

## CAESAREAN SECTION: AN HISTORICAL RIDDLE

Sisir K. Majumdar\*

### ABSTRACT

Etymologically, the word 'Caesar' originates from the Latin word '*Caedaere*' meaning - 'to cut'. So cutting remains the core point, but little is known about the real origin of the history of Caesarean Section. There is evidence that, the ancient Hindus excelled in surgery and many operations were performed, including caesarean section. This operation was mentioned several times in the Mishnah of Rabbi Judah, the first large commentary on the Hebrew Bible. There are also several mythological anecdotes in Hindu, Buddhist and Greek mythologies. The myth of caesarean section did not even escape the keen eyes of William Shakespeare. The landmarks, treatises and the advancement in this operative procedure are presented in this article.

### Introduction

Etymology (Greek word – "*etumon*" – basic meaning- "*etumos*" – true/actual) – the study or account of the source or development of a word – sometimes gives clues to the origin of many historical events; etymologically, the word – "Caesar" originates from the Latin word – "*caedare*" meaning – "to cut". So, "cutting" remains the core point. But little is known about the real origin of the history of Caesarean Section. It is still a riddle wrapped in mystery inside an enigma of myth, mythology, fanciful fantasies and spurious speculations. But whatever may be the truth hidden in the womb of history, the idea of delivering a baby by cutting through the abdominal wall of the mother – just dead or dying – goes back into antiquity and into deep mythology. In the contemporary world, the same procedure, in principle at least, has got a name and is also a significant obstetric operation. Unfortunately, in some countries with loose ethical control, it is a

---

\* Hasiniketan, 200 Summerhouse Drive, Wilmington, Dartford, Kent, DA2 7PB, England, U.K

means of deception, leading to unethical medical practice intended solely to make money through unnecessary section in private commercial medical trade.

*Suśruta* of India (about 600 B.C.) is accepted universally as the “Father of Surgery” he himself described more than a hundred surgical instruments; the ancient Hindus excelled in surgery and many operations were performed, including Caesarean section (*Guthrie, 1960*). In surgery even there is evidence that Caesarean section was performed in India a few thousand years B.C.; it may be that it was done after the death of a pregnant mother, rather than on the living, though this is not certain (*Rhodes, 1985*).

This operation was mentioned several times in the *Mishnah of Rabbi Judah*, the first large commentary on the Hebrew Bible (135-175 A.D.). In his commentary on the Tractate – *Nidda in Talmud* – the authoritative, influential compilation of rabbinic traditions and discussion about Jewish life and law – the Jewish philosopher – physician Moses ben Maimon – Maimonides (1135-1204) – said that if the baby was to be delivered from the mother’s abdomen, the cut should be made on the woman’s side.

### **The mythology**

In Hindu mythology, *Brahma* was said to have been delivered from the umbilicus of his mother. *Gautam Buddha* (563-483 B.C.) – the Prophet of Buddhism – an offshoot of Hinduism, was known to be delivered from his mother *Maya*’s right flank. In Greek mythology there are several such anecdotes. Zeus – the supreme god – is supposed to have torn the premature Dionysus – the god of wild and uncontrolled ecstasy – out of the abdomen of his dead mistress, Semele, and implanted him into his thigh. Apollo – the god of poetic and musical inspiration – is supposed to have killed his mistress – Coronis – because of unfaithfulness towards him and himself removed his unborn child – Aesculapius – god of healing, from her abdomen while she was on the pyre that was meant to consume her and asked the wise Centaur Chiron to bring up the child (*Rousset, 1581*). The beautiful young Adonis was born from the trunk of the Myrrha – a spiny deciduous shrub (native to Africa and West Asia) – into which his mother was turned after she had conceived incestuously from her father, King Cinyra, King of Cyprus or

Assyria. Bacchus – the god of wine – was also delivered by the same operation as Aesculapius. It could be inferred that the operation was performed on dead women if there was any movement whatsoever of the fetus after the women died.

### **'Caesarean' – The origin**

The naming of this operative procedure (delivering a baby through the abdomen of a dead or dying mother) in the antiquity is still a riddle. But there are rational indications of a plausible genesis of the terminology. According to the Roman scholar Pliny (The Elder), Gaius Plinius Secundus (23-79 A.D.) – the celebrated author of 37- volume encyclopaedia ("Historia Naturalis" –77 Natural History), the procedure (surgical removal of a fetus at or near full term from the womb (uterus) through an abdominal incision) takes its name from a branch of ancient Roman family of the "the Julii", whose family name (cognomen) – CAESAR (Latin " caedere" – to cut) originated from a birth of a baby by this means in that family.

Some modern historians, however, have suggested that the procedure and its name derived from the Roman- "LEX REGIA" – a decree issued during the reign (715 – 673 B.C.) of Numa Pompilius, King of Rome which continued to be enforced under the rule of the Caesars (Lex Caesarea) that required abdominal section to be performed before the burial of a woman who had died in an advanced stage of pregnancy (*Encyclopaedia Britannica, 1986*). There is a mythical belief, probably false, that the Roman Emperor, Gaius Julius Caesar (100 – 44 B.C.) was born by this procedure. It is highly unlikely because the mother of Julius Caesar – Aurelia – was alive when he invaded Britain in 55 B.C. and again in 54 B.C. and in early times no woman delivered in this way was at all likely to survive (*Young 1944*).

Any Roman emperor was used to be called "Caesar". This operation was a 'grand' one and, therefore, it may have been called after "Caesar". In Germany, until the end of the First World War, the operation was called "Kaiserschnitt", after the Kaisers who were important. Caesarean birth, as a term, was first used by Rousset in 1581 (*Rousset, 1581, 1591*). Jacques Guillemau (1612) who wrote a book on midwifery,

which was first published in 1598 and translated into English in 1612, apparently was the first to use the term ‘section’. However, Caesarean operation was the term used until the beginning of the twentieth century.

Although the post-mortem operation is mentioned in several ancient texts, the first documented operation on a living woman was performed in 1610. The patient, however, died on the 25<sup>th</sup> post-operative day. Even in the first half of the 19<sup>th</sup> century the recorded mortality of this operation was about 75%, and fetal craniotomy – in which the life of the child is sacrificed to save that of the mother – was usually preferred. There is no record of a mother surviving a Caesarean Section in Britain till the close of the eighteenth century. Eventually, however, improvements in surgical techniques, antibiotics, blood transfusion and antiseptic procedures so reduced the mortality that Caesarean section came to be frequently performed as an alternative to normal childbirth. In modern obstetrical care, Caesarean section is used when life of either the mother or the child would be endangered by attempting normal delivery.

### **Shakespeare on Caesarean section**

The myth of Caesarean section did not even escape the keen eyes of William Shakespeare (1564 – 1616). There is, of course, the well – known allusion to Caesarean Section (though not under that name), which forms part of the plot of the Shakespearean tragedy – ‘Macbeth’ (1605 –6). At Macbeth’s second meeting with the witches he receives an assurance that he will not suffer at the hand of anyone “of woman born”, meaning, presumably, one born through the natural channel of a living woman:

“..... Be bloody, bold and resolute; laugh to scorn  
The power of man; for none of woman born  
Shall harm Macbeth.” (Act IV, Scene 1)

But Macbeth has not taken account of the fact that Macduff – so legend had it – was not born by the natural channel, but by Caesarean section. The “charm” under which Macbeth believed he was immune from harm thus proved to be invalid. Macduff warns Macbeth of this before finally dispatching him with his sword:

Macbeth: I bear a charmed life, which must not yield, to one of woman borne.

Macduff: Despair thy charm  
And let the angell whom thou still hasn't served  
Tell thee, Macduff was from his mother's womb  
Untimely ript. (Act V, Scene 8)  
("Untimely" may have meant post mortem.)

It seems there was an element of stigma in Shakespeare's mind about Caesarean Section when he wrote these famous phrases.

### The landmarks

563 B.C. Gautam Buddha was said to have been born from his mother's right flank. Rustam – a hero in Persian mythology – was born to Rudaba, the wife of King Sal, after his mother's body was cut open, she having been given Hyoscyamus by Simurg, and fallen asleep.

1500 A.D. Jacob Nufer, a Swiss sow-gelder, is said to have delivered his wife – Frau Nufer – using his sow - gelding instrument of a large child and both wife and child are said to have survived. Reported by Caspar Bauhin (1550 – 1624) in 1582 in an appendix to his Latin translation of Francis Rousset's book (*Rousset, 1581, 1591*). Recounted again in 1751 by John Burton (*Burton, 1751*). Rousset advocated the operation when the baby was dead. Rousset managed to prove that a pregnancy could follow the operation. Six different Caesarean operations by different surgeons described in his book.

1578 A.D. Guilio Cesari Aranzio (1530 – 1589) performed Caesarean section delivering a live child from a woman who had been killed in the last month of her pregnancy.

- 1579 A.D. Ambroise Pare (1510 – 1590) of France – “Father of Modern Surgery” after the Great Indian Surgeon – Susruta (5<sup>th</sup> Century A.D.) – known as “Father of Surgery” universally, criticized the operation. Pare had seen the operation done twice and both patients had died (*Pare 1545*).
- 1604 A.D. Scipio Mercurio (1540-1616), Professor of Surgery in Padua, wrote two chapters on Caesarean section in his book (*Mercurio, 1601*). He suggested it for a large baby in a woman with a small pelvis.
- 1610 A.D. Tautman of Wittenburg performed the first intentional Caesarean Section on April 21 – baby healthy, but the mother died on the 25<sup>th</sup> day following the operation because the wound became septic.
- 1612 A.D. Thomas Hatfield’s translation of a book by Jacques Guillemeau (1550 – 1630), Surgeon to Henry IV, had a chapter devoted to Caesarean section- He claimed to have seen the operation performed by various surgeons on five different women, all of whom had died. He wrote to Rousset, opposing the operation.
- 1637 A.D. Theophilus Raynaud wrote about it. (*Raynaud, 1637*).
- 17<sup>th</sup> Century Hendrik van Roonhuyze – an advocate of the operation – mentioned that a physician of Bruges called Sonnius performed the operation seven times on his own wife.
- 1681 A.D. “To be a future king” would be sufficient for operating on a mother to get a live child, even at the risk of her life (*Mauriceau, 1681*).
- 1737 A.D. First Caesarean Section in Great Britain by Smith, a surgeon of Edinburgh.

- 1738 A.D. First successful case in Ireland performed by a midwife.
- 1769 A.D. Lebas (1719-1797) – the French Surgeon – was the first Surgeon to stitch the wound in the uterus.
- 1793 A.D. First successful Caesarean section at Blackburn, Lancashire and next successful one in 1834.
- 1876 A.D. Eduardo Porro (1842 – 1902) – Professor of Obstetrics in Pavia and Milan, Italy, developed the operation (*Porro, 1876*).
- 1879 A.D. In Uganda (Africa), women conducting operation on themselves – witnessed by Felkin (*Felkin, 1884*).
- 1881/82 A.D. Max Sanger (1853 – 1903), a German surgeon, and Kehrer of Heidelberg, adopted Joseph Lister’s (1827 – 1912) principles for the operation. (*Kehrer, 1882; Sanger, 1882 and 1886*)
- 1884 A.D. Total operations – 134  
(Italy – 53; rest – Germany and Austria.)  
Maternal mortality – 55.97%.
- 1890 A.D. Lawson Tait of Birmingham, England, modified Porro’s operation
- 1921 John Martin Munro Kerr (1868-1960), Professor of Obstetrics and Gynaecology, University of Glasgow, Scotland, U.K. together with Eardley Holland (1879-1967), introduced the lower segment Caesarean operation (Holland, 1921; Kerr, 1921). Holland was the first to carry out nine cases and Munro Kerr followed with 22 cases.

**Treatises on the operation:**

Published by William Hunter (1778), Ambroise Pare (1678), A. Hamilton (1791), J. Bell (1826), Van Dauter (1734), Benjamin Pugh (1754), Smellie (1752), John Barton (1751), James Blundell (1832), J. H. Young (1944), D. Trolle (1982).

**The Advancement**

The word –‘Surgery’ derives from the Greek ‘Cheiros’ a hand and ‘ergon’ - work. It applies, therefore, to the manual manipulations carried out by the surgical practitioner in the effort to assuage injury and diseases of his or her fellows or to rescue the baby out of the womb of dying or dead pregnant women, as happened in the antiquity. Homo sapiens appeared on this earth, probably some quarter of a million years ago and, in a spirit of innate instinct for self-preservation and for continuation of species, did many medico-surgical maneuvers. But for curious reasons, Caesarean section shines atop of all such adventures in the annals of surgery. It is rare. It is unique.

The evolution of Caesarean section had a long march – cutting out the baby from the womb of a dying or dead pregnant woman to a scenario where the mother can now take part at the delivery and ‘be present’ at the time, hearing her baby giving its first cry. Substitution of epidural anaesthesia for the operation, instead of general anaesthesia, made it possible. It is an innovation par excellence. If the mother wishes, the baby can be placed immediately on her breast, even before the closure of the abdominal wall is completed. A really long march indeed through, the passage of time, from myth and mythology to a medical miracle in obstetrics.



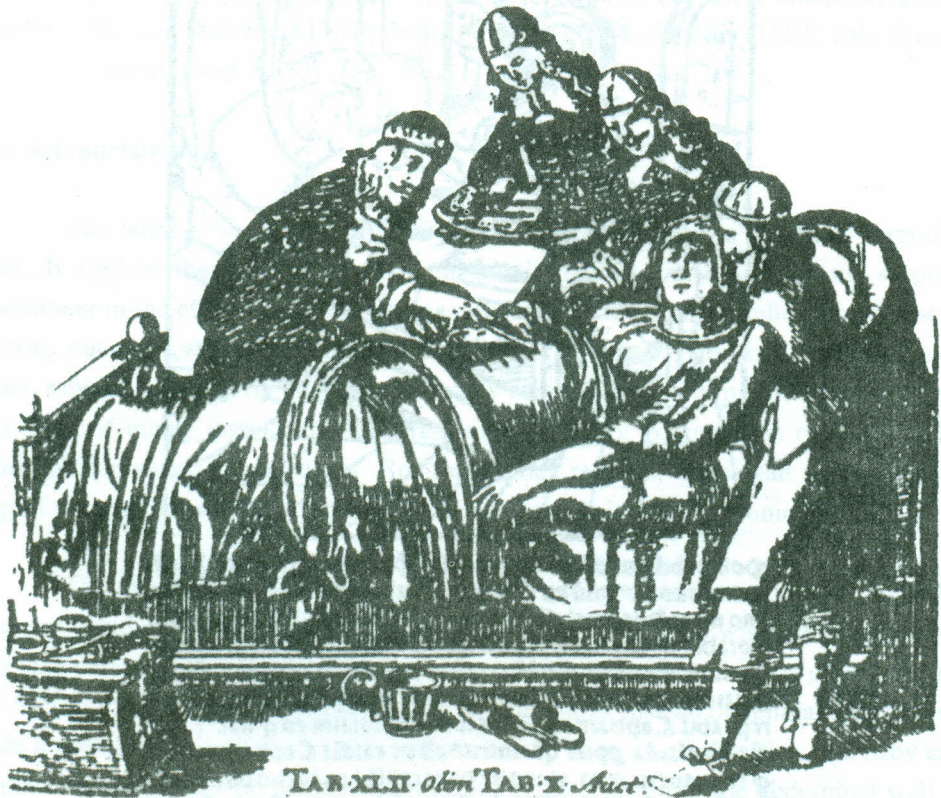
De natiuitate Antichristi.



Post hebdomadā 40 rēpons cū cōphēderint ciuitatē Jopē  
 mirer dñs de° vnū ex pncipibus miline sue ⁊ pcuter eoo in  
 vno momēto tēpoꝝ. Et post hec descēdet rex Rōanoy ⁊ de-  
 morabit in Hierlm septimana tēpoꝝ ⁊ dimidia: qđ ē .x. ānis et  
 dimidiū. Et cū cōplebūt .x. anni ⁊ dimidiū: apparebit filius  
 pdrisio. Die nateet i Chorosum: et nutrit in Bersaida: et  
 regnabit Lapharnū. Et letabit Chorosum eo q̄ nar° i ea ē  
 Et Bersaida ppter qđ nutrit° est in ea: Et Lapharnus eo  
 q̄ regnauerit in ea. Propter hanc causā i euāgelio dñs trinay  
 sententiā dedit dicēs: Eie tibi Chorosai: ve tibi Bersaida: ⁊ tibi  
 Lapharnus: n̄ vsq̄ in celū exaltaberis vsq̄ ad infernum  
 descendes.

D U.

Saint Methodius: birth of Anti-Christ from a live mother by Caesarean section (from an illustration printed in Basle in 1516)



TAB XLII olim TAB X. Auct.

Christ from a live mother by Caesarian section (from an illumination printed in Paris in 1518)

## REFERENCES

- Bell, J. (1826): *The Principles of Surgery, 4 vol., new edition with commentaries and a critical enquiry into the practice of surgery.* London: Charles Bell.
- Blundell, J. (1832): *Lectures on Midwifery and the diseases of women and children as delivered at Guy's Hospital.* London : Field and Bull.
- Burton, J. (1751): *An Essay Towards a Complete New System of Midwifery,* London : James Hodges pp.260-70.
- Cavallini, J. (1768): *Tentamina Medico-Chirurgica de felici in quibusdam Animantibus uteri Extractione.* Florence:Josephum Allegrini & Socios.
- Felkin, R.W. (1884): *Edin.Med.J.*29, 928.
- Guillemeau, J. (1612): *Childbirth or a Happy Deliverie of Women, English translation.* London : K. Hatfield
- Guthrie, D. (1960): *A History of Medicine,* London/Edinburgh” Thomas Nelson and Sons Ltd. pp.33,
- Hamilton, A. (1791): *Outlines of the Theory and Practice of Midwifery, 3<sup>rd</sup> edn.* London:Kay; Edinburgh : Greach. pp.314-19.
- Holland, E. (1921): (A) *Methods of performing Caesarean section.*  
(B) *Results in Great Britain and Ireland 1911- 1920.*  
*J. Obstet. Gynecol. Br. Emp.,* 28, 349-446.

- Hunter, W. (1778): *Reflections occasioned by a decree of the Faculty of Medicine at Paris: relative to the operation of cutting the symphysis of the ossa pubis. In Vaughan, J. Cases and Observations on the hydrophobia.*
- Kehrer, F. A. (1882): Arch Gyna"kol, 19, 196.
- Kerr, J.N.M. (1921): *The lower uterine segment incision in conservative Caesarean section.* J.Obstet. Gynaecol.Br.EMP. 28, 475-87.
- Leopold, G. (1882): Arch Gyna"kol., 19, 400.
- Mauriceau, F. (1681): *Traites des Maladies des Femmes Grosses,*
- Mercurio, S. (1601): *La Commare Oriccoglitrice Divisa in tre libri,* Ristampata, Correta et Acclescuita. Venice: Ciotti
- New Encyclopaedia: Caesarean Section :
- Britannica (1986): *Micropaedia 15<sup>th</sup> Ed. Vol.3, Encyclopaedia Britannica, Inc.* University of Chicago. pp.42
- Pare, A. (1545): *La Methode de traiter de les playes faites par les arquebuses et autres bastions a feu.* Paris.
- Porro, E. (1876): *Della amputazione utero-ovarica come complemento di taglio Cesario.* Ann. Univ.Med.Chirurg, pp.273, 289-350.
- Pugh, B. (1754): *A Treatise on Midwifery, chiefly with regard to the operation. With several improvements in that art.* London: Buckland.

- Raynaud, R.P.T. (1637): *De Ortu Infantium contra Naturam per Sectionem Caesaream*. Lugduni: Gariel Boissat.
- Rhodes, P. (1985): *An outline History of Medicine*, London: Butterworths, pp.7.
- Ro'sslyn, E. (1540): *The Byrth of Mankynde, otherwise named the woman's book*. Newly set forth by Thomas Raynold. London : Raynold.
- Rousset, F. (1581): *Traite Nouveau de l'hysterotomie ou l' enfantement Caesarienne, qui est extraction de l' enfant par incision laterale de venture et matrice de la Femme Grosse. Pouvant Autrement Accoucher, et ce sans Prejudicer a la vie de l' un et de l' autre ni l' empecher la Fecondite Maternelle par après*. Paris: Demeys Duval
- Sa'nger, M. (1882): Arch. F.Gynakol, 19, 370, Intern.Encyclop. Surg., 1886, 3, 768
- Sa'nger, M. (1886): Am. J. Obstet., 19, 883.
- Smellie, W. (1752): *Treatise on the Theory and Practice of Midwifery, 2<sup>nd</sup> edn*. London: D. Wilson and T. Durham. pp.380-4.
- Trolle, D. (1982): *The History of Caesarean Section*, Copenhagen: C. A. Rietzel Booksellers, pp.39.
- Van Deventer, H. 1734 *Observations importantes sur le manuel des accouchemens remiere partie, translated from the Latin by Ablaincourt, J.J.* Paris Cavelier

- Young, J.H. (1944): *Caesarean Section, The History and Development of the Operation From Earliest Times*. London: H.K. Lewis
- Further Reading (1916): *Conservation in Obstetrics*. N. Y. Med. J., 1.104  
Craigin, E.B.
- Ferguson, I. L. C. (1982): *Records and curiosities in Obstetrics and Gynecology*,  
Taylor, R. W. and London: Bailliere Tindall Ltd., pp.107  
Watson, J.M.
- Hall, M.H. (1987): *The Patient Demanding a Caesarean* Br.Med.J.  
294, 201.
- Kiwanuka, A.I. (1987): *The changing incidence of Caesarean section*  
and Moore, W.M.O. *in the health district of Central Manchester*. Br. J.  
Obstet. Gynecol., 94, 440-4.
- Moir, J.C. and (1971): *Monro Kerr's Operative Obstetrics, 8<sup>th</sup> edn*. London;  
Myerscough, P.R. Bailliere, Tindall & Cassell. pp. 527-8.
- Ploss, H.H.Bartels, (1935): *Woman III*, London: Heinemann Medical Books  
M.and Bartels, P. pp. 81-94.
- Rosenbaum, J. (1836): *Analecta quaedam ad Sectionis Caesareae*  
*Antiquitates*. Halle.
- Shiono, P.H.Fielden, (1987): *Recent trends in Caesarean birth and trial of labour*  
J.G., Mc.Nellis, *rates in the United States*. J.Am.Med.Assoc., 257, 4.  
D., Rhoades, G.G.  
and Pearse, W.D.
- Spencer, H.R. (1927): *The History of British Midwifery from 1650-1800*.  
John Bail Sons and Danielson Ltd.



## सारांश

### सीसेरियन सेक्शन : एक इतिहासिक पहली

-सिसिर के. मजुमदार

“सीसर” शब्द का उत्पत्ति “सीडेरे” से हुवा। “सीडेरे” का अर्थ काटना और वही कार्य इस में अंतर्भाग है। किन्तु “सीसेरियन सेक्शन” शब्द का उत्पत्ति आदी इतिहास के बारे में बहुत ही कम जानकारी मिलती है। यह प्रमाणित किया गया है की प्राचीन भारतीय हिन्दुओं ने शस्त्र कर्मा में समर्थ थे। और कई शस्त्रकर्म कर चुके थे। इस में सीसेरियन सेक्शन भी सम्मिलित था। इस के बारे में “मिशनह आफ रबी जुदाह” (हेब्रू बाईबुल पर प्रथम और व्यापक व्याख्यान) में कई संदर्भ मिलते है। कई ऐतिहासिक काथाएँ हिंदू, बौद्ध और ग्रीस इतिहासों में उपलब्ध है। सिसेरियन सेक्शन का इतिहास विलियम सेक्शपियर का दृष्टि से भी बच नहीं पाया। इस आपरेशन का कार्य में सीमा चिह्नाएँ, उन्नतियाँ और पुस्तकों के बारे में भी यह लेख में प्रस्तुत किया गया है।