**TITLE:**

Genetics, Molar Pregnancies, and Medieval Ideas of Monstrous Births: The Lump of Flesh in *The King of Tars*

**ABSTRACT**

The medieval English romance *The King of Tars* gives an account of a birth of a lump of flesh. This has been considered as fantastic and monstrous in past literature, the horrific union of a Christian and Saracen. However, while the text certainly speaks to miscegenation, we propose that this lump of flesh is actually a hydatidiform mole. We trace the hydatidiform mole from antiquity, surrounding it with contextual medieval examples, from theology, history, and medicine, that also describe abnormal births as ‘lumps of flesh’. By discussing medieval ideas of monsters as a warning sign, we interpret the lump of flesh in terms of abnormal births, seed transmission, parental contribution and sin. Ideas of warning, blame, and intervention present themselves as a response to moles both in medieval texts as well as in modern reactions to hydatidiform moles. We explore the epigenetics of hydatidiform moles and relate them to the medieval text. In *The King of Tars*, the fault for the lump of flesh could reside with either parent; we find that this is also the case in the genetic formation of the hydatidiform mole; we also argue that the epigenetics supports medieval theories of seed transmission.

**INTRODUCTION and METHODOLOGY**

Many medieval texts call upon the modern sense of judgement to be suspended to accept the extraordinary. Historical chronicles detail impossible feats of battle. Medieval bestiaries catalogue sirens, unicorns, and satyrs alongside deer and beavers.[[1]](#endnote-1) Augustine lists an array of monstrous peoples, including dog-headed men (cynocephali).[[2]](#endnote-2) Medical treatises claim that oregano causes leprosy or grilled chickpeas reduce fevers.[[3]](#endnote-3) If the historical, medical, and theological texts of the Middle Ages require the modern individual to suspend disbelief, the literature of medieval romance seems to specialise in detailing the unbelievable. So the modern reader of the Middle English romance *The King of Tars* instinctively glosses as fiction the union of a Christian princess and a Saracen (Muslim) Sultan resulting in the birth not of a baby but a lump of flesh. The inclination to label the lump of flesh as fantastic is supported by further miraculous events of the narrative: the transformation of the lump of flesh into a beautiful, healthy boy, and the Sultan’s own transformation from black skin to white. But what if this lump of flesh were not a medieval fiction, but a genetic condition? A rare but well-recognised complication of pregnancy is the development of a hydatidiform mole, a non-viable outcome resembling a lump of flesh. This paper will investigate this possibility in relation to *The King of Tars.*

The lump of flesh appears in *The King of Tars* in an emotionally-charged and unorthodox setting.

The narrative opens with a Saracen Sultan waging war on the Christian kingdom of Tars—and the Christians are losing. The Sultan demands the hand of the princess of Tars, and in order to save her people so he does not kill ‘Cristen kende’ (Christian kind), the princess of Tars accepts.[[4]](#endnote-4)[[5]](#endnote-5) Such a union was considered shocking and even damning by the Church.[[6]](#endnote-6) To make matters worse, the princess consents not only to marry the Sultan, but to convert to his religion, dress like his people, and pray to his gods. While the text glosses that ‘Jhesu forgat sche nought’ (Jesus forgot she not),[[7]](#endnote-7) Siobhain Calkin remarks that ‘the princess is, for all intents and purposes, a Saracen’.[[8]](#endnote-8) The marriage takes place, the princess conceives, and after forty weeks gives birth to ‘a rond of flesche’ (a lump of flesh).[[9]](#endnote-9) The couple, appalled, each blame the other for their lifeless, shapeless offspring. The Saracen Sultan reads it as a sign of his wife’s false conversion; the wife sees it as the Sultan’s fault. They agree to offer the lump to their deities—Christian or Saracen—and to convert to the religion which animates the child. When the Sultan’s gods fail to supply the child with life, the princess petitions a priest to baptise the lump of flesh, whereupon it transforms into beautiful boy. The Sultan dutifully consents to baptism, whereupon his skin transforms from black to white. By presenting the birth of the lump as the fault of one of its parents, the narrative arouses the questions of warning, blame, and intervention that are central to the narrative.

The Sultan’s transformation and the tensions between Christian and Saracen faith lend themselves suggestively to post-colonial interpretations of miscegenation, racism, and fears of uniting with someone from a different religion. Jane Gilbert argues persuasively to view the lump of flesh as a sign of the Sultan’s failure to impose paternity on his offspring.[[10]](#endnote-10) Siobhain Calkin continues this post-colonial interpretation to view the lump of flesh as the monstrous intermingling of Christian and Saracen.[[11]](#endnote-11) All of the historical analogues to *The King of Tars,* recounted in the mid-century research of Linda Hornstein, portray the birth of a monstrous child.[[12]](#endnote-12) As a result of this, much of the surrounding literature on the lump of flesh has termed it a monster. Geraldine Heng states it is ‘a monster of the flesh, in the flesh’.[[13]](#endnote-13) Corinne Saunders writes that ‘the monstrous marriage results in a monstrous child’.[[14]](#endnote-14) Alongside the term monster is the suggestion that the lump of flesh is an impossible fiction, inserted merely to heighten the narrative’s feelings of racism. Calkin claims that it eludes both biological and religious classification.[[15]](#endnote-15) Gilbert calls the lump of flesh ‘outrageously sensational’.[[16]](#endnote-16) The critical aura surrounding the lump of flesh aligns it with the monstrous, the unlikely, and the fictional.

By contextualising the birth of the lump of flesh in *The King of Tars* with other medieval accounts of births of lump of flesh and by grounding this in modern genetics, we contend that the lump of flesh in *The King of Tars* may not be fictitious at all, but a congenital medical condition called a hydatidiform mole or molar pregnancy. This has several implications. The first is that if the lump of flesh is not a fiction, then it evidences genuine fears. It proves that the narrative draws on valid—if extreme—possibilities in pregnancy that could occur. This also accords with the narrative conventions of wish fulfilment found in romance—the satisfaction of (sub)conscious desires of audience and writer in positive extremes—such as the appearance of a faery mistress to an unsuspecting knight.[[17]](#endnote-17) The episode of the birth of a lump of flesh evidences this opposite: the fulfilment, not of extreme wishes, but of extreme nightmares. The lump of flesh as hydatidiform mole also expands the possibility of interpretation. While the post-colonial readings are persuasive, they do not provide a holistic picture of the lump of flesh in *The King of Tars.* Evidencing possible fears surrounding pregnancy grounds the text in what is potentially a more authentic light of how a medieval audience considered the lump of flesh. This genetic viewpoint by no means negates post-colonial interpretation, but offers alternative possibilities to the medieval perception and interpretation of abnormal pregnancies.

If the lump of flesh has a possible genetic origin, this associates *The King of Tars* with other accounts of lumps of flesh—in both medieval and present-day occurrences. Proving that this may be a genetic cause increases the credibility of medieval engagement with science and medicine. It engenders from both scientific and humanities researchers a greater respect for this medieval writer and their community in that, not only did they know from direct or indirect experience that moles existed, but in a form of medical enquiry found ways to describe the cause, course, and consequence of moles. If this is a genuine mole, how does modern clinical practice to molar pregnancies compare with medieval ones? How much do response and treatment differ? And, is the term ‘monster’—so commonly applied in critical literature—still appropriate? How do the medieval accounts of formation of hydatidiform moles—or abnormal births in general—differ from modern perspectives, and are any medieval ideas concerning conception and seed transmission accurate? The lump of flesh in *the King of Tars* touches on all these issues—and opens new vistas for discussion.

Finally, identifying the lump of flesh as a hydatidiform mole may clarify past scholarship. Calkin claims that the lump of flesh ‘eludes biological […] categorization’.[[18]](#endnote-18) A hydatidiform mole provides the lump of flesh with biological categorization. While we arrived at our conclusion of a hydatidiform mole in *The King of Tars* independently, in our critical reading to compose this article, we discovered that the possibility of a *mola matricis* (the medieval name for a hydatidiform mole) had been suggested in recent criticism, but without a genetic foundation appeared with some inaccuracy of interpretation. For example, Sarah Star mentions moles in relation to *The King of Tars* and Henry Daniel, stating that ‘*mola* are not the result of a pregnancy gone wrong: they are not the result of a pregnancy at all,’[[19]](#endnote-19) [[20]](#endnote-20) [[21]](#endnote-21) but hydatidiform mole is a well-recognised form of non-viable pregnancy.

While previous approaches have been informed by post-colonial discourse, this paper approaches present issues through a thorough medical and historical contextualisation in the Middle Ages to situate the lump of flesh in *The King of Tars* within larger narratives of similar case studies in medieval European sources and modern clinical practice. In doing so it will explore the possibility of a medical diagnosis for the lump of flesh as a hydatidiform mole; the medieval historical and gynaecological evidence of *mola matricis*; the strength of the evidence in the *The King of Tars;* medieval concepts of seed transmission and origins of monsters; and the implications of warning, blame, and intervention surrounding moles in medieval and epigenetic discourse.

**THE LUMP OF FLESH, *MOLA MATRICIS,* HYDATIDIFORM MOLE**

*The King of Tars* dedicates nine lines to describing the physical condition of the couple’s offspring:

And when the child was ybore, And when the child was born  
Wel sori wimen were therfore, Well sorry the women were therefore,  
For lim no hadde it non, For no limb had it none,  
Bot as a rond of flesche yschore But as a shorn lump of flesh   
In chaumber it lay hem bifore In chamber it lay them before  
Withouten blod and bon. Without blood and bone.   
For sorwe the levedi wald dye, For sorrow the lady wished to die,  
For it hadde noither nose no eye For it had neither nose nor eye  
Bot lay ded as the ston.[[22]](#endnote-22) But lay dead as the stone.

The text describes the child as without limbs, as a ‘rond of flesche’, without blood, bones, nose, or eyes. The Medieval English Dictionary (MED) describes ‘rond’ (‘rounde’) as ‘a spherical body or form; a globular lump’.[[23]](#endnote-23) The text of *The King of Tars* refers to the child before its transformation as the ‘flesche’.[[24]](#endnote-24) The MED defines ‘flesche’ as ‘the flesh of the human body; esp., the muscular, gristly, and glandular portions (as opposed to blood vessels, bones, fat, hair, ligaments, nerves, skin, etc.)’.[[25]](#endnote-25) The medieval use of the word gristle was synonymous with the modern term for cartilage or tissue. For example, John Trevisa, translating *De Proprietatibus Rerum,* writes: ‘Grustil is tendirnes of bones, and hatte *cartilago* in latyn’ (Gristle is tenderness of the bones and called *cartilago* in Latin).[[26]](#endnote-26) The linguistic implication then is that the ‘flesche’ refers to cartilage or tissue. The couple pray the lump of flesh attain ‘liif and limes’ (life and limbs), and that it be ‘fourmed after a man’ (formed after a man)[[27]](#endnote-27): ‘liif’ refers to the principle of animation, namely a soul; ‘limes’ refers to formation into human likeness. Later in the narrative, the lump of flesh gains a face, skin, limbs, and a voice—features it did not possess prior to transformation.[[28]](#endnote-28) The text also carefully states the princess gave birth ‘atte fourti woukes ende’ (at the end of forty weeks).[[29]](#endnote-29) In summary, if this is a congenital medical condition, what features does this abnormal birth possess that might help us identify it? First, it is an abnormal pregnancy. Second, the lump of flesh contains no defining features of humanity—no bones, no facial features, no organs. Third, it is a globular lump, consisting of muscles, cartilage, or glands—in short, tissue. The congenital medical condition of a *mola matricis,* now referred to as a hydatidiform mole, appears to fulfil these requirements.

A hydatidiform mole goes by many names: a *mylam*, *mola matricis,* uterine mole,or molar pregnancy and occurs when an abnormal ovum (mother’s egg), typically containing no genetic material, is fertilised by a sperm (or sperms).[[30]](#endnote-30)[[31]](#endnote-31)[[32]](#endnote-32) Normally such a zygote dies, but occasionally it implants onto the uterine wall and initiates the development of the placenta. The trophoblastic cells of the placenta proliferate and develop at an abnormal rate into a large mass of fluid-filled sacs. At term, or before, the mother gives birth to an overgrown placenta. It is a relatively uncommon condition, with a prevalence in the US and Europe of one in 1,000 pregnancies, and relatively increased prevalence in reproductively very young or older women.[[33]](#endnote-33) The OED defines a mole as ‘an abnormal mass within the uterus, *spec.* one formed as a result of the death and degeneration of the fetus early in gestation or by the proliferation of trophoblast’.[[34]](#endnote-34) The hydatidiform mole supports the latter cause. Kajii and Ohama offer this definition: ‘Classic hydatidiform mole is the product of an abnormal pregnancy with grossly swollen chorionic villi, but without an embryo, cord or amniotic membrane.’[[35]](#endnote-35) Medical case reports refer to women with a molar pregnancy in the following terms: ‘enlarged uterus’, ‘fleshy mole’;[[36]](#endnote-36) ‘the uterus growing much more rapidly than normal’;[[37]](#endnote-37) ‘a hydatidiform mole the size of a large placenta’;[[38]](#endnote-38) ‘largely dilated with a mass protruding from it’, ‘cystic tumour’;[[39]](#endnote-39) a ‘monstrous birth’, ‘altogether without form’, a ‘lump of flesh’, and ‘in the form of a globe’.[[40]](#endnote-40) [[41]](#endnote-41)

The mole consists of a mass of tissue which certainly resembles a lump of flesh; the fluid-filled sacs (often referred to as ‘grapes’) of the hydatidiform mole appear ‘ronde’ as globular, spherical lumps. The tissue of the placenta fulfils the adjectives described by the Middle English word ‘flesche’, as it is not blood, bones, ligaments, and nerves, but what the medieval writers referred to as cartilage or gristle, and what we refer to as tissue. The evidence, at face value, supports the possibility of the hydatidiform mole as *The King of Tars’*s ‘ronde of fleshe’.

The *mola matricis* has been noted since antiquity. Aristotle and Soranus in their Greek writings refer to it as ‘mylam’.[[42]](#endnote-42)[[43]](#endnote-43)[[44]](#endnote-44) English translators of Aristotle’s *De Generatione Animalium* translate ‘mylam’ as ‘mola’ and describe it as a ‘lump of flesh’.[[45]](#endnote-45) Aristotle and Soranus, among others, influenced medieval considerations of women’s disease—on both theological and gynaecological oriented texts. Drawing from Aristotle’s descriptions of a *mylam,* a Hebrew translation (1197-1199) of *De passionibus mulierum* notes the presence of a *mola*, and describes the symptoms:

‘On the hardness of the womb. This ailment is called *mola.* […] Her belly is expanded and she seems pregnant. At times, malign flesh grows out of the womb’s lesion. If the midwife puts her finger inside, she will feel something like the cervix there, which is called *mola.*[…] There is a difference between one who suffers from *mola* and one who is pregnant. […] One who suffers from mola feels pricks and pains every day, and after a while she does not feel the foetus, either alive or dead.’[[46]](#endnote-46)

Here a *mola* is described as the appearance of pregnancy but is actually a ‘malign flesh’ that grows in the womb. Albertus Magnus, a Dominican Bishop and philosopher who was the first to comment on all of Aristotle’s works (d. 1280) and who also, incidentally, taught his famous pupil Thomas Aquinas, also comments on moles. In *De animalibus,* he attributes an entire section to ‘De impedimento generationis, quod est mola matricis vocatum’.He describes the *mola matricis* as:‘peperit multam et magnam carnem’ (‘she gives birth to a mighty lump of flesh’).[[47]](#endnote-47) The Pseudo-Albertus, a disciple of Albertus Magnus writing in the late thirteenth or early fourteenth century, also mentions the *mola matricis.* He explains it as occurring from a female omission of seed when women desire, but are unable to have, intercourse. As a result, this seed ferments in the body:

The womb must be able to open, because if it does not do so when sperm is ejaculated, then the sperm falls elsewhere and after some time a large mass of flesh is generated from this. This happens to many young women who are incapable of performing the venereal act because of the small opening of their womb. When they are in bed asleep at night lying on their backs the exceeding attraction and desire that they experience causes them to have an emission of their own seed. This pollution remains inside their body near the umbilicus and grows into a large mass of flesh, so that their abdomen begins to swell and they believe mistakenly that they are pregnant. This type of tumor, called by doctors the mole of the womb, can be cured only by medical regimen.[[48]](#endnote-48)

Excess emission of seed—both male and female—appears to create this ‘tumor’, this false pregnancy, this ‘mole of the womb’, twice referred to as a ‘large mass of flesh’. Monica Green notes that from the thirteenth century uterine moles were incorporated into manuals on women’s diseases. [[49]](#endnote-49) These also appear in the work of Guy of Chauliac, William of Saliceto, Nicole Oresme, John Trevisa, and Niccolò Falcucci.[[50]](#endnote-50)[[51]](#endnote-51) The OED first records the world *mola* in English in 1398 in an English translation of *De Proprietatibus Rerum*.[[52]](#endnote-52) John Trevisa writes: ‘at þe laste sche brou󠆋ȝte forþe a lumpe of fleische; suche a lompe hat *mola* among phisicians’ (at the last she brought forth a lump of flesh; such a lump that is called *mola* among physicians).[[53]](#endnote-53) In 1363 Guy de Chauliac defines a mole in his *Chirurgia magna,* a text that was later translated into English *c.* 1425. The English translation reads: ‘The mole is a gobat of flesche gendred in þe moder’ (The mole is a gobat of flesh engendered in the uterus).[[54]](#endnote-54) (The MED defines ‘gobat’ as ‘a lump, a mass’.[[55]](#endnote-55)) Niccolò Falcucci, a physician who worked in Florence around 1400, notes two eye-witness accounts of women with a uterine mole.[[56]](#endnote-56) In the mid-fifteenth century, Michele Savonarola, who practiced and taught medicine in Padua, contributed a chapter on *mola matricis* in his *Practica maior*.[[57]](#endnote-57) In 1493 Alessandro Benedetti recounts the following case of a uterine mole:

“We saw a woman […] whom we immediately judged to have a mole in her uterus. The midwife announced that her vagina was shut. Three pessaries were made from galbanum, bdellium and oppopanax and inserted, and the mouths of the vagina were laid open by the wondrous work of nature. Then the midwife extracted the mole, torn into three pieces, which, when sewn back together, constituted the whole round mole […] [A]nd it was found to be unformed, molded out of human skin, the matter inside without bones, without a heart, without a liver or intestines, but a kind of jumbled mass of flesh, with many veins dispersed through it, like a large round melon.’[[58]](#endnote-58)

This last account describes the condition found in *The* *King of Tars:* no bones, no intestines, no heart, no liver, but importantly, formless, a ‘mass of flesh’. The larger narrative here in these writings on women’s disease is that *mola matricis* is an abnormal pregnancy consistently described as a lump of flesh. *The* *King of Tars* dates to the mid-fourteenth century: these sources span the centuries before and after, and demonstrate contemporary examples in Middle English of describing a *mola* as a lump of flesh. The medieval literature then proves awareness of the possibility of *mola matricis* in pregnancy*,* that this results in the birth of a mass of flesh, and this evidence aligns with modern concepts of molar pregnancies.

However, the lump of flesh is not only found in writings on women’s disease, but also in historic chronicle. An account dating slightly earlier than *The King of Tars,* the Anglo-Latin *Chronicle of Lanercost*, records in the year 1280 that the queen gave birth to a formless lump of flesh:

Accidit ut regina die sancti nominati [Jul. 16] primum ederet partum, pudibundum regno magis quam jucundum, ursi non viri præferens pignus, utpote frustum informe carnis, non filium. Quod cum regi perlatum fuisset, ille fide plenus ait, ‘involvite lintheo mundo et hora conficiendi superponite sancti Francisci altario.’ Quod cum impletum fuisset venientes in fine missæ, ut reciperent quod reposuerant, puerum formosum intus vagientem reperiunt, et Deo gratias læti et sancto referunt.[[59]](#endnote-59)

It happened that the Queen brought forth her first-born on the said saint’s day, to the shame rather than to the joy, of the realm, [for it] resembled more the offspring of a bear than a man, as it were a formless lump of flesh. When this was announced to the king, strong in faith, he said, ‘Wrap it in clean linen and place it on the altar of S. Francis at the time of the celebration.’ Which having been fulfilled, when they came at the end of the service to take away what they had placed there, they found a lovely boy crying, and joyfully returned thanks to God and to the saint.[[60]](#endnote-60)

The language describing the child as ‘frustum informe carnis’, a formless lump of flesh, resounds with medical descriptions of a *mola,* as does its description as a bear’s cub (‘ursi non viri’). Bear cubs were thought to be born as eyeless lumps of flesh that had to be licked into shape. Bestiaries indicate that ‘They give birth to little formless lumps of flesh, white in colour and without eyes. They shape them by gradually licking them with their tongue.’ [[61]](#endnote-61) This analogue is fascinating not only because it describes royalty giving birth to a lump of flesh, but also that the parents seek a spiritual remedy—the king places the lump on the alter during mass and it too transforms into a boy. In both tales, transformation occurs when placed in contact with the sacrament. While the miracle itself is fantastic, the language used here to describe this abnormal birth roots the phenomenal in the natural world of possibility. The lump of flesh as described in *The King of Tars* appears to chime with similar reports found in chronicles and in writings on women’s health and medicine.

**ASSESSMENT OF TEXTUAL EVIDENCE AND PROBABILITY**

The oldest extant manuscript of *The King of Tars* is likely a redaction. Having ascertained that the description of the lump of flesh in *The King of Tars* accords with contemporary medical and historical case reports, can we then deduce that the redactor of the Middle English *The King of Tars* knew of hydatidiform moles and deliberately inserted it into this redaction? Moreover, would a medieval audience have known that the hydatidiform mole was a rare possibility in pregnancy and not something fictional?

In order to ascertain where the redactor of *The King of Tars* acquired the lump of flesh, it would be natural to examine the source material. While there is no direct source for *The King of Tars*, there are historical analogues that both predate and are contemporary with the oldest extant manuscript of the Middle English story.These analogues detail a Christian Armenian princess wed to a Saracen Sultan of Tarsus or Tartars who gives birth to an abnormal offspring.[[62]](#endnote-62)[[63]](#endnote-63) The historical evidence points to the Sultan as being the either Ghazan Khan, also known as Cassanus who won a victory over Saracens in 1299, or Abaka Khan, who defeated Saracens in 1280, wed a Christian princess, and was rumoured to have converted: both were rulers of Tartars.[[64]](#endnote-64)[[65]](#endnote-65) It is likely that some version of this tale was the source for the Middle English romance.

In these analogues, the child takes on a variety of fantastic forms: two thirteenth-century Anglo-Latin accounts feature the child as fully covered in hair[[66]](#endnote-66); thirteenth-century German and Germano-Latin chronicles feature the child half-covered in hair[[67]](#endnote-67); in fourteenth-century Franco-Latin chronicles the child is half-black and half-white[[68]](#endnote-68); an early fourteenth-century Hispano-Latin account details the child as a hybrid between an animal and a human[[69]](#endnote-69); and an early thirteenth-century Italian account details a child without a human face.[[70]](#endnote-70) The variety of the forms of monstrous offspring detailed in the analogues may too be congenital medical conditions. To be fully covered in hair is a genetic condition called hypertrichosis universalis congenital,[[71]](#endnote-71) and the condition of being half covered in dark hair might be explained by a giant pigmented hairy nevus.[[72]](#endnote-72) Mottled skin in black and white coloration may be a sign of a vascular naevus or poor circulation seen in a dying child. The child without a human face may have a number of genetic causes—such as holoprosencephaly.[[73]](#endnote-73) Thus, many variations of the abnormal birth lie within the realm of the extreme, but also the possible, further supporting the suggestion that a lump of flesh in medieval lore may indeed be a genetic abnormality.

Among these historic analogues, none of them mention the birth of the lump of flesh. Linda Hornstein claims that Giovanni Villani’s *Istorie Fiorentine* (under date 1299) features a lump of flesh, but this appears to be incorrect. In the *Istorie Fiorentine,* the Emperor Cassano marries the princess of Armenia, who gives birth to ‘la più orrida e orribile creatura, che mai si vedesse, e quasi per poco non avea faccia umana’ (‘The most horrid and horrible creature that ever was seen, and almost as if it did not have a human face’).[[74]](#endnote-74) This is too vague to identify it as a *mola matricis.* It is merely a child with marred facial features. Elsewhere, Hornstein lists two other accounts of a lump of flesh—neither of them, however, within the similar historic framework of the others listed. The first is the Scandinavian account of Ivar the Boneless—which she logically argues boneless equates to shapeless.[[75]](#endnote-75) However, there are too many varying opinions to Ivar’s disease in Norse scholarship to come to a consensus, and as Ivar grows up into a man—without the need for miraculous intervention—it is safe to conjecture that this is not a hydatidiform mole either.[[76]](#endnote-76) The final account Hornstein mentions is *The Chronicle of Lanercost,* discussed earlier. As a result of this, then out of all the direct historical analogues with similarities in plot, none takes the physical form of the lump of flesh. It appears that if the redactor of *The King of Tars* encountered any of these sources, he then deliberately changed the form of the abnormal offspring to a lump of flesh.

Where, then, did the writer of *The King of Tars* obtain such an accurate medical image? And, if the redactor did have access to these sources, why did he deliberately change the form of the child to a lifeless lump of flesh? The options available seem to suggest that the redactor saw, heard of, or read of a uterine mole. While the oldest manuscript containing *The King of Tars* is the Auchinleck Manuscript, dating to London between 1330-1341, it probably had a predecessor that is now lost.[[77]](#endnote-77) Given the small set of copyists and the number of manuscripts in London preceding 1330, and given that uterine moles were featured in pre-1300 medical manuals, could this scribe of the lost ‘original’ have encountered a uterine mole in a text?[[78]](#endnote-78)[[79]](#endnote-79) Possibly, yes; but without the original manuscript, what the redactor may or may not have known and encountered is too difficult to ascertain. Given the interest in the natural world in medieval literature, the tendency in medieval writings to dwell on abnormal births, and the precise medical description of the lump of flesh, could this not have been taken from a real case study—of a woman giving birth to a lump of flesh? This would provide a plausible explanation for its medical accuracy and detailed sense of wonder.

If the redactor of *The King of Tars* did know of one of these historic analogues, he deliberately changed the form of the abnormal child: rather than depict a child who is hairy or born with mottled skin, our redactor chose an inanimate lump of flesh. This might explain another key deviation from these sources. In the analogues, the princess is sentenced to death when she bears the abnormal offspring, but in *The King of Tars* it becomes a moment for each parent to prove their religion is mightiest. The deity must be able to confer upon inanimate flesh both ‘lif and lim’. If, then, the redactor’s intention was to present the offspring as the ultimate test of faith, the abnormal offspring from other historical analogues would be inadequate: although they are abnormal, they are alive, and cannot demonstrate the ultimate potency of deity to resurrect the lifeless.

The fact that the redactor deliberately varied from his source material to insert a graphic and accurate description of a lump of flesh, the historical nature of his sources, their own probable case for—not fictional—but abnormal genetic births, and the possibility of acquiring such medical information from either a manuscript or physical birth; taken together, these points suggest that the redactor may have had a hydatidiform mole in mind when compiling *The King of Tars* and inserted it deliberately to suit his authorial intent.

And if this is so, did his medieval readership recognise this reference? There is the suggestion that an audience may have known of moles through the presence of fears of wish fulfilment—the nightmare turned reality. The mole shows that terrible and monstrous things could occur during pregnancy and that these were to be feared. This is evidenced in the narrative, when the princess converts to the Sultan’s beliefs and falls pregnant: ‘Ther while sche was with child, aplight, | Sche bad to Jhesu ful of might | Fram schame He schulde hir schilde’ (That while she was with child, in plight, she bade to Jesus full of might from shame he should her shield).[[80]](#endnote-80) Why would the princess pray to avoid shame? This prayer appears awkward and out of place unless it is framed in the context that abnormal, monstrous outcomes of pregnancy were to be feared and avoided. Corinne Saunders appears to support this notion when she notes that ‘*The King of Tars* may also play on fears of deformity’.[[81]](#endnote-81) By inserting this moment of fear of wish-fulfilment, the author may be relying upon the knowledge of his audience: while they may not have known, specifically, the case of uterine moles, it is likely that they would have linked abnormal births as a sign from God that intimately related to sexual intercourse, seed transmission, and the spiritual status of the parents. This leads on more generally to how monstrous offspring were viewed in general (as a warning), the reaction of the parents to such a situation (cause and blame), and their desire to seek for a remedy (intervention).

**MONSTERS AND EPIGENETICS: WARNING, BLAME, AND INTERVENTION**

**Warning**

*The King of Tars* depicts what medieval society perceived as, and the critical literature has termed, a monstrous birth.[[82]](#endnote-82)[[83]](#endnote-83)[[84]](#endnote-84) The word ‘monster’ stems from the Latin *monere* meaning ‘to warn’.[[85]](#endnote-85) Monsters warned or signified something unusual. Isidore of Seville writes that ‘God sometimes wants to indicate what is to come through some defects in newborns’.[[86]](#endnote-86) Often monsters signified parental sins. In medieval thought, the sins of the parents were thought to be evidenced on the flesh of their children. For the Clerk of Enghien the onocentaur (half-horse, half-human) occurs because of the parent’s adultery; on the appearance of bearded women, he writes, ‘but I don’t know if by sin they were first thus conceived’.[[87]](#endnote-87) In discourses on seed transmission, a woman merely had to have an unholy thought while pregnant to mar the form of her child. For example, Gerald of Wales recounts how a queen stared at a black figure in a painting so much that she gave birth to a black baby.[[88]](#endnote-88)

In each of the historic analogues, the monstrous birth is interpreted by the Sultan and his court as a warning—a sign of the princess’s infidelity. As such, she is condemned to death; and it is only because she insists on the child’s baptism—whereupon it transforms into a healthy child—that she is saved. These analogues clearly speak to fears of miscegenation—of a Christian uniting with a Saracen—and support a trend found throughout medieval literature. In Wolfram von Eschenbach’s *Parzival,* the offspring of Belacane (a Moorish Queen) and Gahmuret (a Christian knight), is Fierefiz, whose skin is piebald, described as like that of a magpie.[[89]](#endnote-89) Linda Hornstein writes that in the Middle Ages it was ‘generally believed that the union of a white with a Moor (a Christian with a heathen) would produce offspring partly black and white.’[[90]](#endnote-90) Parents were thought to pass a spiritual inheritance onto their children; this mixed union was thought to be evidenced on their offspring’s skin.[[91]](#endnote-91) This is why the Saracen Sultan in *The King of Tars* forces the princess of Tars to convert to his religion before he consummates their marriage. The Church forbade such a union, and considered it a crime.[[92]](#endnote-92) The various forms of the children in these analogues function as warnings of its parents’ spiritual imbalance. In *The King of Tars,* the lump of flesh is interpreted as a spiritual failure on behalf of one or both of the parents. Corinne Saunders notes that ‘the romance plays on both the popular belief that a child took its shape from the father, whose seed was formative, and the powerful biblical notion that a father’s sin might literally be visited upon his child.’[[93]](#endnote-93) Monsters, in the medieval sense of the word, signified a warning that was often intricately linked to a parent’s spiritual status as well as to their seed.

**Cause and Blame**

Isidore of Seville says that monsters form as a result of mixing of parental seed, ‘that individual monstrosities result from an excess or defect of the materials of “fetatation”’, an idea that John Block Friedman attributes, ultimately, to Aristotle’s tenets.[[94]](#endnote-94) The writings of Aristotle argue that ‘monsters occur when the semen is mixed together and confused either on its exit from the male or in a later mixing in the female.’[[95]](#endnote-95) Inheriting ideologies from ancient philosophers, medieval writers who debated on seed transmission often structured their arguments around Aristotle and Galen, who differed on the role of a woman’s contribution.[[96]](#endnote-96) While medieval interpretations of these texts are often complex, Nemesius (translated into Latin in the eleventh and twelfth centuries) summarizes medieval opinion on the matter in quoting a well-known classical source:

Igitur Aristoteles quidem et Democritus nil volunt conferre mulieris semen ad generationem filiorum; quod emittitur enim a mulieribus sudorem particulae magis quam germen esse volunt; Galenus vero reprehendens Aristotelem, sperma quidem emittere mulieres ait et mixtionem utrorumque facere fetum (ideoque coitum mixtionem dici).

But then Aristotle and Democritus wish to connect nothing of women’s semen to the generation of children; for they regard what is emitted by women more as sweat of [her reproductive] part than as a seed. Galen, refuting Aristotle, says women surely emit sperm and the mixture of the two produces a fetus (hence I have said that coitus is a mixing).[[97]](#endnote-97)

Grossly simplified, for Aristotle, women’s seed had a non-formative role to the nature of the embryo, while for Galen both male and female seed contribute to child formation. Yet by and large, defects in children were blamed on the mother. Jane Gilbert writes, ‘the mother’s individual sin or essential female nature often appear to be the cause of her child’s deformities.’[[98]](#endnote-98) However, according to both Aristotelian and Galenic models, either parent in *The King of Tars* could be at fault for their monstrous offspring. The Galenic medical source, the *Trotula* states: ‘Conception is impeded as much by the fault of the man as by the fault of the woman.’[[99]](#endnote-99) In an Aristotelian model, a father’s seed supplied animation––spirit and form––while the mother supplied the *materia––*basic matter; however, Jane Gilbert argues that from a medieval Christian perspective, as a Saracen, the Sultan would have been deemed spiritually deficient, and thus the Sultan’s seed would lack formative power.[[100]](#endnote-100) Consequently, according to both Galenic and Aristotelian models, either parent in *The King of Tars* could be at fault. In light of this, *The King of Tars* draws on these ideas of seed transmission, spiritual inheritance, and formation, in order to cast blame in the narrative.

In the text, the blame for this abnormal birth is not clear. The Sultan blames his wife and interprets the lump child not as a sign of adultery but of her false conversion: ‘The childe that is here of thee born | Bothe lim and lith it is forlorn | Alle thurth thi fals bileve!’ (The child that is here of you born | Both limb and joint it is forlorn | All through your false belief).[[101]](#endnote-101) The princess, in turn, blames the Sultan’s own religious faith: ‘The child was geten bitwen ous to. |For thi bileve it farth so’ (The child was begotten between us two | For your belief it fares so).[[102]](#endnote-102) The cause then is spiritual, but the blame is ambiguous. Judith Perryman interprets the lump of flesh as a sign of the princess’s religious hypocrisy for deserting the Christian faith.[[103]](#endnote-103) Jane Gilbert reads the lump as a sign of the Sultan’s degenerative seed.[[104]](#endnote-104) Geraldine Heng argues for numerous potential causes, including ‘the intimate metaphysical mingling of the warring essences of Islam and Christianity in the conjugal bed’.[[105]](#endnote-105) Both parents seek healing for their child, suggesting a shared burden of parenting, yet the text never clearly articulates who is at fault.

Modern biological understanding of hydatidiform mole supports the concept of a maternal/paternal genetic imbalance as the cause of the *mola matricis*. In the 1970s it was realised that a hydatidiform mole may occur in two ways.[[106]](#endnote-106) The first is a partial mole. This occurs when two sperm fertilise the same egg. The trophoblastic cells of the placenta proliferate at the expense of an abnormal fetus, but the zygote overall contains too much genetic material with male predominance: 46 paternal chromosomes and 23 maternal ones (instead of the usual situation with 23 male and 23 female chromosomes). This excess of male genetic information arrests foetal development, but the placenta continues to grow into a mass of tissue. This then is an excess of ‘paternal seed’ as described in earlier literature. In a classic complete mole, the 23 maternal chromosomes that should be contained in the ovum are absent. When a sperm fertilises this ‘blank’ egg, only the 23 paternal chromosomes are present, and these ‘reduplicate’ to reconstitute the normal chromosome number of 46. Despite their normal *genetic* constitution, the chromosomes retain an *epigenetic* mark of their paternal origin. This epigenetic marking disturbs the balance of the genes they express from the very onset of development, causing overproliferation of the placenta without development of a fetus. The term ‘complete’ mole denotes the absence of the fetus. In summary, both complete and partial moles result from imbalanced parental contribution to offspring: in the first case, a relative excess of paternal DNA, and in the second, either a deficient maternal or an excessive paternal contribution.[[107]](#endnote-107) Hydatidiform mole can be caused by either parent. The biological imbalance mirrors the ambiguity found in *The King of Tars*.

Intriguingly, the language surrounding epigenetic discourse on moles strikingly echoes medieval notions of seed transmission. Phrases such as it ‘appears to result from a failure to establish correct maternal epigenetic identity’[[108]](#endnote-108); ‘both A and B types corresponding to those of the father, but not the mother’[[109]](#endnote-109); that ‘there was expression of only one pair of paternal A and B antigens’; ‘the loss of maternal haploid contribution’; that this maternal contribution may be ‘lost before or at the time of “fertilisation” or be driven out by the double male sets [of DNA]’; ‘an extra set of paternal chromosomes’;—these snippets describe paternal and maternal DNA in terms of excess and deficiency. Medieval medical discourse conceived of medical aberrations (i.e. ‘monsters’) occurring from an excess or deficiency of parental seed.[[110]](#endnote-110) [[111]](#endnote-111) [[112]](#endnote-112) [[113]](#endnote-113) If we interpret the medieval seed to mean DNA or forming matter, then a hydatidiform mole occurs through an excess or deficiency of parental seed and corresponds to medieval explanations of birth defects. Thus, aspects of medieval discourse on seed transmission may be correct when considering the epigenetic formation of the hydatidiform mole (not, it may be noted, the medieval hypotheses as to how moles were formed).

**Intervention**

Both parents’ reactions to the warning and blame of their abnormal offspring is to seek divine intervention. The Sultan petitions his gods to inform the lump with life and limb. When the Sultan’s gods fail to alter the lump of flesh, the princess seeks a priest, who baptises the infant, whereupon it transforms into a healthy baby boy. The sacrament of baptism is a powerful, transformative moment: in medieval doctrine, it marked the moment when a soul, born dead in its sin, was animated to spiritual life; naturally the body should follow suit and gain physical form to evidence its new spiritual status.[[114]](#endnote-114) Seeking divine intervention as a reaction to a monstrous birth is something that also occurs in theanalogues to *The King of Tars.* In the *Chronicle of Lanercost*, the king places the baby on the altar at mass. In the chronicle analogues, the Sultan grants the princess’s last request to have the child baptised. In all of these stories, it is clear all parents seek intervention, seek remedy, and seek succour. Indeed, both parents describe their gods in medieval medical terms: they each petition their gods to see which is the better ‘leche’ (physician).[[115]](#endnote-115)

Warning, blame, and intervention then surround the narrative of *The King of Tars.* The lump of flesh signifies a warning—here that the spiritual states of either one of the parents is not right. It points to parental blame and resonates with medieval ideas of seed transmission. Both parents blame the other as the cause; however, spiritually, genetically, and according to theories of seed transmission, either parent could be at fault; the narrative remains ambiguous. Both parents also seek intervention for their child—for the divine to supply medical remedies.

Today many couples faced with a hydatidiform molar pregnancy may go through similar stages.[[116]](#endnote-116) Warning of a problem with the pregnancy normally comes through standard antenatal care, such as absence of a fetus upon ultrasound screening, or through adverse events early in gestation; and accurate diagnosis of partial or complete mole can indicate whether an underlying genetic problem exists in either parent. ‘Blame’ or responsibility are natural parental reactions to this adverse pregnancy outcome, and are explored and addressed through information, explanation and support given by the specialty of genetic counselling. Medical intervention commonly terminates molar pregnancy as soon as possible, to avoid risk of complications for the mother, and thus she will very rarely give birth ‘atte fourti woukes ende’. A very small proportion of women are at risk of recurrent molar pregnancy, and appropriate diagnosis and management are available to mitigate the risks for these women. However, at the time of writing there is no prospect of any medical intervention to recover a healthy liveborn infant from a molar pregnancy as described in *The King of Tars.*

**CONCLUSION**

The hydatidiform mole is an epigenetic disorder that documents to antiquity. We argue that the lump of flesh present in *The King of Tars* is a hydatidiform mole, as its description chimes with larger discourses of the *mola matricis,* from medieval thought to the present day. The evidence suggests the possibility that the redactor knew of and deliberately inserted a hydatidiform mole into *The King of Tars* to evidence fears of abnormal pregnancy. The medieval reaction to gloss the lump of flesh as a warning or *signum,* to be interpreted in concepts of seed transmission, blame, and intervention also correlate to modern reactions to epigenetic disorders, such as the hydatidiform mole. According to medieval definitions, ‘monster’ as *signum* functions as an appropriate definition of a hydatidiform mole; however, in light of medical case studies this word may not be the most appropriate. It is remarkable that medieval discourse conceived of these disorders (‘monsters’) in terms of excess or deficiency of seed (formative matter or DNA), which correlates to the cause of hydatidiform mole as an excess of paternal DNA of deficiency of maternal DNA. A hydatidiform mole expands beyond post-colonial interpretations to the text; it also scientifically clarifies the genetic relation of the *mola matricis* to the hydatdiform mole. It engenders in both scientific and humanities researchers a greater respect for the Middle Ages as the text accurately describes moles and engaged moles in a treatment regime. The lump of flesh in *The King of Tars* reveals an instance where medieval medical theories can be supported by modern medicine. In the hydatidiform mole in *The King of Tars,* the fantastic has turned into non-fiction.

1. Barber R, tr. Bestiary: Being an English Version of the Bodleian Library, Oxford, MS Bodley 764. Woodbridge: Boydell Press 1999. [↑](#endnote-ref-1)
2. Augustine. Concerning the City of God against the Pagans. Bettenson H, tr. London: Penguin 2003:XVI.8:661-664. [↑](#endnote-ref-2)
3. Throop P, tr. Hildegard Von Bingen’s Physica: The Complete English Translation of Her Classic Work on Health and Healing. Rochester VT: Healing Arts Press 1998:59, 87. [↑](#endnote-ref-3)
4. Chandler JH, ed. The King of Tars. Kalamazoo, MI: Medieval Institute Publications 2015:261. Future references are to this edition to line number. [↑](#endnote-ref-4)
5. The romance dates to c. 1310-1330. See Purdie R. Anglicising Romance. Cambridge: D. S. Brewer 2008:207-209. [↑](#endnote-ref-5)
6. In similar tales, a sexual union between Saracen and Christian never occurs. See Hornstein L. Trivet’s Constance and The King of Tars*. Modern Language Notes* 1940;55:354-357. [↑](#endnote-ref-6)
7. KT: 504. [↑](#endnote-ref-7)
8. Calkin S. Marking religion on the body: Saracens, categorization, and The King of Tars*. Journal of English and Germanic Philology* 2005;104:219-238(223). [↑](#endnote-ref-8)
9. KT: 577 [↑](#endnote-ref-9)
10. Gilbert J. Putting the pulp into fiction: the lump-child and its parents in The King of Tars*.* In: McDonald N, ed. Pulp Fictions Of Medieval England: Essays in Popular Romance. Manchester: Manchester University Press 2004:103-123. [↑](#endnote-ref-10)
11. Calkin, SB. Saracens and the Making of English Identity: The Auchinleck Manuscript. Routledge: London 2005:113. [↑](#endnote-ref-11)
12. Hornstein LH. New analogues to The King of Tars*. Modern Language Review* 1941;36*:*443-442. [↑](#endnote-ref-12)
13. Heng G. Empire of Magic: Medieval Romance and the Politics of Cultural Fantasy. New York: Columbia University Press 2003:228. [↑](#endnote-ref-13)
14. Saunders C. Magic and the Supernatural in Medieval English Romance. Cambridge: D S Brewer 2010:209. [↑](#endnote-ref-14)
15. Calkin, Marking religion on the body: 226. [↑](#endnote-ref-15)
16. Gilbert, Putting the pulp into fiction: 102. [↑](#endnote-ref-16)
17. For more on wish fulfilment in romance, see Frye N. An Anatomy of Criticism. Princeton: Princeton University Press 1957:186. [↑](#endnote-ref-17)
18. Calkin, Marking religion on the body: 226. [↑](#endnote-ref-18)
19. Star S. Anima carnis in sanguine est: blood, life, and The King of Tars. *Journal of English and Germanic Philology* 2016;115:442-462(445). [↑](#endnote-ref-19)
20. Katie Walker discusses the possibility of a *mola* in relation to skin taxonomies and connects it, in passing, to the hydatidiform mole. Walter KL. The form of the formless: medieval taxonomies of skin, flesh, and the human. In: Walter KL, ed. Reading Skin in Medieval Literature and Culture. Basingstoke: Palgrave Macmillan 2013:119-139(130). [↑](#endnote-ref-20)
21. The possibility of a *mola matricis* in *The King of Tars* is briefly referenced by Angela Florschuetz. Florschuetz A. Marking Maternity in Middle English Romance: Mothers, Identity, and Contamination. Basingstoke: Palgrave Macmillan 2014:103-104. [↑](#endnote-ref-21)
22. KT: 574-582. [↑](#endnote-ref-22)
23. ‘round(e)’, n.1 Middle English Dictionary [Internet]. Medieval Institute Publications. Available from: <https://quod.lib.umich.edu/cgi/m/mec/med-idx?type=id&id=MED37977> (accessed 26 Sept 2017). [↑](#endnote-ref-23)
24. KT: i.e. 604, 619, 636, 659, 746, 772. [↑](#endnote-ref-24)
25. ‘flesh’, n.1 Middle English Dictionary [Internet]. Medieval Institute Publications. Available from: <https://quod.lib.umich.edu/cgi/m/mec/med-idx?type=id&id=MED16282> (accessed 26 Sept 2017). [↑](#endnote-ref-25)
26. On the Properties of Things: John Trevisa’s Translation of Bartholomaeus Anglicus De Proprietatibus Rerum*:* A Critical Text. Seymour MC, ed. 3 Vols. Oxford: Clarendon Press 1975-1988:I:276. [↑](#endnote-ref-26)
27. KT: 611-612. [↑](#endnote-ref-27)
28. KT: 770-777. [↑](#endnote-ref-28)
29. KT: 571. [↑](#endnote-ref-29)
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31. Hayward BE, De Vos M, Talati N, et al. Genetic and epigenetic analysis of recurrent hydatidiform mole. *Hum Mutat* 2009;1062:629-639. [↑](#endnote-ref-31)
32. Miraculous Moles. *BMJ* 1980;281(6250):1233-1334. [↑](#endnote-ref-32)
33. Di Cintio E, Parazzini F, Rosa C, et al. The epidemiology of gestational trophoblastic disease. Gen Diagn Patho 1997;143(2–3):103-108. [↑](#endnote-ref-33)
34. ‘mole’, n.4. OED Online. Oxford University Press. Available from: http://www.oed.com.ezphost.dur.ac.uk/view/Entry/120839?rskey=Dlq8ui&result=4 (accessed 26 Sept 2017). [↑](#endnote-ref-34)
35. Kajii, Ohama, Androgenetic origin: 633. [↑](#endnote-ref-35)
36. Charles A H. A case of hydatidiform mole at age 52. *BMJ* 1946;2(4473):460. [↑](#endnote-ref-36)
37. Neely MR. Pregnancy and hydatidiform mole. *BMJ* 1952;2(4778):283. [↑](#endnote-ref-37)
38. Ross D. A fatal case of hydatidiform mole. *BMJ* 1898;2(1981):1814. [↑](#endnote-ref-38)
39. Roberts AB. A case of hydatidiform mole. *BMJ* 1924;2(3339):1198. [↑](#endnote-ref-39)
40. Richardson MV, Hertig AT. New England’s first recorded hydatidiform mole. *NEJM* 1959;260:544-545(545). This report dates to 1638. [↑](#endnote-ref-40)
41. In these case reports, a woman may give birth before term and to more than one of these globular lumps, although there is generally one lump much larger in size than the others. [↑](#endnote-ref-41)
42. For the original Greek, see Aristotelis. De Generatione Animalium. Lulofs HJD, ed. Oxford: Oxford University Press 1965:IV.7(775b25). [↑](#endnote-ref-42)
43. For the Latin translations of the Greek, see Aristoteles Latinus XVII 2.v. De Generatione Animalium. Guillelmi de Moerbeka, tr. Lulofs HJD, ed. Bruges-Paris: Desclée de Brouwer 1966:IV.7(775b25). [↑](#endnote-ref-43)
44. Temkin O, Eastman NJ, Edelstein L, et al., tr. Soranus’ Gynecology. Baltimore: Johns Hopkins University Press 1991:III.ix.36:158. [↑](#endnote-ref-44)
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50. Green, Women’s Medicine: 314 n. 85. [↑](#endnote-ref-50)
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52. ‘mole, n4’.’ OED online. [↑](#endnote-ref-52)
53. Trevisa, De Proprietatibus Rerum I: 283. [↑](#endnote-ref-53)
54. Guy de Chauliac. The Cyrurgie of Guy de Chauliac. Ogden MS, ed. London: Early English Text Society 1971:531. [↑](#endnote-ref-54)
55. ‘gobat’, n.2 Middle English Dictionary [Internet]. Medieval Institute Publications. Available from: https://quod.lib.umich.edu/cgi/m/mec/med-idx?type=id&id=MED18938 (accessed 26 Sept 2017). [↑](#endnote-ref-55)
56. Green, Women’s Medicine: 251. [↑](#endnote-ref-56)
57. Green, Women’s Medicine: 292. [↑](#endnote-ref-57)
58. Green, Women’s Medicine: 293-294. [↑](#endnote-ref-58)
59. Stevenson J, ed. Chronicon de Lanercost. Edinburgh: Bannatyne andMaitland Club 1839:104. [↑](#endnote-ref-59)
60. Maxwell H, tr. The Chronicle of Lanercost: 1272-1346. Glasgow: James Maclehose and Sons 1913:22. [↑](#endnote-ref-60)
61. Barber, Bestiary: 59. [↑](#endnote-ref-61)
62. Hornstein, LH. A folklore theme inThe King of Tars*.* *Philological Quarterly* 1941;20:82-87. [↑](#endnote-ref-62)
63. Hornstein, New analogues*:* 443-442. [↑](#endnote-ref-63)
64. Hornstein LH. The historical background of The King of Tars. *Speculum* 1941;16:414-414. [↑](#endnote-ref-64)
65. Geist RJ. On the Genesis of The King of Tars. *Journal of English and Germanic Philology* 1943;42:260–268. [↑](#endnote-ref-65)
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67. Hornstein, New analogues: 435-437, includes thirteenth-century chronicles such as the German and Germano-Latin accounts in *Annales Sancti Rudberti Salisburgenses* and Ottokar’s *Österreichische Reimchronik.* [↑](#endnote-ref-67)
68. Hornstein, New analogues: 438-439, in the Franco-Latin Gilles Le Muisit’s *Chronique et Annales* (1337) and in the *Chronicon Muevini* (1338). [↑](#endnote-ref-68)
69. Hornstein, New analogues: 437-438, recorded in a letter to Jayme II of Aragon (Hispano-Latin, c. 1300-1307). [↑](#endnote-ref-69)
70. Hornstein, New analogues: 439-442, in Giovanni Villani’s *Istorie Fiorentine* (under date 1299). Hornstein claims that this account features a lump of flesh, but this is not quite correct. In the *Istorie Fiorentine,* the Emperor Cassano marries the princess of Armenia, who gives birth to ‘la più orrida e orribile creatura, che mai si vedesse, e quasi per poco non avea faccia umana’ (‘The most horrid and horrible creature that ever was seen, and almost as if it did not have a human face’). Latin as quoted by Hornstein; English translation with Elizabeth Johnson. This is too vague to call it a lump of flesh or to identify it as a *mola matricis.*  [↑](#endnote-ref-70)
71. **Hypertrichosis lanuginosa congenital**. Genetic and Rare Diseases Information Center from the US Department of Health and Human Services. Available from: https://rarediseases.info.nih.gov/diseases/2865/hypertrichosis-lanuginosa-congenita (accessed 26 Sept 2017). [↑](#endnote-ref-71)
72. G**iant congenital nevus.** Genetic and Rare Diseases Information Center from the US Department of Health and Human Services. Available from: <https://rarediseases.info.nih.gov/diseases/2469/giant-congenital-nevus> (accessed 26 Sept 2017). [↑](#endnote-ref-72)
73. Holoprosencephaly can have genetic or non-genetic causes. It occurs 1:250 conceptions but only 1:800 births because it is developmentally detrimental. As this is less-rare than a hydatidiform mole, it may have been available as a concept to medieval writers. It is also associated with cyclopia – which a potent concept in ancient writing. McKusick M, Kniffin CL. Holoprosencephaly 1; HPE1. Online Mendelian Inheritance in Man. Baltimore: Johns Hopkins University. Available from: https://www.omim.org/entry/ (accessed 19 Dec 2017). [↑](#endnote-ref-73)
74. Latin as quoted by Hornstein, New Analogues: 440; English translation with the aid of Elizabeth Johnson. [↑](#endnote-ref-74)
75. Hornstein, Folklore Theme: 83. [↑](#endnote-ref-75)
76. McTurk R. Studies in Ragnars Saga Loðbrókar and its Major Scandinavian Analogues. Oxford: Society for the Study of Medieval Languages and Literature 1991:40-41 [↑](#endnote-ref-76)
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79. Green, Women’s Medicine: 314. [↑](#endnote-ref-79)
80. KT: 568-570. [↑](#endnote-ref-80)
81. Saunders, Magic and the Supernatural: 210. [↑](#endnote-ref-81)
82. Heng G. Empire of Magic: 228. [↑](#endnote-ref-82)
83. Gilbert J. Unnatural mothers and monstrous children in The King of Tars and Sir Gowther. In: Wogan-Browne J, Voaden R, Diamond A, et al., eds. Medieval Women: Texts and Contexts in Late Medieval Britain: Essays for Felicity Riddy. Turnhout: Brepols 2000:329-344. [↑](#endnote-ref-83)
84. Calkin, Saracens and the Making of English Identity: 112-122. [↑](#endnote-ref-84)
85. Friedman JB. TheMonstrous Races in Medieval Art and Thought. Syracuse: Syracuse University Press 2000:111. [↑](#endnote-ref-85)
86. Barney SA, Lewis, W J, Beach, JA, et al., tr. The Etymologies of Isidore of Seville. Cambridge: Cambridge University Press 2006:XI.iii.4:244. [↑](#endnote-ref-86)
87. As quoted by Friedman, Monstrous Races: 128-129. [↑](#endnote-ref-87)
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90. Hornstein, A folklore theme: 85. [↑](#endnote-ref-90)
91. For a few examples of this, see Calkin, Marking religion: 219-220. [↑](#endnote-ref-91)
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