The origins of the operation we now know in Western society as a “Caesarean section” can trace back its ancestry to the ancient Graeco-Roman world

“Surprising though it may seem, this operation is one of the oldest in the history of medicine, and without doubt the greatest; the oldest in that the history of its origin is lost in the mists of antiquity, and the greatest in that it is the only operation in which two lives are concerned”.

– J.H. Young in The History of the Caesarean Section. 1944.

A Caesarean section is defined as the “surgical termination of pregnancy or delivery by operative opening of the uterus”.

As mentioned in the statement above by J.H. Young, the operation we now know in Western society as a “Caesarean section” can trace back its ancestry to the ancient (Graeco-Roman) world. However, there is very little information still extant about practices of this kind in antiquity. This essay will explore the evidence that is available and attempt to draw some conclusions about the indications, frequency, methodology, attitudes and personnel involved in this procedure in antiquity. We will also investigate the evidence surrounding its potential to save one life, let alone both concerned, in the ancient world.

Practices of removing a foetus from the mother’s uterus via incisions into the abdomen date back thousands of years to ancient societies. There are many folktales from all over the world that tell of people or characters being born in this manner. Indian religious tales describe the birth of Buddha (around 506 BC) through his mother’s right flank. Brahman was said to be born through the umbilicus of this mother. Sage Susruta, (c. 600 BC) a founder of ancient Hindu


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medicine mentions the importance of performing a post-mortem caesarean section in his medical treatise “Susruta Samhita”. In this he stresses the importance of performing this operation as quickly as possible in order to give the child the best possible chance to live. However, it was only performed if the movements of the baby could be detected after the mother had passed away.

There is also evidence to believe that these post-mortem caesarean sections were carried out by the ancient Egyptian and Chinese societies. Ancient Chinese drawings depict the removal of a foetus from the abdomen of an apparently living woman.

The earliest documented evidence of a caesarean section is the legal documents concerning the adoption of a 2 year old boy in Mesopotamia (which roughly corresponds to modern day Iraq). This legal text dates back to the 23rd year of the Hammurabi of Babylon (1795 – 1750 B.C.). This recently translated text describes the child who is to be adopted as being “pulled out from the womb.”

There is general consensus among scholars that the Akkadian expression used in the tablet has been translated correctly however, there was some debate concerning the meaning of the phrase. It could be said that “pulled out from the womb” could mean either that the birth of the child was through the use of


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There is ample evidence to suggest that knowledge and practice of this type of procedure were present in ancient Greece and ancient Rome. It is these early practices, from this part of the world, which are thought to have formed the foundations for what is known today in modern Western medicine as the “caesarean section”. Therefore it is paramount to explore the practices of this nature in the early Greek and Roman societies in more detail.

Firstly, it is known that the ancient Greek societies had knowledge of a caesarean section like operation as it is incorporated into Greek mythology. Both Dionysus (the Greek god of Wine) and Asclepius (the Greek god of Medicine) were said to have been born via abdominal incisions into their mother’s body. It is alleged that Zeus (father of Dionysus) removed Dionysus prematurely from his mother, Semele, and implanted him into his own loin until he could be removed again at full term17. The story of Asclepius tells of the death of his mother Coronis by the arrows of Artemis. This is said to have come after Apollo (father of Asclepius) discovered that Coronis had been unfaithful; whereby he ordered that she be killed. While Coronis’ body lay on the funeral pyre Apollo is then said to have extracted his son from her abdomen18 thus performing, in essence, what we today would describe as a post-mortem caesarean section.

It seems there was a superhuman connotation attached to being born via caesarean section19 in the minds of these ancient people; thus explaining the presence of the caesarean section in these stories about the birth of their divinities. This superhuman component may have stemmed from the well-known


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knowledge that the mortality rates for the foetus were very high in situations where the mother passed away during childbirth\textsuperscript{20} even if a post-mortem caesarean section was attempted to save the infant’s life. Therefore it appears that in antiquity, any individual that survived a birth of this extra-ordinary nature was said to be destined for great things in life\textsuperscript{21}. The attitude was that the gods had intended for them to live, therefore they were saved from an early grave against all the odds. This attitude may have been extended in some cases to embellish the stories of the birth of an individual, in retrospect. It is possible that this was a means to glorify their birth in order to glorify their life. An example of this may be seen in the common misconception throughout history that this procedure took its name after the Roman statesman Julius Caesar (100 – 44 B.C.) was born via this method. We know now that this cannot be correct as his mother, Aurelia, lived until he was in his fifties; passing away in 54 B.C.\textsuperscript{22} Therefore it seems highly unlikely that a caesarean section was the method of delivery in this scenario as we know that in ancient Rome that this procedure was not attempted on living woman as it had a known mortality rate of 100 percent\textsuperscript{23}.

We know that post-mortem caesarean sections were most certainly known to and performed by ancient Roman societies as it was indicated to do so in Roman law: “A royal law forbids the burial of a pregnant woman before the child is extracted from the womb; whoever violates this law is deemed to have destroyed the child’s


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Expectancy of life along with the mother. This ruling was issued by the ancient Roman king Numa Pompilius, (who ruled from 716-673 B.C.) as part of his “Lex Regia” (The Law of the Kings). This not only provides us with evidence that this type of post-mortem procedure was performed but also that it was seen as a necessary process. This remained law even after the fall of the Roman Empire. There is reference to this part of Numa Pompilius’s “Lex Regia” in Justinian’s “Corpus Iuris Civilis” (527 – 565 C.E.). Therefore we can see that these attitudes of necessity withstood the test of time, and that this post-mortem procedure continued to be an important one well into the Middle Ages.

To understand why these ancient societies placed so much importance on this procedure we must consider the reasoning and rationale behind its practice in antiquity. The modern day caesarean section is a procedure that is undertaken to avoid risky labours to save the lives of both the mother and the child, however, the operation in its infancy served quite a different purpose. As mentioned previously, in antiquity, the caesarean section was primarily a post-mortem procedure; however it is probable that it was also carried out on mori-bound women. This procedure was performed with mainly religious intentions; the need to separate the body of the mother and child in order for them to be buried

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The origins of the operation we now know in Western society as a “Caesarean section” can trace back its ancestry to the ancient Graeco-Roman world separately\(^\text{28}\). In antiquity, it was believed that failing to follow proper burial rites would impede the journey of the soul into the after-life. Therefore it can be assumed that in general, especially amongst the upper-class families, that this post-mortem practice was carried out to ensure that their loved ones (the woman and the infant) were given proper passage into the after-life.

One can safely assume, from the stories of Greek mythology and the implications of the Roman law, that the ancients would have also carried out this procedure as a last resort attempt to preserve the life of the child after (or just before) the mother had passed away and not purely as the beginnings of the burial process. However, the rates of live births in these situations would have been extremely low and the procedure inevitably would have lent itself to the religious purpose. As mentioned before the attitude of people in antiquity towards caesarean birth being somewhat superhuman probably stems from this well-known high neonatal mortality rate. The most common causes for maternal mortality in antiquity were malnutrition, haemorrhage and infection\(^\text{29}\), the risk of the latter two increasing significantly if the labour was protracted due to obstruction or mal-presentation of the foetus. Mortality due to infection was also a very real concern for the foetus\(^\text{30}\). Malaria and Tuberculosis presented a special threat to expectant mothers and malnutrition signified a risk to the survival of both the mother and the child\(^\text{31}\).


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When considering the probabilities associated with live births following this post-mortem procedure in antiquity, it seems appropriate to draw some conclusions from the example of childbirth in rural parts of the developing countries in modern times. In these parts of the world, with significantly decreased access to modern medical care, high rates of malnutrition, infection and haemorrhage during childbirth there is a greatly increased risk of maternal mortality. This risk is exacerbated if the labour is complicated with a mal-presentation of the foetus. In these cases of maternal mortality during labour, there is a high correlation with subsequent neonatal mortality, even if the foetus is able to be delivered alive. Asphyxiation (lack of oxygen) following the cardiac arrest of the mother would most likely be the immediate cause of death for the exhausted foetus in these situations. In developing countries of our time, the chances of an infant surviving the neonatal period after a distressful labour and death of the mother is very low. Due to the similarities between this modern example and what we know existed in antiquity, one can assume that this would also have been true in those ancient times thus further proving that live births following a post-mortem caesarean section would have been a rare event in antiquity.

However, there are a few extant records detailing these exceptional occurrences from the ancient Greek and Roman societies. There are records of a Gorgias of Sicily, a well-renown orator, being born via caesarean section. Scipio Africanus, the Roman general who defeated the Hannibal, is also said to have been born by a

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post-mortem caesarean section\textsuperscript{35}. As mentioned earlier, Julius Caesar however was not born via this method and did not give his name to the procedure.

The etymology of this procedure is still unclear. However, it is generally thought that as the aforementioned “Lex Regia” became known as the “Lex Caesare” during the rule of the Caesars, the procedure took its name from the law that necessitated it\textsuperscript{36}. Other possibilities include Latin terms such as “caedare” which means “to cut”, or “caesones” which was the term given to infants born via a post-mortem operation\textsuperscript{37}.

Another area of uncertainty surrounding this operation in ancient times is the methodology used. Unfortunately none of the prominent medical writers of antiquity mention this procedure in their writings. The Hippocratic Corpus dedicates a number of treatises to female health and aspects of childbearing and childbirth\textsuperscript{38}, but none mention a caesarean section. The Roman medical writer Celsus, does not mention this procedure as a method to salvage the life of the infant in his “De Re Medica” (written around 30 A.D.)\textsuperscript{39}. The most renowned gynaecological writer of the Roman World: Soranus of Ephesos (98- 138 A.D.) wrote the text “Gynaecology” for the instruction of midwives on proper medical practice at childbirths\textsuperscript{40}. This text is regarded as the most significant


\textsuperscript{39} J.H. Young. The History of the Caesarean Section. London, H.K. Lewis & Co. Ltd, 1944, p.3.

\textsuperscript{40} D. Todman. “Childbirth in Ancient Rome: From traditional folklore to obstetrics”. Australian and New Zealand Journal of Obstetrics and Gynaecology v.47, 2007, p. 84.
The origins of the operation we now know in Western society as a “Caesarean section” can trace back its ancestry to the ancient Graeco-Roman world. A gynaecological treatise of the Roman World, yet he also fails to mention this procedure. The reason for this lack of mention is thought to be mainly due to the fact that this was not seen as medical procedure but rather a religious practice and that it was not performed or thought to be worthy of mention by physicians. It was most likely carried out by midwives. Pregnancy and childbirth were still considered very much a woman’s domain. Females were thought to be more appropriate to treat other women as there would be no issues surrounding modesty and women were thought to be “more re-assuring and less frightening for the female patient” in any kind of gynaecological treatment, as mentioned in the Hippocratic Corpus. Priests and clergy sometimes also attended difficult births and they may have also performed this operation at times.

Therefore it is probable that for the majority of childbirths in antiquity midwives were the primary form of aid, with physicians being called upon only in the most difficult of circumstances where surgical intervention may have been necessary to


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save the life of the mother. In fact both Hippocrates⁴⁷ and Celsus⁴⁸ mention procedures for the dismemberment and careful extraction of a dead foetus from the mother's uterus in order to save her life. Hippocrates⁴⁹ and Soranus⁵⁰ advocate the use of surgical instruments to forcibly widen the orifice of the uterus as well as a variety of blunt and sharp instruments to remove the foetus from the womb in situations of difficult or obstructed labour.

A trend can be seen emerging; physicians in antiquity were concerned only with documenting life-saving procedures. If a mother was to pass away during labour it most likely signified the complete absence of attempted surgical intervention to salvage her life, or a missed window of opportunity to do so. There would have been no place for a physician at childbirths such as this as the neonatal mortality was also very high following the death of the mother (as mentioned before).

Therefore it seems logical to conclude that any post-mortem procedure carried out either in vain hope of saving the life of the child or simply to serve as precursor for proper burial rites, would have been attempted by the midwife (or other non-medical personal present) rather than the physician himself. Unfortunately there is no recorded evidence of midwifery practices in antiquity still extant. Therefore no explicit conclusions can be made about the nature of the exact methodologies utilized for this primarily post-mortem procedure in antiquity.


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Hand in hand with the lack of understanding of ancient techniques of caesarean section come the problems surrounding frequencies of this practice within ancient society. Its mention in Roman law gives an indicator that it may have been somewhat routinely performed on women that passed away during childbirth. However, its mention in a legal text cannot alone prove that the law was strictly adhered to by the ancient people. But if we are to consider the practice in terms of its significance to burial rites and the proper passage of the soul into the after-life it seems likely that it was carried out regularly as it is known that the ancients placed a high importance on the soul and its treatment after death. Once again, no conclusive statements can be made about the occurrence of this procedure in antiquity as there is a lack of evidence to strongly suggest either rarity or regularity.

The story of the caesarean section certainly does begin in the “mists of antiquity”\(^{51}\) it appears that it was known to and practiced by many ancient civilisations including the ancient Graeco-Roman world from which the modern day Western operation stems. In modern times, this operation could be argued to be “without doubt the greatest”\(^{52}\) operation in medicine as it is “the only operation in which two lives are concerned”\(^{53}\). A statement of this nature could only be given based on the fact that in today’s society this operation is capable saving both the lives concerned.

However, in the ancient Graeco-Roman world it severed a different purpose. It was indicated for when the mother had passed away (or was mori-bound) during childbirth. It was a crude separation of mother and child, carried out primarily

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post-mortem for the purposes of proper burial rites. A procedure of this nature appears somewhat compulsory in situations where the mother passed away as it is indicated for by ancient Roman law. It appears there was an attitude of acceptance and necessity associated with this procedure mainly to ensure proper passage of the soul into the afterlife. In antiquity it was seen largely as a religious act, therefore it was ignored by physicians, and performed instead by midwives. The lack of interest by the medical community of the time seems due to its high mortality rates; most certainly for the mother, but in most cases for the infant as well. As a consequence, there is no mention of this procedure in any ancient medical texts and no way of ascertaining information on the exact methods, tools and frequencies of this procedure in the ancient Graeco-Roman world. It appears that the high mortality rates for the infant were also well known as the survival of a post-mortem caesarean birth was held in high regard and seen as somewhat heroic. This may explain the mention of this procedure in ancient Greek mythology.

It seems ironic to comment on the antiquity of this operation and still refer to it as the “greatest” in medical history as historically the operation served a vastly different purpose. It most definitely could not be utilized to save the life of the mother in antiquity; therefore it was primarily indicated for post-mortem. Consequently the employment of this technique to save the life of the infant was also largely unsuccessful. Therefore whilst it can be said that this operation may be the greatest of our time it most certainly would not have been deserving of that title in antiquity.

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