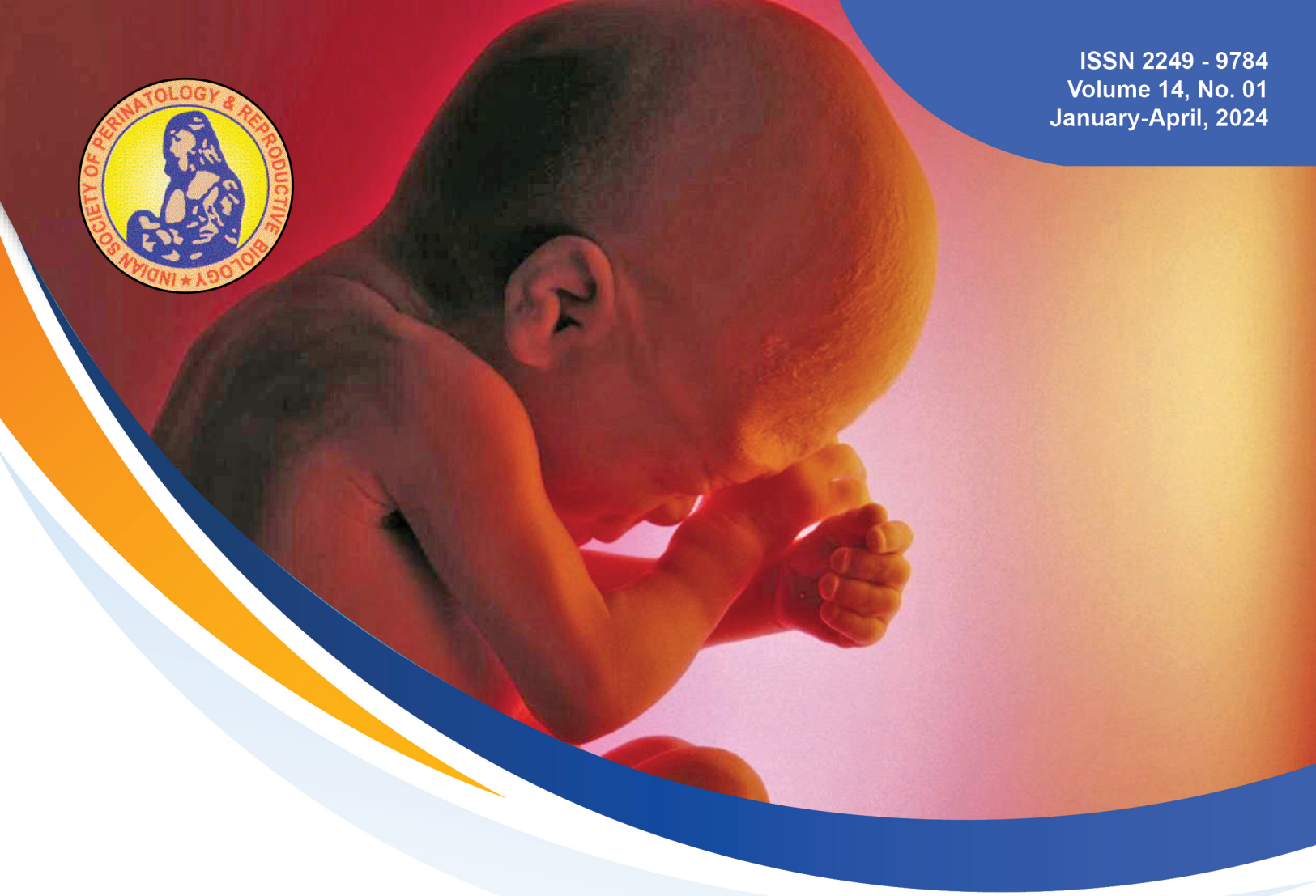
ISSN 2249 - 9784
Volume 14, No. 01
January-April, 2024



IJOPARB

Indian Journal of Perinatology and Reproductive Biology

Official Journal of Indian Society of Perinatology and Reproductive Biology

IJOPARB

Indian Journal of Perinatology and Reproductive Biology

Vol. 14 | No. 01 | January-April, 2024 | ISSN 2249-9784

www.ijoparb.co.in

Official Journal of
INDIAN SOCIETY OF PERINATOLOGY AND REPRODUCTIVE BIOLOGY (ISOPARB)

Indian Society of Perinatology and Reproductive Biology

Estd. 1978

(Reg No. 71 of 1978-1979 under the Societies Registration Act 21 of 1860)

Executive Committee (2024-2026)

President	Dr Narayan Jana (2024-25)	9331035392
Secretary General	Dr Pragya Mishra Choudhary	9835273668
President Elect	Dr Sulekha Pandey	9415202523
Immediate Past President	Dr Arup Kumar Majhi	9831672151
Editor-in-Chief	Dr Ramprasad Dey	9433219808
Vice Presidents	Dr. Anjoo Agarwal	9450401972
	Dr. Lakshmi Ravindran	9445568319
	Dr. Ojaswini Patel	9937103805
	Dr. Rita Kumari Jha	9430510948
Treasurer	Dr Abha Rani Sinha	9386834364
Communicator	Dr Amita Sinha	9835288771

Executive Members

Patna	Dr. Anjana Sinha
Ranchi	Dr. Archana Kumari
Kolkata	Dr. Ashis Kr. Mukhopadhyay
Sundargarh	Dr. Dillip Kumar Sarangi
Secundarabad	Dr. Madhumathi Sanjay
Patna	Dr. Neelam
Prayagraj	Dr. Ranjana Khanna
Patna	Dr. Ranjana Sinha
Varanasi	Dr. Ruchi Sinha
Gorakhpur	Dr. Sadhana Gupta
Patna	Dr. Supriya Jaiswal
Hyderabad	Dr. V. P. Jyotsna

Head Office:

IMA Building, Dr A. K. N. Sinha Path, South East Gandhi Maidan, Patna 800004
Web: www.isoparb.org

Secretary General's Office

Dr Pragya Mishra Choudhary, Secretary General, ISOPARB
Nulife Test Tube Centre, Annie Besant Road, Opp Patna College, Patna 800 004
(M): + 91 9835273668 | E-mail: pragyamishra@hotmail.com

Indian Journal of Perinatology and Reproductive Biology

Girikunj Apartment, 530 S N Roy Road,
Flat No – 306 B, Kolkata- 700038
E-mail: ijoparb1978@gmail.com | Website: www.ijoparb.co.in

ISSN 2249-9784 RNI No. WB ENG/2010/39056

EDITORIAL BOARD

Editorial Office:

Girikunj Apartment
530 S N Roy Road
Flat No – 306 B
Kolkata 700038
Phone: +91 033 24030054
Mobile: +91 94332 19808

Contents

Editor's Choice

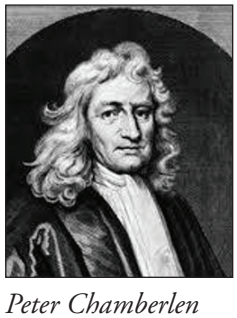
Pioneers in Obstetrics and Gynecology

Prof Arup Kumar Majhi* MBBS, MD, DNB, FICOG

The practice of modern obstetrics and gynecology is built upon the discoveries, innovations, and tireless efforts of numerous pioneers throughout the history. Each contributor has played a crucial role in shaping the field, and while it is difficult to encapsulate all their achievements in a single article, this overview highlights some landmark contributions and key figures. The information presented here has been carefully collected from various sources and verified with available literature to ensure accuracy wherever possible.

1. Gabriele Falloppio (1523-1562)

Gabriele Falloppio, an Italian anatomist described the uterine tubes with which his name is associated. He described also the skeletal system of the fetus and described also the clitoris. His revolutionary work 'Observationes Anatomicae' was published in 1561 in Vince. Renaissance of anatomy started after the great anatomists Fabricus, Vesalius and Gabriele Falloppio.



Peter Chamberlen the third

2. Peter Chamberlen, the elder (Peter I) (1560-1631)

Peter Chamberlen II, the younger (1572-1626) and Peter the Third (1601–1683) **(Figure)**. Obstetric forceps, a major innovation for instrumental vaginal delivery was introduced by Chamberlen family around 1600 AD. The eldest and the youngest children of William's Chamberlin- were Peter I/II. It is said that obstetric forceps were invented by one of the Peter I and Peter II, probably by Peter I. This family was Huguenot refugee and came to England in 1569. This instrument was kept secret in the Chamberlen family for 100 years or more. Peter I attended Anne of Denmark, Queen consort of James and other notable women of the society for confinements. Four generations of Chamberlen reigned in full swing with forceps till the death of Hugh Chamberlen the younger (junior) (Born 1664, died 1728). In 1818, a number of Chamberlen's instruments were discovered in a well-concealed chest in Woodham Mortimer Hall, Essex. Peter the Third (1601–1683) was the son of Peter Chamberlen II, the younger.

* Immediate Past President, ISOPARB; Emeritus Editor, Indian Journal of Perinatology and Reproductive Biology; Professor, Obstetrics and Gynaecology, Santiniketan Medical College, Bolpur, West Bengal;

3. Anthony van Leeuwenhoek (1632-1723)

Leeuwenhoek is commonly known as father of microbiology and one of the first microscopists and microbiologists. He designed many types of microscopes himself. Van Leeuwenhoek is best known for his pioneering work in microscopy and for his contributions toward the establishment of microbiology as a scientific discipline. He was also the first to document microscopic view of RBC, bacteria, muscle fibres, spermatozoa and many. He described the spermatozoa in 1677.

4. Francois Mauriceau (1637-1709)

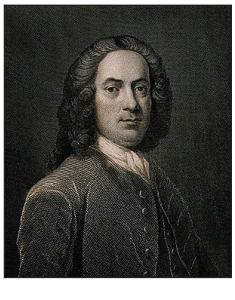
Francois Mauriceau, a famous French Obstetrician is said to report caesarean section first in living woman in 1668. Francois Mauriceau was the author of best selling text book 'Observations sur la grossesse et l'accouchemen 1668' at that time. Hugh Chamberlen (elder) elder during return from Paris (1670) collected a copy of Francois Mauriceau's book and translated into English under the title 'The Accomplish't Midwife'. He is also known for development of a classical manoeuvre of assisted breech delivery (Mauriceau-Levret manipulation)

5. Regnier de Graaf (1641-1673)

Graafian follicles is after the name of Regnier de Graaf. After returning to Holland he studied on male and female generative organs in goats and rabbits. He published his greatest work in "De Mulierum Organis" with beautiful illustrations in 1672.

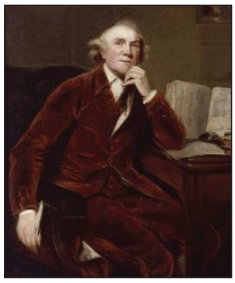
6. Caspar Bartholin (1655-1738)

Caspar Bartholin the Younger (1655-1738) was a Danish physician and anatomist. Bartholin's gland was named after Caspar Bartholin for the detailed description of the gland. Bartholin was a man of wide interests and great versatility. He became professor of philosophy in very young age of 19 and later became professor of physics when he used to give lectures in anatomy. His famous 'De Ovariis Mulierum' was published in 1677.



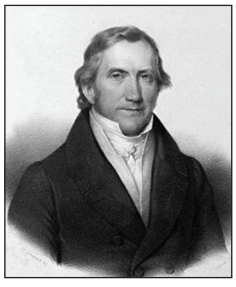
7. William Smellie (1697-1763)

William Smellie is one of the famous obstetricians of all time. His book 'Treatise on the theory and practice of midwifery 'is outstanding where he described normal and abnormal pelvis accurately. His short forceps are remarkable. He is first to measure diagonal conjugate. He was described as 'great horse God-mother of a he-midwife'



8. John Hunter (1728-1793)

John Hunter who was a Scottish surgeon first documented artificial insemination with husband's semen (AIH). It was reported by John Hunter in 1770. He used quill for insemination. First successful donor insemination was conducted by Joseph Pancoast in 1884



9. Franz Carl Naegele (1778-1851)

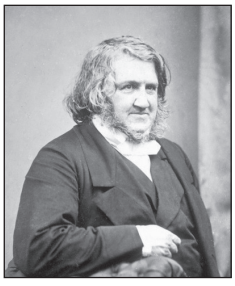
Negele's Rule, Naegele's Asynclitism, and the Naegle Pelvis were after the name of Franz Carl Naegele. He was born in Germany. In early life he became official physician when he was interested in obstetrics problems and later became extraordinary professor of physiology and pathology. In late life he became the director and professor of lying -in hospital. **Naegele's Rule** - The formula to calculate the expected date of delivery by adding seven days to the first day of the last menstruation and counting back three months is designated as Naegele's rule. **Naegele's Asynclitism** - In mechanism of labour engagement in cephalic presentation occurs mostly in transverse with the sagittal suture parallel to the transverse diameter of the inlet. It is said 'synclitic' when the sagittal suture lies equidistant from the sacral promontory and pubic symphysis. More often, the sagittal suture deviates, toward the promontory or symphysis, anterior or posterior asynclitism resulting according to the anterior or posterior parietal bone presentation. Anterior asynclitism, or anterior parietal presentation, is often referred to as Naegele's obliquity which was described in his monograph, "Ueber den Mechanismus der Geburt" in 1819. **Naegle Pelvis** - Naegle had lot of work on bony pelvis. He described the obliquely contracted pelvis where one ala is absent, later named as Naegle Pelvis in a monograph, "Das Schrag Verengte Becken",in 1839. Heinrich Ludwig Ferdinand Robert (1814-1878)- Robert from Marburg, Germany encountered a very rare malformation of pelvis shortly after description of Naegle pelvis. Here both the ala is absent and known as Robert or double Naegle pelvis.

10. Ferdinand August Maria Franz von Ritgen (1787 –1867)

Von Ritgen was a German Obstetrician and naturalist. He is remembered for training for midwives. His name is associated with the so-called **"Ritgen's maneuver"** a technique by giving pressure over the perineum during delivery of fetal head simultaneously pressing the head with the other hand to control the speed of delivery. Later, he founded a school for midwives.

11. Johannes Peter Muller (1801-1858)

Johannes Muller was foremost German physiologist of his days. **Mullerian Ducts** was named after the name of Muller. He had 20 books, and about 250 scientific papers illustrated with 350 hand-drawn plates, contributing to almost all fields of basic medical research. His treatise on the embryology of the genitalia in vertebrates, "Bildimgsgeschichte der Genitalien" was published in 1830 containing the clear picture of the development of the mammalian uterus.



12. Sir James Young Simpson (1811-1870)

Sir James Young Simpson, a Scottish obstetrician was the first physician to demonstrate anaesthetic properties of chloroform and popularised its use. Sir James Young Simpson designed various obstetric forceps including Simpson's obstetric forceps, long and short. Simpson designed first the vacuum extractor for assisted vaginal birth in 1838 long before the useful ventouse designed by Malmstrom from Sweden in 1954, but not popular. He also developed Simpson's uterine sound.

13. James Marion Sims (1813-1883)

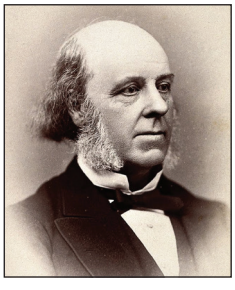
James Marion Sims, an American gynaecologist is known as the founder of modern gynaecology. He devised a vaginal speculum in 1845. Later (1852) he started to use in repair of vescicovaginal fistula. He was pioneer in repair of VVF. **Sims' triad** means using silver wire suture (Sims' silver wire) to avoid sepsis using Sims' vaginal speculum and in Sims position.

14. Ignac Fulop Semmelweis (1818-1865)

Semmelweis, a Hungarian Physician introduced the hand washing of the obstetricians and midwives in 1847 by using chloride or lime to prevent puerperal fever. The technique was known as Semmelweis method to prevent puerperal fever. This handwashing technique reduced the maternal death from sepsis dramatically. The trio of Louis Pasteur (1822–1895), father of microbiology, Joseph Lister (1827–1912), founder of modern surgery and Ignaz Semmelweis (1818–1865), are the architects of the modern antiseptic technique.

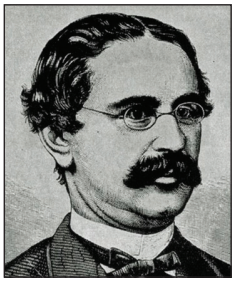
15. Louis Pasteur (1822-1895)

Not being a gynaecologist Louis Pasteur, a professor of chemistry is remembered for his enormous contribution in bacteriology and surgical antisepsis. His work established the basis of antisepsis in surgery. He explained the cause of puerperal fever by bacterial colony. He is the first chemist to culture streptococci. almost 90 years after Jenner initiated immunization with smallpox vaccine, Pasteur developed another vaccine—the first vaccine against rabies. He administered the rabies vaccine in 1885 and developed a live attenuated vaccine for anthrax in 1888 and used for sheep and cattle.



16. John Braxton Hicks (1823-1897)

Born in Sussex, England John Braxton Hicks identified painless rhythmic uterine contractions from third month onwards during pregnancy which is known as **'Braxton Hicks sign'** (1871). He also introduced the internal podalic version.



17. Otto Spiegelberg (1830-1881)

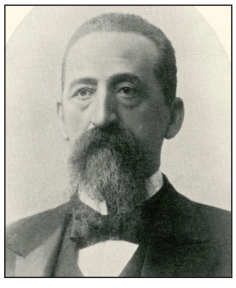
Spiegelberg was the very famous writer in obstetrics and Gynaecology. He had lot of works on ovarian follicle, corpus luteum, inversion of uterus and ovarian pregnancy. He introduced four criteria popularly called **"Spiegelberg criteria"** for diagnosis of ovarian pregnancy.

18. Alfred Hegar (1830-1914)

Alfred Hegar, born in Darmstadt, Germany is remembered for **'Hegar's Sign'** and **'Hegar's Dilators'**. He was professor of obstetrics and gynaecology at Freiburg, where he remained for 40 years until his retirement in 1904. Hegar's sign, a selective softening of the uterus in the region of the lower segment, as a new and certain diagnostic early sign of pregnancy was actually described first by C. Reinl, one of Hegar's assistants, who published this observation in 1884. Hegar's curved metal series of cervical dilators was published in 1879 in an article by Tchoudowski. Hegar's original dilator was solid, cylindrical dilators made out of ebonite with conically tapering ends with a flattened handle.

19. Ladwig Bandl (1842 – 1892)

Ladwig Bandl was an Austrian obstetrician and is remembered for his description of the "pathologic retraction ring", or **'Bandl's ring'**, in between the thinned lower segment and contracted upper segment of the uterus, feature of obstructed labour. He discovered this ring in 1870 while still a student to perform autopsy in a gravid woman who made suicide during advanced labour. He also first recognized in 1875 that rupture is almost confined to lower uterine segment of uterus.

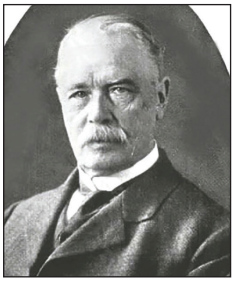


20. Edoardo Poro (1842-1902)

Eduardo Porro from Italy introduced the subtotal or supravaginal hysterectomy in obstetric surgery in 1876 to lower the death rate from cesarean section (CS). Before that cesarean delivery was almost fatal. Porro published in 1876 the first case report of survival of woman who was undergone hysterectomy following cesarean delivery of a large baby (3.300 Kg female). Cesarean hysterectomy is referred to as 'Porro operation' by many.

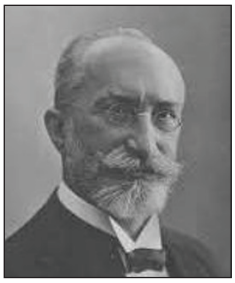
21. Adolphe Pinard (1844-1934)

Adolphe Pinard, a French obstetrician was a pioneer for working on abdominal palpation and version. He first developed fetal stethoscope in 1889, called 'Pinard Fetal stethoscope'



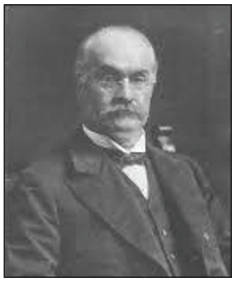
22. Friedrich Trendelenburg (1844-1924)

Born in Berlin Friedrich Trendelenburg was a great contributor of modern surgical practice as innovator and surgeon. **'Trendelenburg position'**, a pelvis-up, head-down position which is of great use in diagnostic and surgical practice is only after his name. He introduced endotracheal anaesthesia and proposed pulmonary embolectomy.



23. Christian Gerhard Leopold (1846-1912)

Christian Gerhard Leopold famous for **"Leopold maneuver"** of obstetrics abdominal palpation, was born in Mecranc, Saxony. He was assistant to Crede, whose daughter he later married, and he was appointed as instructor of midwives. He had more than 120 publications. Leopold was the first in Germany to perform ovariectomy in vaginal route and did the first classical caesarean section in that country with survival of both mother and baby. In 1890 he published a paper where the manoeuvres of Leopold were outlined, the details of which were described in the fifth edition of the Crede-Leopold textbook.



24. Friedrich Schauta (1849-1919)

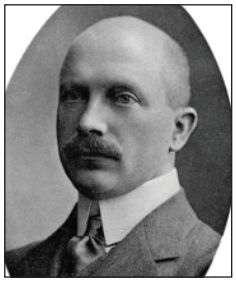
Friedrich Schauta, was an Austrian surgeon and gynaecologist born in Vienna. Schauta is famous for introducing an operation for cancer of uterus in which the uterus and ovaries are removed by way of the vagina (Schauta-Stoeckel operation)

25. Duhrssen Alfred (1862-1933)

Duhrssen Alfred is regarded as one of the founders of modern surgical gynaecology. He developed a technique by incision over cervix for facilitating labour in cervical dystocia, known as **'Duhrssen's incision'**.

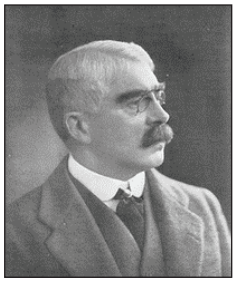
26. Hermann Johannes Pfannenstiel (1862–1909)

Born in Berlin Hermann J Pfannenstiel described a low transverse abdominal incision, called **'Pfannenstiel incision'** in 1900, to prevent incisional hernia. It is the incision of choice for gynaecology and genitourinary procedures.



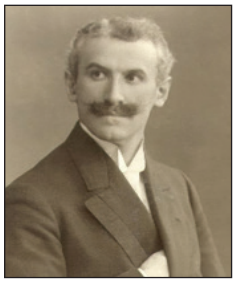
27. Ernst Wertheim (1864 – 1920)

Ernst Wertheim, an Austria's most famous gynaecologist first performed radical hysterectomy (pan hysterectomy, removal of parametrium,upper part of vagina and removal of lymph nodes) for cervical cancer in 1898. After his name the name of the operation was **'Wertheim operation'**. He did more than 1300 this type of operations between 1900- 1910.



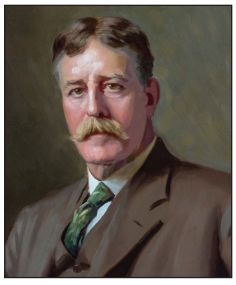
28. William Edward Fothergill (1865-1926)

Archibald Donald (1860-1937)- Manchester is a city of England famous for development of surgery for uterine prolapse. "The Manchester Operation" includes a double colporrhaphy (anterior and posterior) with amputation of the cervix and suturing of the deep structures. This operation, is still referred to occasionally as the Donald or Fothergill procedure, more often as **"Fothergill's operation"**. Surgery of the uterine prolapse was first published in 1908 both by Fothergill and Donand separately. Manchester is situated in industrial districts, polluting the atmosphere with bronchial irritants and cough was endemic to the area. The cases of uterine prolapse were a major interest of Manchester gynaecologists.



29. Ferdinand Strassmann (1866-1938)

Ferdinand Strassmann was leading specialist of plastic surgery for female genital tract. **'Strassmann unification operation'** of uterine anomaly (bicornuate uterus) is very popular surgical technique.

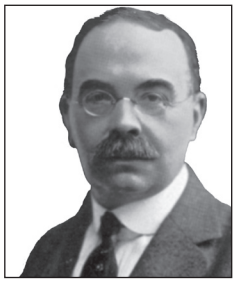


30. John Whitridge Williams (1866-1931)

John Whitridge Williams, of Baltimore was pioneer of academic obstetrics. Williams was the founder of academic obstetrics in the United States and with his textbook was the recognised leader of this discipline in America during the first 30 years of the 20th century. His text book of obstetrics , "Williams obstetrics" was first published in 1902 by D. Appleton and company. Twenty sixth edition is published in 2022 by McGraw-Hill Education and most popular book in obstetrics in world till the date.

31. Sir Kedarnath Das (1867–1936)

Sir Kedarnath Das was a great obstetrician from Calcutta, India. He designed a special type of forceps, "Bengal forceps" (1912) suitable for Indian babies. He wrote a treatise on obstetric forceps titled "Obstetric forceps – its history and evolution" (1929). His collection of hundreds of obstetric forceps of different models from various parts of the world have been kept in Forceps gallery at R G Kar Medical college, Kolkata. Graduated from Medical college, Calcutta he worked in both Medical college, Calcutta and Cambel Medical School (now called NRS Medical College, Kolkata) and worked as Professor and later Principal, Carmichael Medical College (now R G Kar Medical College, Kolkata) till his sudden demise.



32. Ralph Hayward Pomeroy (1867–1925)

Ralph Hayward Pomeroy was an American gynecologist who is famous for the development of female sterilization technique, popularly called **'Pomeroy method of tubal ligation'**. Pomeroy developed his technique but never reported or published in his life time. Bishop and Nelms, his associates presented the procedure in 1929. In this procedure a loop is created in each fallopian tube, tied with cat gut and the loop is cut.

33. John Martin Munro Kerr (1868 – 1960)

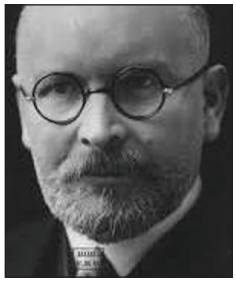
Munro Kerr, Professor of midwifery at the university of Glasgo he published to great success "Operative Midwifery" in 1908, popularly called later "Munro Kerr operative Obstetrics". He popularized the modern technique of caesarean section by curved lower uterine segment transverse incision in 1926.

34. Friedrich Ernst Krukenberg (1871-1946)

Friedrich Ernst Krukenberg bom in Halle, Germany is famous for the extensive description of **'Krukenberg tumour'** of ovary. In his six-case series of bilateral ovarian tumor was published in 1896 in a paper entitled "Ueber das Fibrosarcoma ovarii microcellular (carcinomatodes)". He described it as a primary malignant neoplasm of the ovary. Later, the origin of tumour was reviewed as secondary.

35. Victor Bonney (1872–1953)

William Francis Victor Bonney, a British gynecological surgeon is primarily remembered for the invention of an antiseptic solution known as "Bonney's blue". He preferred to do conservative surgery instead of hysterectomy in women of reproductive age. He is famous for his myomectomy in uterine fibroid. He developed a surgical clamp to reduce blood loss, known as **'Boney's myomectomy clamp'**. He became experienced in the radical extended Wertheim hysterectomy for treating cancer cervix., He authored illustrated 'A Textbook of Gynaecological Surgery' (1911), still in print as 'Bonney's Gynaecological Surgery'.



36. Alexandre Couvelaire (1873-I948)

Alexandre Couvelaire was born in Bourg, France and became professor in the University of Paris and famous for dealing the cases of antepartum hamorrhage. On describing uteroplacental apoplexy on premature separation of placenta Alexandre Couvelaire first described in detail the extensive hemorrhage into the myometrium, ovaries, broad ligaments, and pelvic peritoneum that occasionally found. The typical appearance of uterus with subserosal ecchymoses is referred to as **'Couvelaire uterus'** after his name.

37. Alfred Baker Spalding (1874—1942)

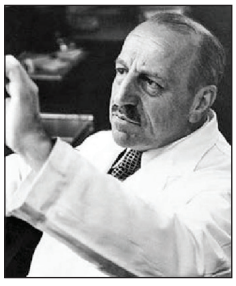
Alfred Spalding was born in Atchison, Kansas. His Sign of Fetal Death in Utero is x-ray appearance of 'overriding of the cranial bones'. Although generally known as **'Spalding's sign'**, credit for its discovery should be divided with D. A. Homer. Both of them published their observations in successive issues of the same journal; Spalding in June, 1922 and Homer in July, 1922.

38. Margarate Sanger (Margaret Louise Higgins) (1879-1966)

Margarate Sanger was an American birth control activist. She opened the first birth control clinic in the United States and established organizations that evolved into the 'Planned Parenhood Federation of America'. A nurse by profession Margarate dreamt of "magic pill" in 1912 and imprisoned for birth control movement. She was prosecuted for her book Family Limitation under the Combstock Act in 1914. Sanger died in 1966 at aged 86, about a year after the US Supreme Court's landmark decision which legalized birth control in the United States. Enovid, first birth control pill also gained approval from the FDA for contraceptive use in 1960 before her death.

39. Ernst Grafenberg (1881-1957)

Ernst Grafenberg, a German gynecologist developed first the flexible intrauterine contraceptive ring called the **"Gräfenberg ring"** and introduced in 1929. It was one of the first intrauterine devices that effectively prevented pregnancy without causing infection, and it became the forerunner of all modern intrauterine devices, or IUDs. Initially he used only loops of silk threads, later used coiled silver wire wrapped with silk. The idea of intrauterine contraceptive device came from the observation that Arab camel drivers prevented their female camels from becoming pregnant and aggressive by inserting stones into the uterus.



40. George Nicholas Papanicolaou (1883-1962)

George Nicholas Papanicolaou was born in Greece, later shifted to USA. He developed cervico-vaginal smear test. An illustrated manual 'Diagnosis of uterine cancer by the vaginal smear' was written in 1943 along with Herbert Traut. He also published 'Atlas of Exfoliative cytology' in 1954. **'Papanicolaou test (PAP smear)'** is routinely used now as screening of cervical cancer.

41. Irving Freiler. Stein, Sr (1887-1976)

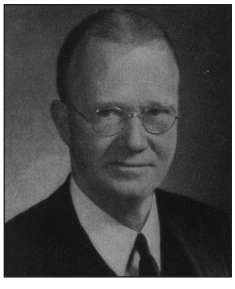
Irving F. Stein, an American gynaecologist along with Michael Leo. Leventhal described **'Stein-Leventhal Syndrome'** in 1935. The syndrome was later known as polycystic ovarian syndrome. Stein also helped to establish a treatment with surgical removal of ovarian tissues.

42. Walter Schiller (1887-1960)

Walter Schiller, an American pathologist worked primarily in the field of gynaecological cancer, and described **'Schiller's test'** to diagnose early cervical cancer in women. In 1928, Schiller invented the test which was known as the Schiller test to diagnose cervical cancer using Lugol's solution, or a potassium iodide solution. Schiller observed solution-stained healthy cervix a temporary dark brown colour while a cancerous cervix would not be stained due to absence of glycogen.

43. John Rock (1890-1984)

John Rock, an American Gynecologist and Professor of Harvard Medical school, is pioneer in the developing of first oral contraceptives. John Rock and Gregory Pincus in 1955, first gave successful human trial of progestogens in 1954. In 1960, Enovid (combination of progestogen and oestrogen) gained approval from the FDA for contraceptive use.

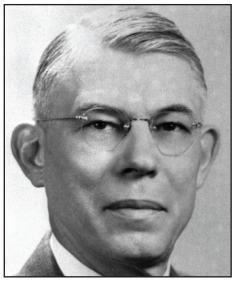


44. Joe Vincet Meigs (1892-1963)

Joe Vincet Meigs was an American gynecologist, modified Wertheim procedure of radical hysterectomy in cancer cervix. in 1957 he described **'Meigs' syndrome'** which is the association of hydrothorax, ascites and ovarian fibroma

45. Henry Hubert Turner (1892-1970)

Henry Hubert Turner born in Harrisburg, illions described 'pterygo-nuchal infantilism syndrome' in 1938, later popularly known as **'Turner syndrome'**. Turner syndrome is characterized by short stature, with no secondary characters, streak ovaries, small uterus, patent vagina with multiple physical stigmas. Later C.E. Ford noticed these patients commonly to have 45 XO chromosomes when sex chromosome analysis became available in 1950.



46. Edward A. Doisy (1893-1986)

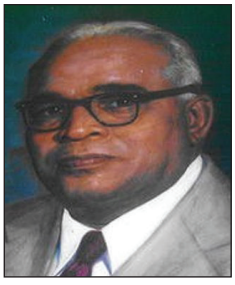
Edward Doisy, an organic biochemist was first to isolate oestrogen in 1929 along with Edgar Allen. Allen provided follicular fluid from sows and Doisy purified the estrogenic activity. Doisy crystallized estrone and presented this finding at the 13th International Physiologic Congress in Boston in 1929

47. Subodh Mitra (1896-1961)

Subodh Mitra, an eminent obstetrician and Gynaecologist from Kolkata,India, is the founder of the **"Mitra operation"** – a special type of radical surgery in cancer cervix (Extended Radical Vaginal hysterectomy with extraperitoneal lymphadenectomy). In his later life he became Professor of Obstetrics and Gynecology and Director at R G Kar Medical College, Kolkata and later appointed as Vice-chancellor of the University of Calcutta in 1960. N N Roy Chowdhury, his son-in law, an eminent gynaecologist popularised 'Mitra operation'.

48. Vithal Nagesh Shirodkar (1899-1973)

V N Shirodkar from India, is remembered for Cervical cerclage reported in 1955, known as **'Shirodkar's operation'** where sutures pass through the walls of the cervix. Cervical cerclage is given in cervical incompetence to prevent preterm birth.

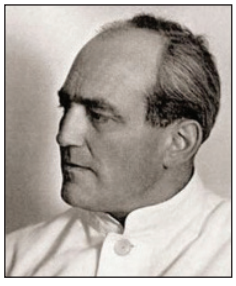


49. Balachandra D. Pattawardhan (1900-1983)

Patwardhan, born in Maharashtra is famous for his technique **(Patwardhan technique)** of delivering impacted head during caesarean delivery, first delivering the upper limbs,then the back, lower limbs and finally the head.

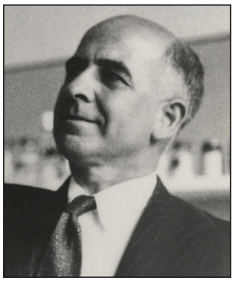
50. Michael Leo Leventhal (1901-1971)

Michael Leo Leventhal, a Chicago born physician along with Irving Stein (1887-1976) described a syndrome, **'Stein-Leventhal syndrome'**. They published a paper 'Amenorrhoea associated with bilateral polycystic ovaries' in 1935. Obesity and hirsutism are common association. They reported case series of seven cases. They also suggested wedge resection of the ovaries which yield normal cyclical menstruation and two women conceived in their series.



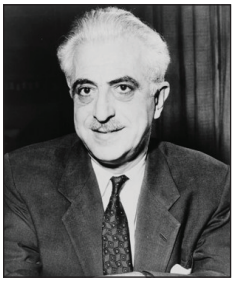
51. Karl Schuchardt (1856-1901)

Karl Schuchardt, surgeon dedicated most of his life to the surgical treatment of cervical carcinoma. He improved the surgical access by enlarging the introitus with a particular perineotomy (pararectal incision) bearing his name known as **'Schuchardt incision'**.



52. Russell Earl Marker (1902 –1995)

Russel Marker was an American chemist discovered progestogens from plant Mexicans wild yam (diosgenin)in 1941. This eventually led to the development of the combined oral contraceptive pill and synthetic cortisone.



53. Gregory Goodwin Pincus (1903-1967)

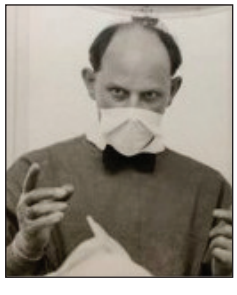
Gregory Goodwin Pincus was an American biologist and researcher who co-invented the combined oral contraceptives along with Jhon Rock. Pincus, along with M C Chang confirmed that progesterone would act as an inhibitor to ovulation. He first pointed out the progesterone as antiovulatory drug. Much before in 1934 he was able to perform successful invitro fertilization in rabbits.

54. Viginia Apgar (1909-1974)

Viginia Apgar, an obstetric anaeshesiologist and director of Columbia university and is best known as the inventor of the **'APGAR score'** to quickly assess the health of a newborn child immediately after birth. In 1952, she developed the 10-point score comprising of five parameters; Colour of the skin(Appearance), Heart rate(Pulse rate), Grimace (response to stimulation), Activity (muscle tone) and Respiratory effort, each carrying 0 to 2 scores, total 10 score. A score above 7 indicates good condition. Score 3 or less at one-minute needs active resuscitation.

55. Ian Donald (1910-1987)

Ian Donald was a brilliant teacher and author of very famous text book 'Practical Obstetric problems'. He adapted ultrasound or 'sonar' for use in medicine. Donald served second world war from 1942 onwards and his task was to seek and to destroy German U-boats by using sonar.

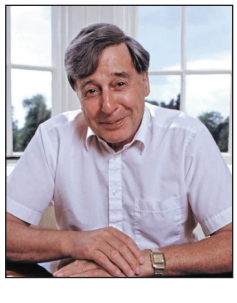


56. Tage Malmström (1911-1995)

Malmström, a Swedish obstetrician popularised the vacuum extractor or Ventouse, an obstetrical instrument for assisted vaginal delivery. Famous obstetrician James young Simpson had constructed a suction bell in the mid-19th century, but he never got to work satisfactorily. Malmstrom from Sweden modified it with a metal cup and a vacuum pump system and made it available after 1950s.

57. Patrick Steptoe (1913 – 1988)

Patrick Steptoe was an English obstetrician and gynaecologist and a pioneer of fertility treatment. He first wrote book on laparoscopy in English in 1967. Patrick Steptoe and Robert Edward created World's first test tube baby "Louise Brown," on July 25, 1978.



58. Robert Edward (1925 –2013)

Sir Robert Geoffrey Edwards was a British physiologist and pioneer in reproductive medicine and in-vitro fertilisation. Along with obstetrician and gynaecologist Patrick Steptoe and nurse Jean Purdy, Edwards successfully pioneered conception through IVF, which led to the birth of First test tube "Louise Brown" on July 25, 1978. Edwards was the founding Editor-in-Chief of Human Reproduction in 1986. He was awarded Nobel Prize in 2010.

59. Baidyanath Chakravarty (1928 -2022)

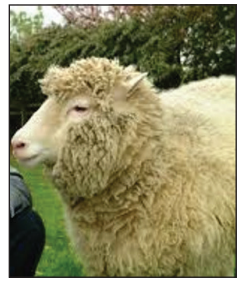
Baidyanath Chakravarty was excellent teacher, an extraordinary clinician and an outstanding researcher and the father of infertility, ART and reconstructive surgery of mullerian anomaly. He along with his team is the creator of third test tube baby in India delivered on 6th November 1986 at Kolkata. He delivered 5th baby in the world after correction of cervicovaginal atresia. He was close associate of Dr Subhas Mukherjee, creator of first test tube baby (IVF) in India and second in the world. He established Institution of Reproductive Medicine (IRM), Kolkata after his retirement as Professor, G&O, N R S Medical College, Kolkata. He had performed over 4,000 IVF procedures.

60. Subhas Mukherjee (1931-1981)

Subhas Mukherjee was professor of physiology of different Medical Colleges of West Bengal, India. He is the creator of first test tube baby (IVF) in India and second in the world, Durga (Kanupriya Agarwal) by name was born in October 3, 1978, just 67 days after the first IVF baby in World. Subhash Mukherjee committed suicide on 19 June 1981 as his work was denied by the then local Government and was not allowed to share his achievements with the international scientific community. The delivery of India's first scientifically documented test-tube baby (6 August 1986) was initially credited to Indira Hinduja and T.C. Anand Kumar (1936–2010). On checking the research papers T C Anand Kumar acknowledged that the first test tube baby born in India is by Subhas Mukherjee, not by them. His work was recognised long after his death.

61. Sir Ian Wilmut (1944-2023)

Ian Wilmut, a British scientist who led the team that cloned Dolly the Sheep in 1996. Dolly was the first mammal to be cloned from an adult cell, breaking barriers in science believed to be impossible. He died in 11th September 2023 at the age 79.



Original Article: Obstetrics

An Analytical Study on Intrauterine Foetal Death and Still Birth in a Teaching Hospital

Sandhyasri Panda[1], Kalluru Revathi[2]

ABSTRACT

Objective: IUFD is an important indicator of maternal and perinatal health of a given population. To know the incidence, etiology and mode of delivery of IUFD and Stillbirths in our institute.

Materials and Methods: This is a retrospective observational study over 3 years, from medical records of IUFD and still births, with gestational age >24 weeks. We focused on gestational age, investigations, medical history, maternal and foetal antenatal and intrapartum complications.

Results: During the study period 40 intrauterine fetal deaths were recorded among 1050 total deliveries, counting to an incidence of 3.8%. Amongst those, unexplained were 12 [30%], fetal abnormalities 7 [17.5%], maternal infection 6 [15%], cord accidents 4 [10%], APH [7.5%], hypertension, rupture uterus, abnormal placenta 2 [5%] each, diabetes and IUGR 1 [2.5%] each. Primigravidae contributed to 62.5% of them, 67.5% were male fetuses and 87.5% were delivered vaginally.

Conclusion: To decrease the occurrence of IUFD and prevent its recurrence, it is crucial to engage in early booking, identifying risk factors and prompt intervention. The majority of the causes can be prevented through a collaborative approach. However, it is imperative to encourage stringent monitoring throughout the labour and delivery to prevent intrapartum stillbirth.

Keywords: Intrauterine foetal death, Still Birth, Incidence, Riskfactors

Introduction:

Foetal demise is defined differently around the world, based on gestational age and foetal weight. According to World Health Organization (WHO), Intra uterine foetal death (IUFD) is defined as death prior to complete expulsion or extraction from mother of products of conception after the age of viability which is 28 weeks for india; but is defined variously after 20th or 28th weeks of gestation between countries.[1]

It is an important indicator of maternal and perinatal health of a given population.[2]

Worldwide over 2.6 million of still births happen annually. Out of these, statistics reveal that 23.2%

[1]MD, FICOG, Professor, Department of OBGYN, Maharajaha's Institute of Medical Sciences, Vizianagaram, Andhra Pradesh
[2]MBBS, Final year Post Graduate in Obstetrics and Gynaecology, Maharajaha's Institute of Medical Sciences Vizianagaram, Andhra Pradesh
Corresponding Author: Dr. Sandhyasri Panda

were from India, the highest for any nation, which counts to 22 stillbirths per 1000 live births.[3]

This problem is attributed to inadequate antenatal care and inaccessibility to health care facilities. The prevalence of IUFD has been decreased in developed countries where the cause is usually antenatal and unexplained but it still remains very high in underdeveloped and developing countries where majority of cases are intranatal and avoidable.[2]

While decline in stillbirth and infant death rates have been noted, rates are likely underestimated due to difficulty in capturing these data, including a reluctance to report such outcomes.[4]

These causes of IUFD include foetal (25-40%), placental (20-30), maternal (5-10%) and in 25-35% cases cause remains unknown.[5]

The major problem faced by the obstetrician is the identification of women at risk; as many cases seem to occur in the absence of recognized risk factors.[2]

IUFD is an unhappy event for both obstetrician and parents especially when it is a apparently healthy pregnancy.[6]

Intangible loss of perinatal death includes mental health sequalae and sense of insecurity for further pregnancy fearing recurrence of still birth. The estimated direct financial cost of a stillbirth is 10-70% greater than the cost of a live birth.[7,8]

Service providers are also responsible for investigating the cause of death and intervene in time to decrease stillbirth rate. Research has shown that placental pathology and foetal autopsy are the most valuable examinations to determine the cause of death in stillbirth. A higher autopsy rate could give us more accurate and clear information about the causes of death in stillbirth. Thus, healthcare professionals have a responsibility to inform parents about the importance of foetal autopsy. The quality of care from government, public and private providers during pregnancy and childbirth should be exacerbated by health system constraints and is an important marker of a health system`s quality by global health community. Efforts are needed to raise awareness of stillbirth risk factors at community level to facilitate care seeking to antenatal and childbirth care.[9]

After the diagnosis of IUFD is made, though It is mentally stressful for the patient as well as relatives, it is important to offer both the options of delivery by induction of labour or expectant management. The Type of induction- pharmaceutical or mechanical and mode of delivery - depends on the gestational age, the maternal history of a previous uterine scar and her preference.[6]

We undertook this study to identify the incidence, etiology and mode of delivery of IUFD and stillbirth in our centre.

Materials and Methods

This is a retrospective observational study conducted in the department of obstetrics and gynaecology at Maharaja Institute of Medical Sciences after obtaining ethics committee approval and consent from subjects. The study population was the women who delivered at MIMS, during a period of 3 years from June 2020 to May 2023. Inclusion criteria: All diagnosed IUFD and still births , >24weeks of gestational age which occurred during the study period. Methodology: medical records of IUFD and still births during the study period were extracted. Total number of live births during the same period were noted from the parturition record. Data collection was done on pre structured proforma on details of complaints on admission, obstetric history, past surgical history, past and present history of medical illnesses, P/A & P/V findings, investigation reports and treatment rendered; mode of delivery, intrapartum events and postpartum complication if any was checked and noted. Foetal outcomes were recorded including birth weight and congenital malformations. Abnormal findings of placenta, if any were noted. Data analysis was done by using fractions and percentages.

Results

Total number of deliveries during the study period is 1050, out of which 40 are IUFD; hence the incidence at our center is 38 per 1000 live births.

Discussion

Intrauterine foetal death elicits distress and psychological suffering in both patients and their family members. Efforts have been conducted for a considerable period of time to decrease its frequency. Although there has been a decrease in the overall

perinatal mortality rate, the occurrence of intrauterine foetal demise (IUFD) still remains at an unacceptably high level. The present study showed an incidence rate of 38 per 1000 deliveries at our center. Our facility is a specialized medical center that primarily treats people who have already experienced intrauterine fetal demise (IUFD). Varying regions have documented distinct stillbirth rates. A study conducted in Uttarakhand found that the stillbirth rate was 49 per 1000 live births, while the national average is 38 per 1000 live births.[10]

Table 1 showing Referred cases were 17% (9 IUFD/52), compared to 3.1% (31 IUFD/998) in booked cases. Mufti et al[1] found more in unbooked cases similar to our study.

Table 1: Booking status of cases with IUFD

Type of admission	Live births	IUFD / Still birth	Total
Booked	967	31 [77.5%]	998
Referred	43	9 [22.5%]	52
Total	1010	40	1050

Out of the total 40 IUFD, 31 [77.5%] were booked and 9 [22.5%] were referred to our centre [Table 1]. The rate of IUFD among the booked cases is 3.1% (31 IUFD/998 booked cases) whereas that in referred cases is 17% (9 IUFD/ 52 referred cases).

Distribution of cases according to maternal demographic variables

Table 2 showing Majority of IUFD occurred in the age group of 21 to 25 years i.e. 25 [62.5%] indicating that the group most commonly affected followed by 8 [20%] in 15 to 20 years, 5 [12.5%] in 26 to 30 years and 2 [5%] in greater than 30 years of age group. Pregnancies occurring at a younger age are typically not planned and carry a significant risk for hypertensive disorders of pregnancy, anemia, and problems during childbirth.

Table 2: Maternal age

Maternal age (in years)	Number and percentage of IUFD
15 – 20	8 [20%]
21 – 25	25 [62.5%]
26 – 30	5 [12.5%]
>30	2 [5%]
Total	40

Majority of IUFD occurred in the age group of 21 to 25 years i.e. 25 [62.5%] [Table 2].

Table 3 showing Parity is an important factor that affects pregnancy outcome. This study found 62.5% of instances in primigravida moms. However, Mufti G et al[1] found a greater still birth rate in multigravida females.

Table 3: Parity

Parity	Number and percentage of IUFD
Primigravida	25 [62.5%]
Multigravida	15 [37.5%]
Total	40

Majority of IUFD were seen in primigravida i.e 25 [62.5%] [Table 3].

Distribution of cases according to fetal variables

Table 4 showing Majority of IUFD are male foetuses i.e 67.5% where as 32.5% are female foetuses. In study by Ivana Jovanovic et al,[11] IUFD were seen in male foetuses are 55% and female foetuses are 45% similar to our study.

Table 4: Fetal sex

Fetal sex	Number and percentage of IUFD
Male	25 [67.5%]
Female	15 [32.5%]
Total	40

IUFD were 25 [67.5%] are male fetuses whereas 5 [32.5%] are female fetuses [Table 4].

Table 5 showing Majority of IUFD, 55% cases belong to preterm gestation and 45% are term gestation. The highest in the former includes foetal abnormalities followed by unexplained IUFDs. IUFD in term gestation are most commonly associated with maternal medical disorders and unexplained. Where as in a study by Bhavi S hah et al,[6] they observed 74% IUFD in preterm and 26% in term gestation.

Table 5: Gestational age

Gestational age	Number and percentage of IUFD
<28 weeks	7 [17.5%]
28 to 32.6weeks	10 [25%]
33 to 36.6 weeks	5 [12.5%]
37 to 41 weeks	18 [45%]
Total	40

Majority of IUFD occurred at preterm gestation (22) and at term gestation (18). [Table 5]

Table 6 showing IUFD with birth weight less than <1000grams were 9 [22.5%], between 1000-1499 grms are 4 [10%], between 1500-2499 grams were

11 [27.5%], between 2500-3499 were 16 [40%]. As IUFD were higher in preterm, LBW babies accounted for 60% of cases whereas normal BW were 40% and none were large baby.

Table 6: Birth weight

Birth weight (in grams)	Number and percentage of IUFD
<1000	9 [22.5%]
1000 - 1499	4 [10%]
1500 - 2499	11 [27.5%]
2500 - 3499	16 [40%]

IUFD were higher in preterm, LBW babies accounted for 60% of cases whereas normal BW were 40% and none were large baby. [Table 6].

Table 7 showing The leading reason for IUFD in our study is unexplained 12 [30%] followed by fetal abnormalities 7 [17.5%], maternal infection 6 [15%], cord accidents 4 [10%], APH [7.5%], hypertension, rupture uterus, abnormal placenta 2 [5%] each, diabetes and IUGR 1 [2.5%] each. Similarly in a study by Monasta et al,[12] the percentage of IUFD cases for which no possible cause can be identified is high i.e. 28%.

Table 7: Distribution of cases based on the causes of IUFD

Causes	Number and Percentage of IUFD
Unexplained	12 [30%]
Fetal abnormalities	7 [17.5%]
Maternal infection	6 [15%]
Cord accidents	4 [10%]
APH	3 [7.5%]
Hypertension	2 [5%]
Rupture uterus	2 [5%]
Abnormal placenta	2 [5%]
Diabetes	1 [2.5%]
IUGR	1 [2.5%]

The leading reason for IUFD in our study is unexplained 12 [30%] [Table 7].

Table 8 showing Majority of the IUFD i.e 87.5% underwent vaginal delivery and 7.5% by lscs and 5% by laparotomy. In a study by Mamta bansal et al[5] 78.89% underwent vaginal delivery and 21.11% by LSCS similar to our study. Similarly in a study by swapnil patel et al,[13] 91.2% underwent vaginal delivery, 5% by caeserian section, 3.7% by hysterotomy.

Table 8: Distribution of IUFD among periviable and viable gestational age

Causes	Periviable gestational age	Viable gestational age
Unexplained	2	10
Fetal abnormalities	3	4
Cord accidents	1	5
Maternal infection	-	4
APH	-	3
Hypertensive disorders	-	2
Ruptured uterus	-	2
Abnormal placenta	1	1
Diabetes mellitus	-	1
IUGR	-	1
Total	7	33

Majority of the IUFD were in the viable period 33 [82.5%] where the highest being 10 unexplained. [Table -8]

Table 9: Mode of delivery in IUFD

Mode of delivery	Number and percentage of IUFD
Vaginal delivery	35 [87.5%]
LSCS	3 [7.5%]
Laparotomy	2 [5%]
Total	40

Majority of the cases 35 [87.5%] are delivered by vaginal route.

Conclusion

In our study maximum number IUFD were unexplained, not all instances of Intra Uterine Fetal Demise can be prevented, nor can a specific cause be attributed. The second most prevalent cause in the present study is congenital anomalies. According to other studies maternal hypertensive diseases in pregnancy is the most prevalent cause of IUFD. To decrease the occurrence of IUFD and prevent its recurrence, it is crucial to engage in early booking, identify high risk cases, intervene promptly. The majority of the causes can be prevented through a collaborative approach. However, it is imperative to encourage stringent monitoring throughout the labour and delivery to prevent intrapartum foetal death.

Acknowledgments

There is no funding received for the study. We acknowledge the faculties and postgraduates and the management for their cooperation. We are thankful to the patients for their confidence and consent.

Conflict of interest : None

Fig:1 Maternal fever

Fig:2 Macerated foetus

Fig:3 Congenital anomaly [Thoracoomphalophagus]

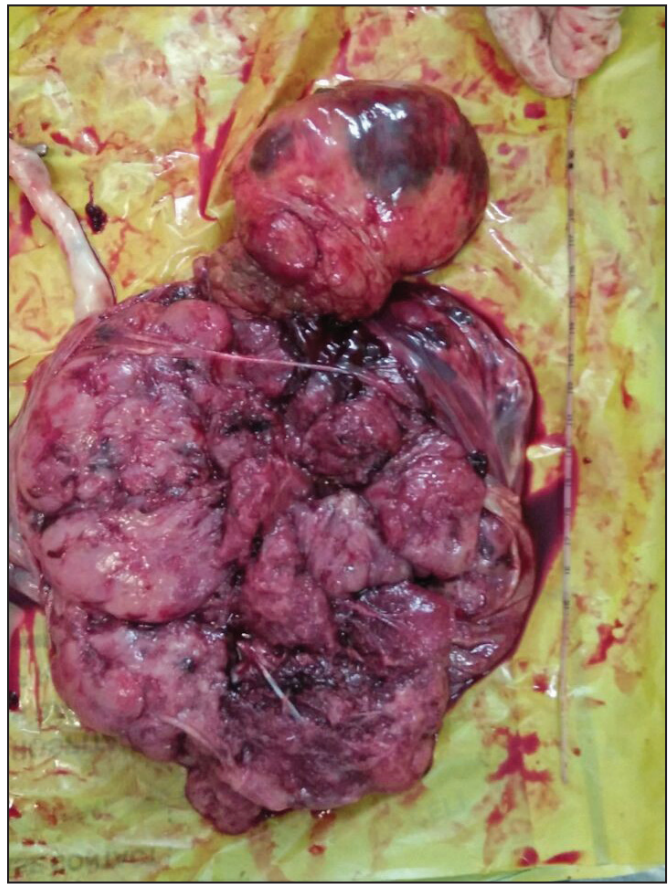


Fig:4 Chorangioma of placenta

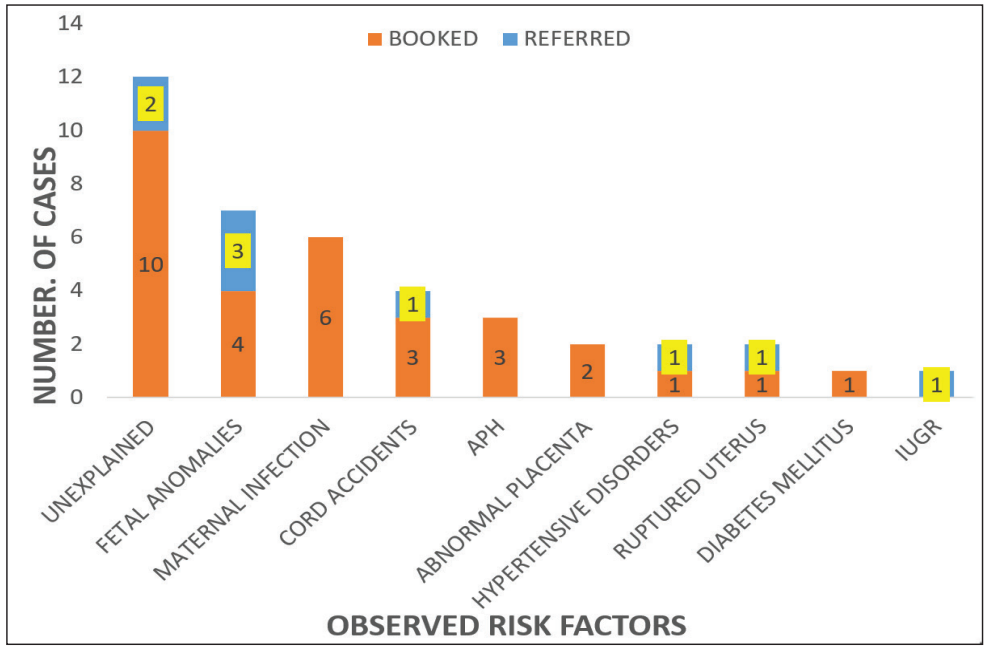


Fig : 5 Distribution of booked and referred cases based on risk factors

References

1. Mufti AH, Mufti S, Wani NJ. Intrauterine fetal death associated socio-demographic factors and obstetric causes: a retrospective study. Int J Reprod Contracept Obstet Gynecol. 2020 Oct 1;9(10):4027-31.
2. Meena L, Gupta R. Study of intrauterine fetal death cases in a tertiary care center. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2020 Mar 1;9(3):1255-9.
3. Jamal S, Agarwal S. IUFD incidence, causes and complications: a retrospective study done at a tertiary care centre in greater Noida, India. International journal of reproduction, contraception, obstetrics and gynaecology. 2017 Dec 1;6(12):5483-7.
4. Roberts L, Renati SJ, Solomon S, Montgomery S. Stillbirth and infant death: mental health among low-income mothers in Mumbai. BMC Pregnancy Childbirth. 2021 Apr 10;21(1):292. doi: 10.1186/s12884-021-03754-0. PMID: 33838663; PMCID: PMC8037900.
5. Bansal M, Sharma I, Chandrakar S. Study of Intrauterine Foetal Death in Government Medical College in Tribal Area of Bastar. Journal of Evolution of Medical and Dental Sciences. 2020 Aug 10;9(32):2257-61.
6. Shah BS, Yadava PA, Mehta ST, Raval BM, Dadhania BH. Intrauterine Fetal Death: A Study of Its Epidemiology, Causes & Methods of Termination.
7. de Bernis, Luc & Kinney, Mary & Stones, William & ten Hoope-Bender, Petra & Vivio, Donna & Leisher, Susannah & Bhutta, Zulfiqar & Gülmezoglu, Ahmet & Mathai, Matthews & Belizán, José & Franco, Lynne & McDougall, Lori & Zeitlin, Jennifer & Malata, Address & Dickson, Kim & Lawn, Joy & Litch, James. (2016). Stillbirths: Ending preventable deaths by 2030. The Lancet. 387. 10.1016/S0140-6736(15)00954-X.
8. Christou A, Alam A, Hofiani SM, Rasooly MH, Mubasher A, Rashidi MK, Dibley MJ, Raynes-Greenow C. Understanding pathways leading to stillbirth: The role of care-seeking and care received during pregnancy and childbirth in Kabul province, Afghanistan. Women and Birth. 2020 Nov 1;33(6):544-55.
9. Deep JP, Sharma R, Ansari S, Shah RK, Raut RK, Deep SK et al. Evaluation of Intrauterine Fetal Death at Tertiary Care Centre: A Descriptive Cross-Sectional Study. Medphoenix. 2022;7(2):10-16.
10. Choudhary, Dr & Gupta, Dr. (2014). Epidemiology of Intrauterine Fetal Deaths: A Study In Tertiary Referral Centre In Uttarakhand. IOSR Journal of Dental and Medical Sciences. 13. 03-06. 10.9790/0853-13320306.
11. Jovanovic I, Ivanovic K, Kostic S, Tadic J, Dugalic S, Petronijevic M, Gojnic M, Petronijevic M, Vrzic-Petronijevic S. Intrauterine Fetal Death in Term Pregnancy-A Single Tertiary Clinic Study. Life (Basel). 2023 Dec 10;13(12):2320. doi: 10.3390/life13122320. PMID: 38137921; PMCID: PMC10745047.
12. Monasta, L., Giangreco, M., Ancona, E. et al. Retrospective study 2005–2015 of all cases of fetal death occurred at ≥23 gestational weeks, in Friuli Venezia Giulia, Italy. BMC Pregnancy Childbirth 20, 384 (2020). https://doi.org/10.1186/s12884-020-03074-9
13. Patel S, Thaker R, Shah P, Majumder S. Study of causes and complications of intra uterine fetal death (IUFD). International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2014 Dec 1;3(4):931-6.

Case Series On Caeserean Scar Ectopic Pregnancy: A Rising Trend

Monisha Mohapatra[1], Indira Palo[2], Sairindri Sahoo[3]

Introduction

Caeserean scar pregnancy is a rarest form of ectopic pregnancy.

It is the implantation of embryo in the myometrial defect of any previous uterine surgery mostly caeserean section,myomectomy, hysterotomy and in some minor procedure like dilatation and curettage etc. Its incidence was uncommon. But over a couple of decade its incidence has increased. The main reason behind its increased incidence is the increase in rate of caeserean section from 5% to 15% world wide. The incidence of caeserean scar ectopic is 1/2800 pregnancies. It is associated with complications such as uterine rupture, uncontrolled bleeding which may be life threatening and can result in hysterectomy. Ultrasound can be an essential tool for diagnosis of caeserean scar pregnancy which can decrease maternal mortality and morbidity. It should be always clinically suspected.

Case Reports

CASE 1: A 26 year old second gravida para 1 living 1 with prior lower segment caeserean section 5 years back ,at 22 weeks of gestational age came to OPD for routine antenatal checkup.Her previous medical reports of one antenatal check up & blood investigations were normal done in a near by PHC.

On examination, her vitals were stable. On per abdominal examination, the height of the uterus was 16 - 18 weeks and fetal parts were not felt.Her transabdominal ultrasound report showed the size of uterus as 14 cm 8cm 7cm* and it contains mixed echogenic tissue suggestive of missed abortion / molar pregnancy.

All her routine investigations were repeated and were normal. One pint blood requisition have been advised and donor was kept ready. She was planned for suction and evacuation under anaesthesia after priming with Tab Misoprostol.

During the procedure there was torrential bleeding with the removal of trace amount of tissues. The procedure was abandoned and bleeding was controlled by Inj. oxytocin, Inj. tranexa, Inj. methergine, uterine massage with uterine packing. The patient was counselled regarding the need of laparotomy under anaesthesia.

Next day in OT after keeping two pint of blood in hand, suction and evacuation was attempted once again which resulted in uncontrollable bleeding leading to abandonment of procedure and laparotomy was planned immediately.

On laparotomy,the fundus of the uterus and cervix was normal. There was a bulging of previous caeserean scar area with increased vascularity, thinning and

1. Junior resident, Department of Obstetrics and Gynecology, MKCG Medical College And Hospital, Berhampur, Odisha
2. Associate Professor, Department of Obstetrics and Gynecology, MKCG Medical College And Hospital, Berhampur, Odisha
2. Senior Resident, Department of Obstetrics and Gynecology, Shri Jagannath Medical College And Hospital, Puri, Odisha
Corresponding Author: Dr Monisha Mohapatra

bluish coloration suggestive of caeserean scar ectopic pregnancy. Hysterectomy was done. On cut section, endometrial lining at fundus and cervix was normal and LSCS scar area was filled with placental tissue with myometrial invasion.

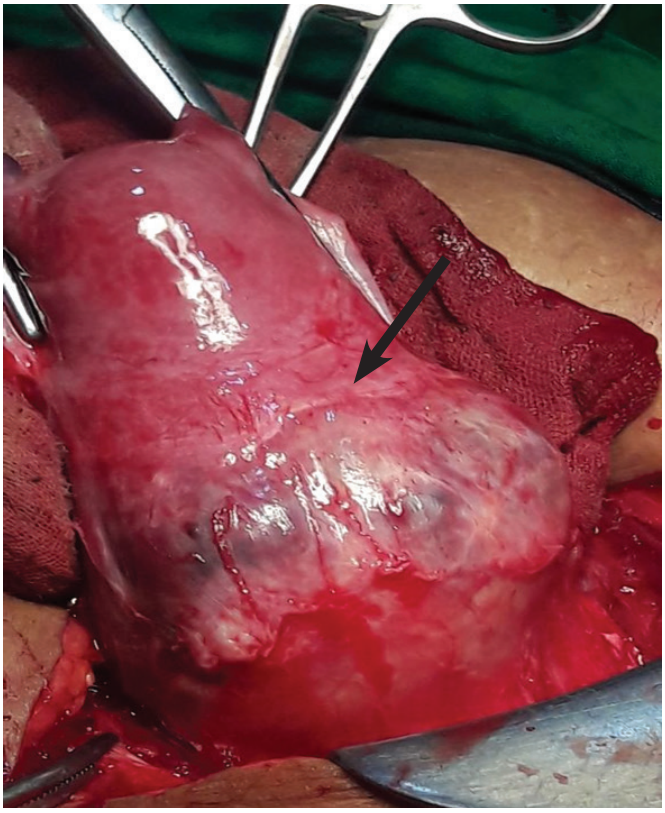


Fig 1.1: Intraoperative finding of caesrean scar ectopic at the lower uterine segment

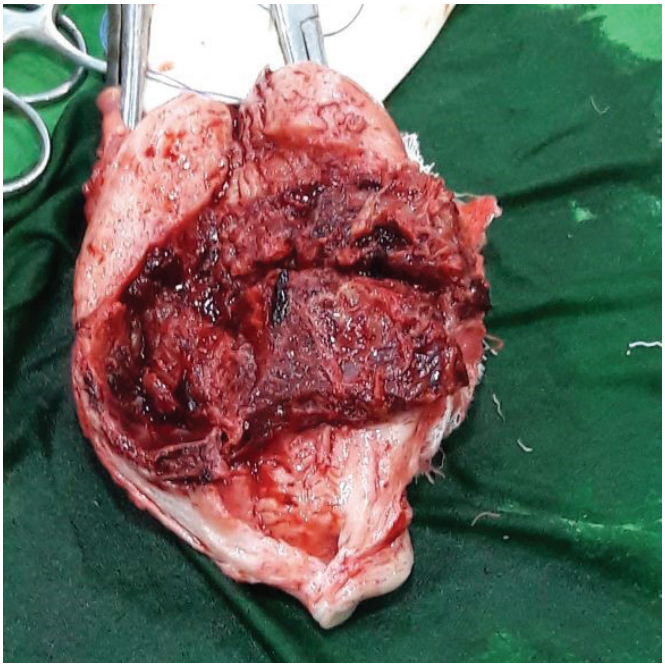


Fig 1.2: On cut section, placental tissue invasion into myometrium

CASE 2: A 28 year old 3rd gravida , para 1 living 1 abortion 1 with prior history of lower segment caeserean section done 3 year back came to OPD with complaint of on and off bleeding per vaginum. She had history of suction and evacuation at 8 weeks of amenorrhoea in private clinic for missed abortion one month back. Her ultrasound report suggested that the uterine cavity is empty and there is fibroid of 3cm *2cm present in anterior wall of uterus behind the bladder. The value of Beta HCG was 221 IU/ml. CT scan revealed empty uterine cavity with anterior wall fibroid of size 3*2.5 cm. She was planned for hysteroscopy under anaesthesia. On Hysteroscopy, the uterine cavity was normal and necrotic fragmented tissue were hanging from anterior wall of uterus suggestive of caeserean scar ectopic. She was planned for laparotomy. On laparotomy, uterus was normal and a bulge was present at previous scar area. After injecting vasopressin,a cut was made on the bulge site. The placental tissues were removed and the defect was sutured with vicryl.

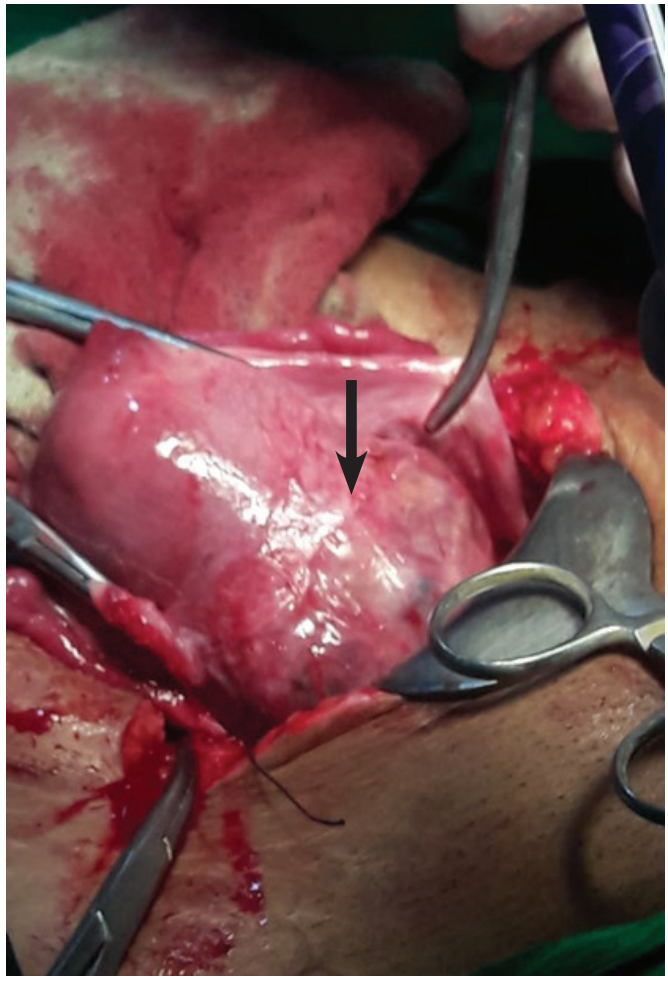


Fig 2.1: Intraoperative finding of bulge at the previous lower caeserean scar site

CASE 3: A 26 year old gravida 2 para 1 living 1 with previous LSCS with last child birth 1 year back at 8 weeks of gestational age complained of bleeding per vaginum. Earlier she had taken Tab MTP kit and had underwent suction and evacuation for incomplete abortion.On examination, she was vitally stable. On per abdominal examination, abdomen was soft and non tender. On per vaginal examination, uterus was found bulky, mild tenderness present and bilateral fornices were free. On USG, uterine cavity was empty with presence of a gestational sac like structure with a tiny fetal pole without any cardiac activity on the anterior wall of uterus. Serum Beta HCG reported as 325IU/ml. She was planned for medical management. Single dose of inj methotrexate of dose 50mg/m2 was given. The serum beta hcg level declined but there was persistence of sonographic findings and she again complained of bleeding per vaginum. She was planned for laparotomy. There was a bluish colored bulging on the anterior wall of uterus suggestive of caeserean scar ectopic. After injecting vasopressin, excision of ectopic tissue with repair of the uterus was done.

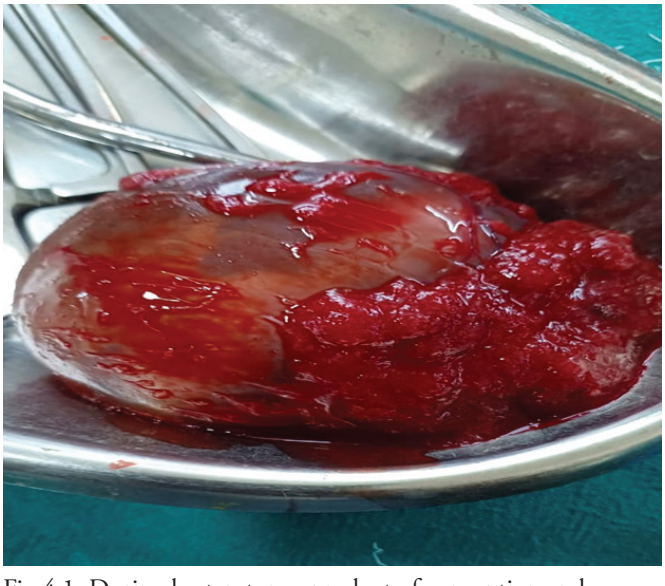


Fig 4.1: During hysterotomy, product of conception and placenta and its membranes were removed in toto.

CASE 4: A 25 year old 2nd gravida, para 1 living 1 with previous LSCS 4 year back with amenorrhoea of 13week had been referred to tertiary care hospital with a ultrasound report suggestive of caeserean scar pregnancy. She had no complaints at the time of admission.On examination, her vitals were stable. On per abdominal examination, abdomen was soft and uterus was just palpable. On per vaginal examination, uterus size was 12 week, mobile, soft, non tender, b/l fornix free. She had been electively planned for hysterotomy. During the procedure, the product of conception along with placenta and all its membranes were removed. Placental bed bleeding sites were secured with interrupted absorbable sutures.

CASE 5: A 28 year aged 4th gravida , para 1 living 1 abortion 1 with Rh negative pregnancy at 12 weeks of gestational age attended routine opd for antenatal check up.. Her routine antenatal ultrasound reported showed missed abortion for which she underwent suction and evacuation 1month back and had received injection Rhoclone. She complained of continous bleeding per vaginum following suction and evauation and ultrasound suggested retained product of conception. She was again planned for suction and evacuation under anesthesia the next day. She had been infused with one pint packed red blood cells following the procedure. After the completion of the procedure , she complained about serosanguinous discharge for about one month but did not complain about abdominal pain. After a month, she again complained about bleeding per vaginum. She was advised for beta-Hcg test and repeat ultrasound. Her beta-hcg report was 16.2IU/ml.

Ultrasound reported as bulky uterus of size 127*58*67 mm with heterogenous lesion in anterior myometrial wall of mid and lower uterine body showing focal bulge, loss of endomyometrial interphase with evidence of myometrial invasion suggestive of invasive mole? Caeserean scar ectopic pregnancy?. Her hemoglobin level was 8.5 mg/dl. She was immediately planned for laparotomy with 2 pint blood in hand. She had been explained about the need for immediate laparotomy. On opening the abdomen , there was a bulgingof the size 4cm*3cm *3cm on the anterior wall of uterus from the site of previous scar site upto the internal os. Intra operatively it was diagnosed as a case of caserean scar ectopic pregnancy. After injecting vasopression, incision was made on the uterus for hysterotomy but there was torrential bleeding from the uterine arteries. Despite all conservative efforts, the bleeding did not stop. Hysterectomy was done with a blood loss amounting of 2 L. 2 pint intraoperative blood transfusion was done and abdominal drain was given. On cut section of the uterus, there were chorionic tissue along with dead necrotic tissue extending from previous scar site to internal os. The fundus and cervix of the uterus was normal and healthy. Abdominal drain

was removed after 24 hour with a total collection of 30 ml. She had another one pint blood transfusion in post operative period and was discharged on post op day 7.

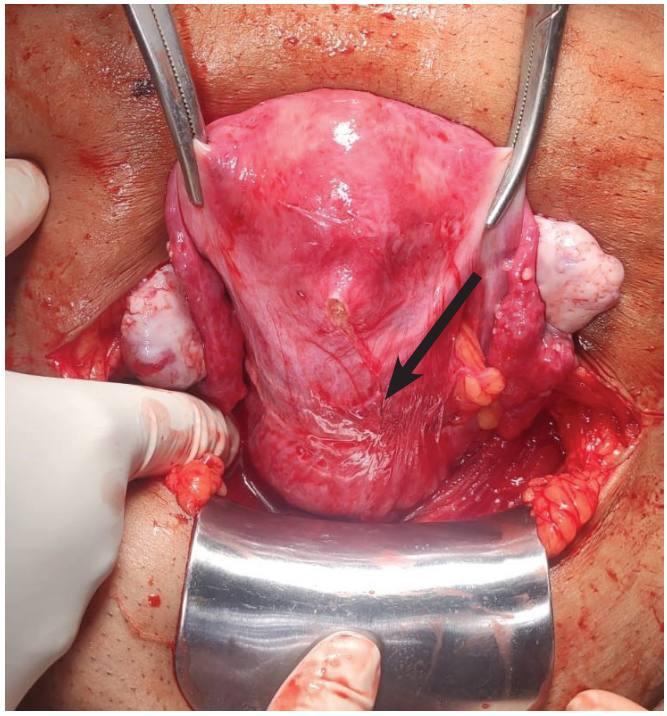


Fig 5.1: Intra operative finding of caeserean scar ectopic pregnancy

Fig 5.2: Gross view of uterus of post hysterectomy done in caeserean scar ectopic pregnancy

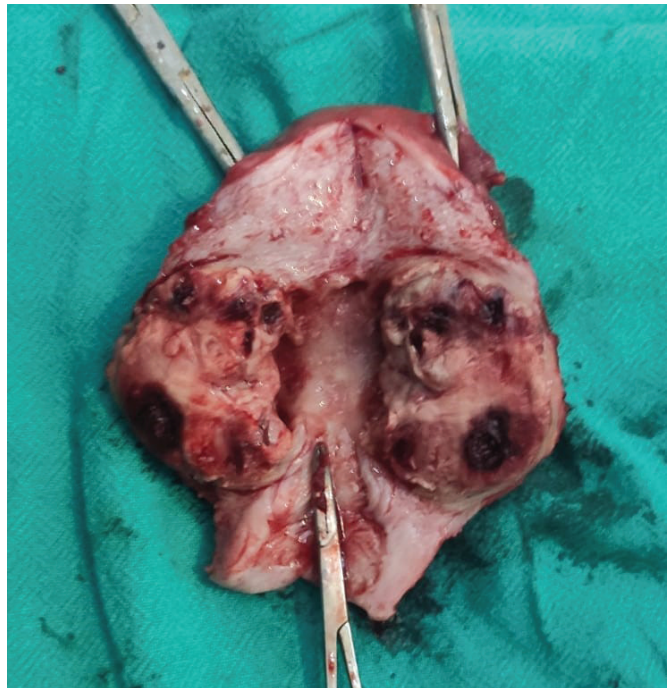


Fig 5.3: cut section view of uterus showing presence of chorionic villi and dead necrotic tissue over the previous scar region

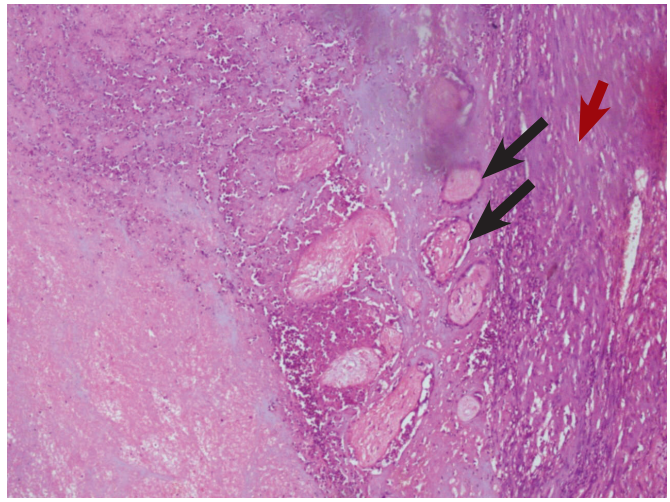


Fig 5.4: Histology image of the specimen .
The black arrow suggests the chorionic villi
The red arrow demonstrates the uterine muscle layer.

Discussion

Caesrean scar ectopic , though a rarest type of ectopic pregnancy, but still it has shown a rising trend over years. Larsen and Solomon reported the first case of caeserean scar pregnancy in 1978. Caeserean scar ectopic pregnancy is the implantation of embryo in the myometrial defect of any previous scar in the uterus . The location of embryo is outside the normal uterine cavity. The pregnancy is completely surrounded by myometrium and fibrous tissue of the scar. The scar

may be due to previous caeserean section or any gynecological procedure like myomectomy, suction and evacuation, dilatation and curettage etc. The most probable explanation of occurrence of caesarean scar ectopic is the invasion of myometrial tissue into the microtubular tract i.e. present between endometrial canal and previous scar. Intraoperative damage to the decidua basalis can apparently, microscopically persist within the endometrial layer as a residual minuscule defect or as small yawning tracts.[1]

There are two types of caeserean scar ectopic pregnancy. In Type I or the endophytic type, the gestational sac grows towards the uterine cavity whereas in type II or exophytic type is where the gestational sac grows towards the bladder. In both the scenario, the caeserean scar pregnancy is a life threatening condition. It may present in a similar way as in placenta increta and may present more dangerously than placenta acrreta. The patient will present as profuse vaginal bleeding in first trimester as the pregnancy advances and ultimately as uterine rupture if delayed in diagnosis and treatment.

Ultrasound is the initial tool of diagnosis .In usg there may be (I) gestational sac located at the level of the previous scar i.e between the bladder and anterior uterine wall (ii) no fetal parts in the uterine cavity (iii)surrounding doppler flow with minimal separation from bladder i .e sac is well perfused in contrast to the avascular appearance of an aborting gestational sac (iv) outward bulging of the gestational sac within the scar and no myometrium is seen between the gestational sac and urinary bladder. (v) negative 'sliding organ sign" i.e non displacement of the gestational sac from its position at the level of internal os with the application gentle pressure from transvaginal ultrasound.

Early diagnosis and prompt treatment is the main stay of diagnosis. If left untreated, it can progress to placental accreta or even uterine rupture and bladder rupture. Both medical and surgical management can be followed for the management with respect to the stability of the patient, gestational age at the time of diagnosis and desire of future fertility. Injection methotrexate could be administered for the successful management of caeserean scar ectopic only in vitally stable patient. Beta hcg values is reviewed after the administration of methotrexate to know the effectiveness of the treatment or to know the need for change in plan of management. In some cases, injection potassium chloride is administered.

Surgery is the ultimate and definitive treatment in case of failure of medical management and in a vitally unstable patient. It provide an opportunity for future fertility in case of repair of uterine dehiscence. The various surgical approaches are laparotomy, laparoscopy, hysteroscopy or even vacuum aspiration, depending on the location of the gestation and surgeon's expertise.[2] Laparotomy provide better intra operative view, access to the site of bleeders and control of hemorrhage especially in type II scar ectopic pregnancy.

Conclusion

The risk of recurrence of a scar ectopic pregnancy is about 3.2– 5%.[2]

Ultrasound is usually the screening modality for diagnosis and MRI can be done for equivocal cases.[3] The mainstay of management is early diagnosis and prompt management in order to avoid life threatening complications like torrential hemorrahage, uterine rupture.[4] The clinician should be ectopic minded as the incidence of caeserean scar ectopic pregnancies is on rising trend.

Conflicts of interest: NIL

References:

1. Shafqat G, Khandwala K, Iqbal H, et al. Cesarean scar pregnancy: An experience of three cases with review of literature. Cureus 2018;10(2):e2133. DOI: 10.7759/cureus.2133
2. Görker S, Sadun S, Muge H, Mehemet IH. Successful management of cesarean scar pregnancy with vacuum extraction under ultrasound guidance. Acute Med Surg. 2018;5(4):358–61.
3. Jayaram PM, Okunoye GO, Konje J. Caesarean scar ectopic pregnancy: Diagnostic challenges and management options. Obstet Gynaecol 2017;19(1):13–20. DOI: https://doi.org/10.1111/tog.12355.
4. Dutta I, Haldar A , Nath M. Scar pregnancy: A case series involving two medical college hospitals in West Bengal. J South Asian Feder Obst Gynae 2020;12(1):51–58. DOI: https://doi.org/10.5005/ jp-journals-10006-1756.

Case Report: Obstetrics

A Rare Presentation of Acute Inversion of Uterus and PPH — A Maternal 'Near Miss' Case

Priti Jha[1], Puja Jha[2], Soumyajyoti Kundu[3], Swapan Kr. Kundu[4]

ABSTRACT

Introduction: Maternal "near-miss" refers to surviving severe pregnancy complications, requiring innovative problem-solving and more resources. Postpartum hemorrhage (PPH) is a major health risk, a leading cause of maternal death.

The Case: Mrs. R. J., 32 years, $G_2P_1L_1A_0$, previous uncomplicated vaginal delivery presented at 38.4 weeks gestation with a normal antenatal course. Labour was induced with vaginal misoprostol, resulting in the successful vaginal delivery of a healthy 3.5 kg baby with routine preventive measures for postpartum hemorrhage. However, she experienced acute spontaneous uterine inversion post-delivery, leading to severe PPH despite attempts at repositioning the uterus and administration of halothane for relaxation. Compounded by her bronchial asthma, preventing the use of carboprost, intractable bleeding persisted, resulting in significant blood loss. With approximately 1.3 litres lost, emergency postpartum hysterectomy became imperative to save her life. This critical intervention was executed through a collaborative "Team Approach" involving obstetricians, anesthesiologists, cardiologists, pediatricians, and perioperative generalists, highlighting the importance of multidisciplinary care in managing obstetric emergencies.

Result: Following emergency postpartum hysterectomy, 4 units PRBC and 8 FFP transfusions, the patient successfully recovered.

Conclusion: Prompt identification, timely intervention, a coordinated team approach, and urgent management of PPH are critical for improving maternal outcomes and saving lives.

Key words: Acute Inversion Of Uterus, PPH, Maternal 'Near Miss', Placenta Found Morbidly Adherent (PAS), "Multidisciplinary Care", Obstetric Emergenciess, Coordinated Team Approach, Unusual Complications

1. Junior Resident, Department of OBGY, MGM Medical College, MG University, Kishanganj, Bihar
2. Junior Resident, Department of Anesthesia, Max SS hospital Shalimar Bagh, New Shalimar, New Delhi
3. Junior Resident, Department of Microbiology, ICARE Institute of medical Sciences & Research, Haldia, West Bengal
4. Professor, Department of OBGY, MGM Medical College, MG University, Kishanganj, Bihar

Corresponding Author: Dr. Priti Jha

Introduction

Maternal "near-miss" refers to women who have escaped death either due to chance or good health care after experiencing severe life-threatening complications during pregnancy which can manifest *unexpectedly*, with varying severity. Predictable complications typically benefit from established protocols and mitigation strategies. However, *Unexpected*, or *Accidental* complications pose greater challenges, demanding innovative problem-solving approaches which require *increased Resource Allocation*. PPH constitutes a major health risk and is one of the leading causes of maternal death.

The Case:

Mrs. R. J., 32 years, $G_2P_1L1A_0$, previous uncomplicated vaginal delivery, a booked case with regular ANC was admitted on 16/01/2024 in early labour at 38 weeks 4 days. She took folic acid, iron, and calcium supplements regularly. She is on inhaler for bronchial asthma.

On examination, her BP was 110/70 mmHg, Pulse - regular, 94b/m, SpO2 99%, temp- 97°F, P+I- C-C- E-, CVS: S1 S2 audible, no added sounds heard. Respiratory system: B/L vesicular breath sounds heard - 18/min. P/A: Uterus term sized, mild contractions present, cephalic presentation, longitudinal lie, FHR: 146b/m, regular, P/V: Os parous, Show present.

Investigations:

Blood Gr: 'O'-positive, Hb: 11.4 gm%, Viral Serology: negative, VDRL: non-reactive, Euglycaemic, Urine R/E M/E: WNL, USG: 2nd trimester Anomaly Scan was normal. 3rd trimester growth scan suggested Liquor volume adequate, Foetal maturity 38 wks 3 days, estimated wt: 3.6 kg, cephalic presentation. Placental maturity Grade III, normal in size, placed fundal with normal echotexture, nuchal cord found.

Management:

Labor was augmented with 25 mcg vaginal misoprostol, resulting in smooth progress and successful vaginal delivery of a healthy 3.550 kg baby after 10 hrs of labour, mother was slightly exhausted. Nuchal cord released from the neck, clamped, cut - Baby resuscitated by neontologist. Inj. Carbetocin 100 mcg given i/m. However, *Acute partial Spontaneous Inversion of Uterus* occurred at the time of delivery while giving mild fundal push, may be due to traction on apparently shortened nuchal cord. Patient went into *Neurogenic Shock* immediately. *Placenta* found *Morbidly Adherent* (PAS) which was NOT diagnosed in USG. Abdominal palpation revealed Cupping of Fundus. Attempts of repositioning the uterus after administration of halothane for uterine relaxation failed. *Severe PPH* started. Compounded by her bronchial asthma, preventing the use of inj. Carboprost, intractable bleeding persisted, resulting in approximately 1.3-liters blood loss. Immediate *Emergency Postpartum Hysterectomy* became imperative to *Save her Life*. This critical intervention was executed through a *collaborative "Team Approach"* involving Obstetricians, Anaesthesiologists, Cardiologists, Neonatologists, and perioperative Generalists, highlighting the importance of *"Multidisciplinary Care"* in managing Obstetric Emergenciess.

Result:

Following Emergency Postpartum Hysterectomy, the patient received 4 units of **PRBC** and 8 units of **FFP**. Through this critical intervention, the patient was able to recover successfully with Hb 9.2 gm% on day 4.

Conclusion:

Prompt Identification, Timely Intervention, Coordinated Team Approach, and *Urgent management of postpartum hemorrhage (PPH)* stand as crucial pillars in enhancing maternal outcomes and potentially saving lives. With Organised efforts from Healthcare Professionals, including Obstetricians, Midwives, Nurses, and other Specialists, *Effective Strategies* can be implemented promptly to *combat "NEAR MISS CASES"*

Conflicts of interest: no any Conflicts of interest

REFERENCE

1. Krakowiak P, Smith EN. Risk factors and outcomes associated with a short umbilical cord. Obstet Gynecol. 2004;103(1):119-27.
2. Wendel MP, Shnaekel KL, Magann EF. Uterine Inversion: A Review of a Life-Threatening Obstetrical Emergency. Obstet Gynecol Surv. 2018 Jul;73(7):411-417. [PubMed]
3. Coad SL, Dahlgren LS, Hutcheon JA. Risks and consequences of puerperal uterine inversion in the United States, Am J Obstet Gynecol.2017,217(3),pp 1-377
4. Bakshi S, Meyer BA. Indications for and outcome of emergency peripartum hysterectomy.A five year review. J Reprod Med. 2000;45(9):733–737. [PubMed] [Google Scholar]
5. Zelop CM, Harlow BL, Frigoletto FD, Safon LE, Saltzman DH. Emergency peripartum hysterectomy. Am J Obstet Gynecol. 1993;168:1443–1448. [PubMed] [Google Scholar]
6. Miller DA, Chollet JA, Goodwin TM. Clinical risk factors for placenta previa-placenta accreta. Am J Obstet Gynecol. 1997;177(1):210–214. [PubMed] [Google Scholar]
7. Combs CA, Murphy EL, Laros RK. Factors associated with post partum hemorrhage with vaginal birth. Obstet Gynecol. 1991;77(1):69–76. [PubMed] [Google Scholar]
8. Fitzpatrick K, Sellers S, Spark P, Kurinczuk J, Brocklehurst P, Knight M. The management and outcomes of placenta accreta, increta, and percreta in the UK: a population-based descriptive study. BJOG Int J Obstet Gynaecol. 2014;121(1):62–71. [PMC free article] [PubMed] [Google Scholar]
9. Jauniaux E, Jurkovic D. Placenta accreta: pathogenesis of a 20th century iatrogenic uterine disease. Placenta. 2012;33(4):244–251. [PubMed] [Google Scholar]
10. Irving C, Hervig AT. A Study of Placenta Accreta. Surg Gynecol Obstet. 64th ed. 1937:178–200. [Google Scholar]

Case Report: Gynaecology

Two Rare Presentations of Huge Fibroid Polys

Shreya Raj[1], Mamta Dagar[2], Mala Srivastava[3], Indrani Ganguli[5]

ABSTRACT

Uterine fibroids are the most common benign, monoclonal, smooth muscle cell tumors in women of reproductive age group. Here we present two rare cases of huge fibroid polyps. First is a 28 years old nulliparous woman with acute retention of urine. On examination, she had a large mass impacted into the vagina with necrotic areas. She underwent vaginal myomectomy followed by hysteroscopic D+C. Second is a 25 years old nulliparous woman with protrusion of mass from vagina for 1 month. Local examination revealed a large globular mass attached to the fundus of a totally inverted uterus. Vaginal myomectomy with repositioning of inverted uterus was done. Post op period of both the patients were uneventful. Thus prompt diagnosis and conservative surgery can help relieve acute symptoms and save uterus for future reproduction.

Introduction

The fibroids are the most common pelvic smooth muscle tumors in women of reproductive age group. They are classified according to their location into different grades as per Wamsteker classification system. Submucosal fibroid polyp is classified as grade 0. When large, it can protrude through gradually dilating cervix and ultimately prolapse through the vagina. The main complication of this condition is pain, necrotic degeneration, hemorrhage and infection. They are also the most common factor for non-gravid uterine inversion. They represent a separate entity regarding their treatment. Though easily accessible vaginally these large fibroid polyp carry risk of severe uncontrollable hemorrhage and uterine inversion during myomectomy thereby requiring hysterectomy as a life saving measure.

Department of Obstetrics and Gyenaecology, Sir Ganga Ram Hospital, New Delhi
Corresponding Author: Dr Mala Srivastava

CASE 1: Mrs. T, 25 years old nulliparous married for 4 months presented with c/o white discharge per vaginum x for 2-3 months and something coming out per vaginum x 1 month. Her general examination was normal. Per abdomen examination was soft. On local examination: a large 12 x 12 cm globular mass lying outside the vulva attached to the fundus of the uterus and the uterus was totally inverted. On per vaginal examination pedicle of polyp could not be felt. All blood investigations were within normal limits. On USG uterus was anteverted of 5.5x2.6x3.8cms. A big mass was seen outside the vagina with a pedicle arising from cervical canal, ET 7.7mm. On MRI a pedunculated mass lesion arising from uterine fundus and prolapsed through introitus , possibility of polyp with areas of degeneration was noted. She had vaginal myomectomy followed by repositioning of inverted uterus under general anesthesia. Post op period was uneventful. She was followed up after 1 week and the uterus was nicely repositioned, the cervix had become absolutely normal. USG pelvis was done which showed uterus anteverted, 6.4x 4.1 x 5.0 cms, ET 9 mm B/L ovaries normal

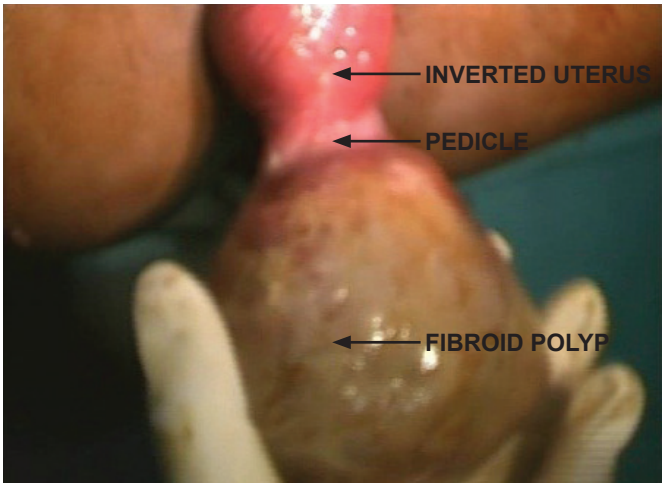


Fig 1. Prolapsed Fibroid Polyp with Inverted Uterus

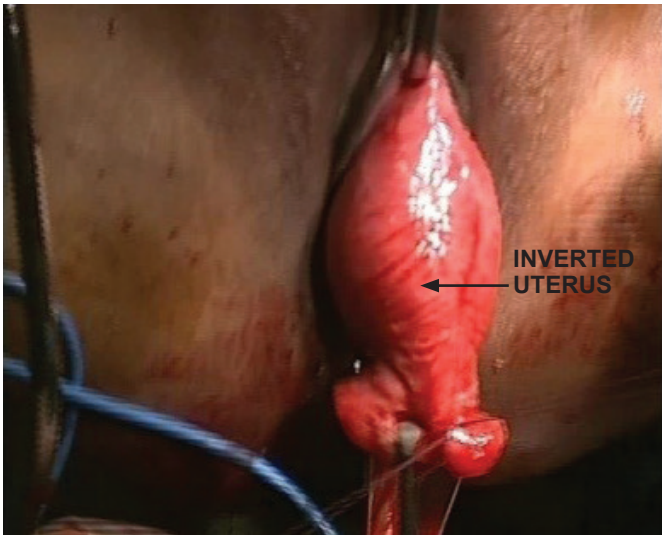


Fig 2. Polypectomy Done

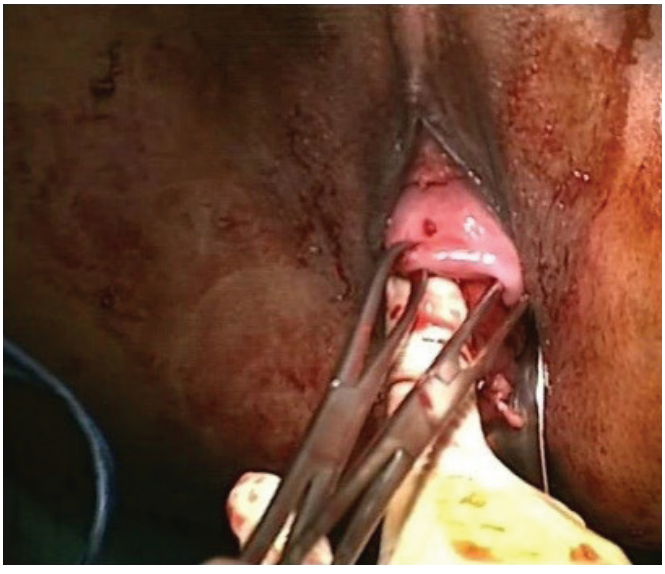


Fig 3. Uterus Repositioning

CASE 2: Mrs S, 28 years old nulliparous, married for 2 months presented to the casualty with c/o acute retention of urine for 4 days, continuous bleeding P/V for 17 days. Her general examination was normal. Per abdomen examination was soft. On per speculum examination a large mass 12x 12 cm was seen impacted into the vagina with areas of necrosis and bleeding with foul smell. On per vaginal examination a 12x12 cm mass was felt impacted in the vagina, though the pedicle could not be felt nicely. The cervical canal was distended and thinned out over the vaginal mass, uterus was anteverted, bulky. All blood investigations were within normal limits. USG done showed a heterogenous predominantly echogenic mass 12.2x 12.6 cms distending the cervical canal. The lesion appeared to be arising from the endometrial cavity with internal vascularity continuous with that of endometrial cavity. Both ovaries were normal. MRI done showed a large pedunculated endometrial polyp prolapsed into the endocervical canal with areas of hemorrhage and necrosis into it. She had vaginal myomectomy followed by hysteroscopy D+C under general anesthesia. Post op period was uneventful.

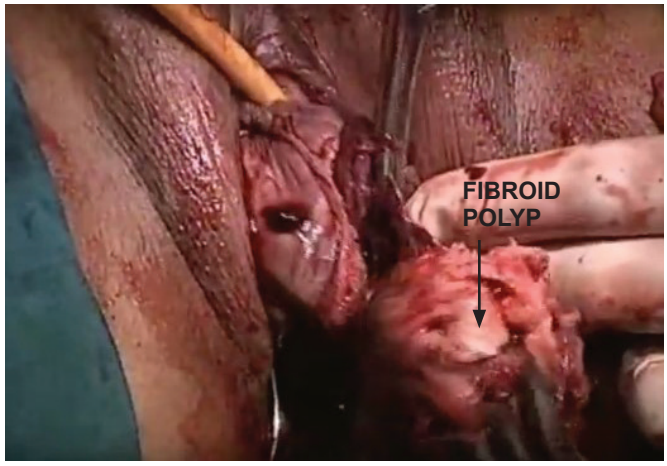


Fig 4 Prolapsed Fibroid Polyp

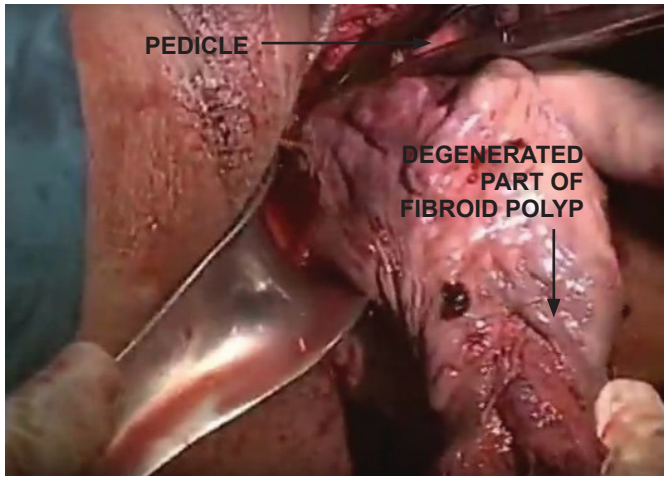


Fig 5 Clamped Pedicle

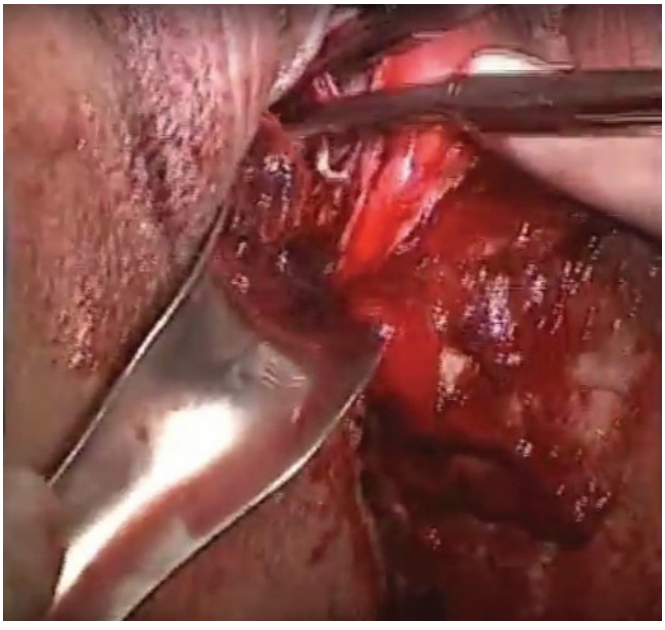


Fig 6 Polypectomy Done

Discussion

Uterine fibroids (myomas or leiomyomas) are the most common benign, monoclonal, smooth muscle cell tumors of the human uterus. Their etiology is multifactorial, and the incidence ranges from 5 to 77% in women of reproductive age 1. There are no data regarding the incidence or risk factors of prolapsed uterine leiomyomas in particular. Submucosal fibroids account for approximately 15 to 20 percent of these and an unknown proportion of submucosal leiomyomas prolapse through the cervix1. Majority of women with uterine fibroid are asymptomatic. Symtomatic women typically complain of heavy and prolonged bleeding. Women with a fibroid that has prolapsed through the cervix may present with vaginal bleeding, watery discharge, vaginal pressure or rarely urinary retention.

Uterine fibroids (myomas, leiomyomas) are an extremely rare cause of acute urinary retention with only a few case reports and series documented in literature2-5. Various mechanisms have been postulated by which acute urinary retention may occur due to a leiomyoma. The commonest theory is that the proximal urethra and bladder neck compression may be caused by anterior and superior displacement of the cervix due to the impacted fibroid. In normal voiding, the cervix is rotated away from the urethra/bladder neck; this movement is hindered by the impacted uterine fibroid6-8.

Uterine inversion is an extremely rare condition of submucosal fibroid polyps. There are two types of uterine inversions- puerperal and non puerperal or gynnaeciological9. Inversion can also be classified as acute and chronic. Uterine inversion can be classified into four stages as Stage 1: The inverted uterus remains in the uterine cavity, Stage 2: Complete inversion of the fundus through the cervix, Stage 3: The inverted fundus protrudes through vulva, and Stage 4: Inversion of the uterus and vaginal wall through the vulva.3 Gomez-Lobo et al. reported only 150 cases of non puerperal uterine inversion from 1887 to 2006 with Only four cases having been reported in women less than 45 years10.

The underlying cause of uterine inversion in 80%-85% of cases is uterine leiomyoma making it the most common cause. The proposed factors thought to contribute to uterine inversion are (a) a uterus previously distended by a tumor undergoing sudden emptying; (b) Intra uterine tumor causing thinning of uterus; and (c) dilatation of the cervix9.

The main symptoms of non-puerperal uterine inversions are anaemia caused by irregular vaginal bleeding, vaginal discharge, lower abdominal and/or pelvic pain, a protruding mass in the vagina, and in some cases obstruction of the urethra9.

As nonpuerperal uterine inversion is rarely encountered by the gynecologist its diagnosis and management could be challenging11. In our case, on clinical examination, the diagnosis was not clear, so detailed ultrasound of abdomen and pelvis was done to confirm the diagnosis. On ultrasound, it can be diagnosed by visualization of an indentation at the fundus on longitudinal section12. However, in our case, ultrasound did not pick up the inversion. Magnetic resonance imaging can prove to be a useful imaging modality for preoperative diagnosis of uterine inversion. A “V-shaped” uterine cavity and a thick, inverted fundus in a sagittal section and section through the upper level show layers of the inverted uterus with “bull’s-eye” configuration in T2-weighted images13. Unfortunately, because of the rare nature of the disorder, uterine inversion frequently goes undetected until surgery unless a high index of suspicion is maintained.

The condition is treated surgically. A fertility sparing surgical treatment is the ideal in this condition9.

With regard to the type of operation that should be performed for prolapsed pedunculated fibroids, Philpott states that vaginal myomectomy 'is particularly indicated when the tumour is necrotic and infected'. Tumours attached to the interior of the uterus by a stalk and then expelled into the vagina may produce inversion of the uterus. 'The patient's symptoms are those of the polyps and the associated inversion may be missed unless the possibility is kept in mind. If it is overlooked, the result can be disastrous because, in dividing what is regarded as the pedicle of the polyps, the surgeon cuts across the fundus of the uterus and opens into the peritoneal cavity. Vaginal myomectomy is a relatively straightforward procedure with low postoperative morbidity.

There is no current consensus on the management of urinary retention in patients with uterine leiomyomas14. Wu et al., have proposed an algorithm for the management of patients with acute urinary retention due to leiomyoma15. They suggest that short term management of acute urinary retention due to uterine leiomyoma (size ≥ 5-6 cm) is bladder decompression by catheterization, while long term management is based on either uterus preserving options (in whom fertility is desired) or hysterectomy in those who are menopausal. Pre/perimenopausal women may be tried with hysterectomy or GnRH agonists, aromatase inhibitors or ulipristal acetate.

Conclusion

Fibroids are usually asymptomatic. Patients can present with a range of symptoms depending on its size and location. In the above cases the patient presented with acute symptoms and prompt diagnosis and conservative surgery helped us to relieve them of the acute symptoms and save the uterus for future reproduction.

REFERENCES

1. Rice K E, Secrist J R, Woodrow E L. et al. Etiology, diagnosis, and management of uterine leiomyomas. J Midwifery Womens Health. 2012;57:241–247
2. Wu CQ, Lefebvre G, Frecker H, Husslein H. Urinary retention and uterine leiomyomas: a case series and review of literature. Int Urogynecol J. 2015;26(9):1277–84
3. Mavromatidis G, Dinas K, Mamopoulos A, Delkos D, Rousso D. Acute urinary retention due to a uterine fibroid in a non-pregnant woman. Clin Exp Obstet Gynaecol. 2009;36:62–63
4. Novi JM, Shaunik A, Mulvihill BH, Morgan MA. Acute urinary retention caused by a uterine leiomyoma: a case report. J Reprod Med. 2004;49:131–32
5. Hosokawa Y, Kishino T, Ono T, Oyama N, Momose H. Two cases of female acute urinary retention caused by an impacted pelvic mass. Int J Urol. 2005;12:1069–70
6. Barnacle S, Muir T. Intermittent urinary retention secondary to a uterine leiomyoma. Int Urogynaecol J Pelvic Floor Dysfunct. 2007;18:339–41
7. Yang JM, Huang WC. Sonographic findings of acute urinary retention secondary to an impacted pelvic mass. J Ultrasound Med. 2002;21:1165–69
8. Ding DC, Hwang KS. Female acute urinary retention caused by anterior deflection of the cervix which was augmented by an uterine myoma. Taiwan J Obstet Gynaecol. 2008;47:350–51
9. Non-puerperal uterine inversion due to submucous myoma in a young woman: a case report Marjolijn de Vries, Denise Arlette Maria Perquin*de Vries and Perquin Journal of Medical Case Reports 2010, 4:21
10. Gomez-Lobo V, Burch W, Khanna PC: Non-puerperal uterine inversion associated with an immature teratoma of the uterus in an adolescent. Obstet Gynecol 2007, 110:491-493
11. Omololu OM, Rabiu KA, Quadri MA, Oyedeko MO, Fatogun YM. Non puerperal uterine inversion due to Submucous fibroid: A case report. Niger Postgrad Med J 2011;18:158-60
12. Chhabra S, Agrawal V. Inversion of uterus – Vagaries of presentation. J Obstet Gynecol India. 2009;59:162–4
13. Mihmanli V, Kilic F, Pul S, Kilinc A, Kilickaya A. Magnetic resonance imaging of non-puerperal complete uterine inversion. Iran J Radiol. 2015;12:e9878
14. Wu CQ, Lefebvre G, Frecker H, Husslein H. Urinary retention and uterine leiomyomas: a case series and review of literature. Int Urogynecol J. 2015;26(9):1277–84
15. Lefebvre G, Vilos G, Allaire C, Jeffrey J, Arneja J, Birch C, et al. Clinical Practice Gynaecology Committee, Society for Obstetricians and Gynaecologists of Canada. The management of uterine leiomyomas. J Obstet Gynaecol Can. 2003;25:396–418. quiz 419-22

URGENT

Members of ISOPARB are requested to update their Mailing address including the Mobile Number & E-mail ID for all correspondence

Contact:

Dr Pragya Mishra Choudhary
Secretary General, ISOPARB
E-mail: pragyamishra@hotmail.com

Dr Ramprasad Dey
Editor-in-Chief
E-mail: drrpdey@gmail.com

Why to Submit in IJOPARB?

- National and International recognition, readership and acceptance.
- Not to wait too long for publication.
- Quality feedback from the expert editors for your improvement.

How to Submit:

Instruction to authors IJOPARB in each issue.

Advertise in IJOPARB

Advertise your

Meeting
•
Training Programme
•
Products
•
Educational Courses

For Tariff Rates
E-mail: ijoparb1978@gmail.com

BE A LIFE MEMBER

of
Indian Society of Perinatology and Reproductive Biology (ISOPARB)

[Affiliated to the Federation of Asia and Oceania Perinatal Societies (FAOPS)]

Website: www.isoparb.org

For any more information, please contact Editorial Board

Email: ijoparb1978@gmail.com

CALL FOR PAPERS

From Pan India, Bangladesh, Nepal, Asia Pacific Region, United Kingdom & Overseas

- High Quality Research Papers/ Original Articles
- Review Articles
- Commentaries
- Letters to Editor
- Observational Studies covering General Obstetrics, Gynecology, Anesthesiology, Internal Medicine, Perinatology, Neonatology & Reproductive Biology
- Papers are invited from all the disciplines which have relevance to practice and policy
- Case reports of importance and papers on basic science are also accepted with these subjects.

Support to prepare your paper

For any support of composition before submitting article you may contact the IJOPARB Editorial Board.

Email: ijoparb1978@gmail.com / drrpdey@gmail.com

Call For IJOPARB Reviewers

Members of ISOPARB interested to work in the editorial Board as reviewers, are requested to submit their names with their updated Curriculum Vitae to the Editor in Chief. Kindly mention your interest in the subspeciality that you need to be involved (e.g. fetal medicine, perinatology, general gynaecology, high risk pregnancy, reproductive endocrinology etc.)

AN APPEAL !

DONATE GENEROUSLY FOR IJOPARB JOURNAL

Cheques / Demand Draft to be drawn in favour of
Indian Journal of Perinatology and Reproductive Biology, payable at Kolkata

Instruction to Authors

The Journal of Indian Society of Perinatology and Reproductive Biology which is the official publication of the Indian Society of Perinatology and Reproductive Biology (ISOPARB) invites original research articles in gynaecology / obstetrics / related subjects in the following category: Clinical Articles; Review Articles; and Brief Communications (including Case Reports).

All manuscripts should be prepared according to the guidelines detailed below. It is also available in our website www.ijoparb.co.in. Any manuscript that has not been formatted as per the ISOPARB requirements will be returned to the author for correction. All manuscripts should be created and submitted in Word format.

1. SUBMISSION

Authors must submit manuscripts by Email to:
ijoparb1978@gmail.com
drrpdey@gmail.com

Hard-copy submissions will not be considered.

Please submit a cover letter to the Editor-in-Chief mentioning the following:

- Each author's name, address, and email address.
- Each author's affiliation and qualifications.
- The name of the author who is to deal with correspondence and proofs.

Once submitted, manuscripts undergo initial screening by the editorial staff and editors and then papers will undergo peer review.

2. Authors must give a separate "Author Guarantee" document mentioning the following:

(1) that all authors have met the criteria for authorship and have participated sufficiently in the work to take responsibility for it;

(2) that all authors have reviewed the final version of the manuscript and approve it for submission to the ISOPARB journal.

(3) that neither this manuscript nor one with substantially similar content by the authors has been published elsewhere or is being considered for publication elsewhere;

(4) that the manuscript has been submitted with the full knowledge and approval of the institutions or organizations given as the affiliation(s) of the author(s);

(5) that the authors have informed the editor in a cover letter and in the manuscript itself of any conflicts of interest; and

(6) that the corresponding author affirms the manuscript to be an honest and transparent account of the study being reported.

In line with ICMJE standards, the criteria for authorship are as follows:

(1) Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND

(2) Drafting the work or revising it critically for important intellectual content; AND

(3) Final approval of the version to be published; AND

(4) Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

3. CLINICAL TRIALS AND REVIEW ARTICLES

Clinical trials

Submission of clinical trials must include reference to ethics approval (or explanation of why ethics approval was not received). Authors must consult the CONSORT statement and checklist and submit a CONSORT flow chart as an editable figure in Word/PowerPoi ntformat.

The clinical trial registration is preferable and information should be included at the end of the abstract of the submitted manuscript.

Review articles

Reviews based on the recent and relevant subjects of clinical interest should be considered.

4. LAYOUT OF MANUSCRIPTS

Manuscript text should be in English (US spelling), double-spaced, font size 12, in Arialmmes New Roman font.

First page

The first page of the manuscript should contain the following: (1) title; (2) full names of authors (6 maximum, although listing more authors may be considered on an individual basis if authorship requirements have been met and a request has been included in the cover letter); (3) affiliations of authors (i.e. department, section or unit of

an institution, hospital or organization, city, and country (4) full contact details (postal address. email address) of the corresponding author; (5) a list of up to 8 keywords for indexing and retrieval:

Footnotes linking author names to affiliations should be listed as 1,2,3 etc..

The first page should also list the type of article: Clinical Article; Brief Communication: or Review Article.

Abstract

Clinical Articles

A structured abstract not exceeding 200 words is required for all full-length clinical articles. It should contain all and only the following headings: Objective; Methods; Results; and Conclusion.

The Objective reflects the purpose of the study: that is, the hypothesis that is being tested. The Methods should include the setting for the study, the participants (number and type), the treatment or intervention, and the type of statistical analysis. The Results include the outcome of the study and statistical significance, if appropriate. The Conclusion states the significance of the results.

Review articles

An abstract not exceeding 200 words is required for all review articles.

Narrative reviews require an unstructured abstract. Systematic review articles should have a structured abstract with the headings; Background; Objectives; Search strategy; Selection criteria; Data collection and analysis; Main results; and Conclusions.

Brief communications

Brief communications should not include an abstract.

Main text

In full-length articles, subject matter should be organized under the following headings, with no subheadings: Introduction; Materials and methods; Results; Discussion; Acknowl edgments; Conflicts of interest; and References.

Brief communications should not have any headings separating the text.

Clinical articles

The main text of clinical articles should not exceed 2500 words, excluding the first-page information, abstract (no more than 200 words), author contributions, acknowledgments, Conflicts of interest, references (no more than 15), figure legends, and tables and figures. Please include the word count in the cover letter and on the first page of the manuscript.

Review articles

Review articles should have no more than 3000-3500 words in the main text and 20 references. Please include the word count in the cover letter and on the first page of the manuscript.

Brief communications

Brief communications should be no more than 400 words, excluding the first-page information, synopsis, keywords, author contributions, acknowledgments, conflicts of interest, references, figure legends, and tables and figures. There should be no more than 4 references and no more than 1table or 1figure.

Power calculations, statistics, and reporting of numbers.

Power calculations

Where appropriate (e.g. for clinical trials), power calculations should be performed as part of the study design, and a statement providing the power of the study should be included in the Materials and Methods. Authors should state how the power calculation was determined, including what type of difference the calculation was powered to detect and on what studies the numbers are based.

Statistics

The statistical tests used and the significance level set should be listed in the methods for all studies that employed statistical analysis. Information regarding the statistical software programs used should be included in the methods: for example, "SPSS version 20 (IBM, Armonk, NY, USA)." This information should not be included in the reference list.

P values should be provided where calculated. The largest P value that should be expressed is P>0.99. The smallest P value that should be expressed is P<0.001.

For measures of effect (e.g. relative risks, risk ratios, odds ratios), authors should also report confidence intervals (e.g. 95%) so that the precision of the effect estimate can be assessed.

5. Ethics approval and informed consent

Studies of patients, patient records, or volunteers require Ethics Committee approval and informed consent.

Ethics approval

Include a statement in the methods that the research protocol was approved by the relevant Institutional Review Board or Ethics Committee before the study began; if such approval was not needed/obtained, include an explanation. Authors must provide copies of the appropriate documentation if requested.

Informed consent

Include confirmation in the methods that all human participants gave written informed consent before the study began; if consent was not needed/obtained, include an explanation. Authors must provide copies of the appropriate documentation if requested.

6. Acknowledgments

Sources of funding should be acknowledged by the author(s), along with the names of individuals who do not fulfil the criteria for authorshi p, but who have made a substantial contribution to the manuscript.

7. Confllcts of Interest

A conflict-of-interest statement must be included in the cover letter and before the reference list in the manuscript. It should list any relationships (for any author) that may be deemed to Influence the objectivity of the paper and its review, or state that no such relationships exist. Commercial associations, either directly or through immediate family, in areas such as expert testimony, consulting, honoraria, stock holdings, equity interest, ownership, patent-licensing situations or employment that might pose a Conflicts of interest should be stated. Conflicts for other reasons, such as personal relationships or academic competition, should also be stated.

8. References

The number of references should not exceed 15 for clinical articles, 20 for review articles, and 4 for brief communications; in general, they should be limited to the past decade. They must be numbered and listed as they are cited in the article, using Index Medicus abbreviations for journal titles. Cite the names of all authors when there are six or fewer; when there are seven or more, list the first three authors followed by "et al." Include the volume number.

Journal article

[1] Vellacott ID, Cooke EJ, James CE. Nausea and vomiting in early pregnancy. Int J Gynecol Obstet. 1988;27:57-59.

Book

[2] Speroff L, Glass BH, Kase NG. Clinical Gynecologic Endocrinology and Infertility. Baltimore: Williams and Wilkins; 1982.

Chapter in a book

[3] Disaia PJ, Creasman WT. Invasive Cancer of the Vulva. In: Disaia PJ, Creasman WT, eds. Clinical Gynecologic Oncology. St Louis: C.V. Mosby; 1984:214-219.

Web reference

[4] World Health Organization. WHO Recommended Surveillance Standards, Second Edition [WHO website). 1999. http://www.who.int/csr/resources/publications/surveillance/whocdscsrisr992.pdf.

Text references can be indicated by Arabic numerals in superscript. abc[1]

Tables

Each table should be titled, numbered (with Arabic numerals), and placed on a separate page after the reference list (not embedded within the main text).

All tables must be cited in numeric order in the main text as "Table 1" etc.

Footnotes to tables should be listed as a, b, c etc.

9. Figures and photographs

Figures and photographs should be submitted as jpg format. CONSORT flow charts should be created and submitted as editable Word/ Power Point files. All figures must be cited in numeric order in the main text as "Figure 1" etc.

Figure permission

All authors wishing to use figures (or any material) that have already been published must first obtain the permission of the original author and publisher and/or copyright holders, in addition to giving precise reference to the original work. This permission must include the right to publish in electronic media. Confirmation should be included in the cover letter (the actual permission correspondence from the copyright holder does not need to be submitted).

Photograph/video consent

If photographs or videos of identifiable people are used, authors must obtain and submit a signed statement of informed consent from the identifiable person(s) or their next of kin. Authors should not try to conceal identity with black bars over eyes etc.

9. Drugs

Give generic names of all pharmaceutical preparations and, where appropriate, include the trade name and manufacturer's name and address. Review drug names and dosages with care. The author is responsible for all recommended dosages.

10. Plagiarism

Plagiarism entails the "use or close imitation of the language and thoughts of another author and the representation of them as one's own original work." Self-plagiarism, a form of misconduct in which an author reuses his/her previously written text, data, or ideas, wholly or in part, without indicating previous dissemination, will also be considered plagiarism. Verbatim copying of sentences, even if a citation is provided (unless the sentence appears in quotation marks), is considered to be plagiarism.

11. ON ACCEPTANCE

If your paper is accepted for publication, you will receive an email informing you of this decision.

12. Copyright

Once accepted and published, all copyright will belong to ISOPARB. No part of the article could be published without permission. All disputes are subjected to Indian Jurisdiction.

13. It is desirable that the, author(s) submitting article in IJOPARB be a member of ISOPARB.

If undelivered, return to:
DR RAMPRASAD DEY
Girikunj Apartment, 530 S N Roy Road, Flat No – 306 B, Kolkata 700038