayed menstruation			
<i>Aristolochia</i> (birthwort)	Ensures the birth of a son	Eaten with veal at the time of conception		No
	<i>Emmenagogue</i>	Drunk with myrrh and pepper or used as a pessary		Yes
	Expels dead foetus			Yes
	Contraceptive			Yes
	abortive			Yes
<i>Artemisia</i> (wormwood)	Expels a dead foetus	Drunk with iris oil fig or myrrh		Yes

<i>Asarum europaeum</i> (hazelwort)	Cleansing after miscarriage			Yes
	Abortifacient			Yes
	Applied to breasts after childbirth			Unknown
<i>Asplenon</i> (spleenwort)	Causes barrenness			Yes
<i>Atropa mandragora</i> (mandrake)	Checks excessive menstruation			Unknown
<i>Batrachium</i> (buttercup)	Promote menstruation	Taken in drink or food, or used as a pessary		Yes
Cabbage	Abortive	Burning the root or eating it raw	Lais and Elephantis	Yes but only when ingested
	Postcoital contraceptive			Yes
	Reduce morning sickness	Eaten	Hippocrates	No
	Ease breast swelling Enhance milk supply	Applied Topically	Hippocrates	Yes No
<i>Centarium erythraea</i> (greater centuary)	Beneficial on uterine pains	Drunk or as a fomentation		Yes
<i>Centarium erythraea</i> (lesser centuary)	<i>Emmenagogue</i>	Drunk or as a fomentation		No
<i>Cichorium intybus</i> (chicory)	Withdraws an unborn baby and acts as a purgative	Boiled in water		Yes
<i>Citrus medica</i> (citrons)	Eases nausea and settles the stomach in pregnant women			Yes
<i>Conium maculatum</i> (hemlock)	Dries up breast milk	Applied topically		No
<i>Cyclamen</i>	<i>Emmenagogue</i>	In drink or as a pessary		Yes
<i>Dranuculus</i>	Causes miscarriage		Greeks	Unknown

(dragonwort)				
<i>Elaterium</i> (squirting cucumber)	Promotes menstruation			Yes
	Causes abortion			Yes
<i>Epimedium</i> (barrenwort)	Stops breast growth in young girls	Beaten in wine		Yes
<i>Glycyrrhiza glabra</i> (Licourice)	Cure for sterility Conception	With Hyeana's eye and dill		Yes
<i>Helleborus</i> (Hellebore)	General poison			Yes*0
<i>Hippuris</i> (the Mare's Tail)	<i>Emmenagogue</i>	Pessary		Unknown
<i>Hyoscyamus niger</i> (Henbane root)	Unclear	Applied to breasts and uterus with <i>chelidonia</i> (swallowwort)		Unknown
<i>Lapathum</i>	Prevents miscarriage	Taken with five crabs, soot, rue and honey wine		No
<i>Linozostis</i> (mercurialis)	In connection with menstruation	Taken with food for three days		Unknown
	Uterine pain	Used as a pessary with oil of rose, iris, lilies	Hippocrates	Unknown
	<i>Emmenagogue</i> /expel after-birth		Hippocrates	Unknown
<i>Mentha pulegium</i> (pennyroyal)	<i>Emmenagogue</i>	Two drachmae taken in water with <i>castoreum</i>		Yes
Myrrh	Expels a dead foetus	Taken in drink with Artemisia, iris oil or fig		Yes
Myrtle	Abortive	Burning the root (see Cabbage)	Lais and Elephantis	Yes
<i>Peristereos</i> (vervain)	Hysterical suffocations Delayed menstruation	Pessary with lard		Not in pessary form.

<i>Polemonia</i> (Greek valerian)	Brings away afterbirth	Drunk with wine		Yes
<i>Punica granatum</i> (pomegranate)	Contraceptive			Yes
	Eases nausea			Yes
Radish	Increase the supply of milk		Medius	Yes
	Relieve uterine pine	Applied topically	Hippocrates	No
<i>Ruta graveolens</i> (rue)	Promotes Menstruation	With five crabs, honey wine, soot and <i>lapathum</i>	Hippocrates	Yes
	Withdraws Dead foetus			Yes
<i>Silphium</i>	Promotes menstruation	Pessary with wine		Unknown
<i>Soncum</i>	Makes breast milk richer			Unknown
<i>Tamarix</i> (tamarisk)	Abortive	Burning the root	Lais and Elephantis	Yes
Thessalian <i>nymphaea</i> (water lily)	Checks excessive menstruation	Taken with dark-red wine		Yes
Tongue (plant)	Aid during delivery	Amulet		No
<i>Pimenta racemosa</i> (Bay)	Manage menstrual pain			Yes
<i>Verbena</i> (Vervain)	Aid during delivery	Drunk in water		Yes
	Beneficial afterbirth	Drunk in water		Yes