PRACTICE OF MIDWIFERY IN ANCIENT INDIA

by

RAMESH P. NARVEKAR, M.B.B.S., (Bombay)

Amongst all the archaic systems of medicine, Indian Medicine is possibly the oldest science, barring that of Egyptian Medicine. According to Theodore Cianfrani, Indian Medicine dates back to the second millenium B.C. or probably even earlier.

Knowledge of Indian medicine is mainly concentrated in the Ayurvedas. Amongst the texts of Ayurvedic medicine, "Sushruta-samhita" and "Charak-samhita" are outstanding.

It may be surmised, from the historical data available today, that the original Sushruta-samhita was composed at about 600 years B.C. (Kaviraj Kunjalal Bhishagratna), while, Charak, the court physician of Kanishka-Gupta, composed his commentary on medicine, "Charak-samhita" in the early part of second century A.D. Thus the works of Sushruta and Charak give an idea of the medical practice prevalent in the period from 600 B.C. to 150 A.D. While going through such ancient works, one is impressed with the versatile knowledge of these ancient acoucheurs in the different realms of midwifery.

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Anatomy

Knowledge of anatomy of the female pelvis and of the structures contained therein, was rather elementary. According to Sushruta, the pelvis consisted of five bones:—trika-asthi or a triangular bone (sacrum), guda-asthi or anal bone (coccyx); bhaga or pubic bone; and nitamba or two shroniphalak (i.ei two hip-bones or ilium osteii). It seems that ischium was regarded as being incorporated in either ilium or pubic bone. (Hornle).

Genital tract was compared to a conch-shell with three involuted turns, with the uterus located at its third turning.

Physiology of Reproduction

Germination is described by Sushruta as "Garbhavkranti" or the descent of the germ into the womb. It was supposed that the union of semen and menstrual blood forms a favourable condition for the descent of garbha or the life-monad into the womb.

Sushruta has described the growth of embryo according to the period of gestation. It was supposed that the embryo in the first month is like a resinous exudate; in the second month it became a solid mass; in the third month protrustions of head and four extremities appear, in the fourth month heart develops; in the fifth

month the brain develops and that by seventh month limbs are well formed. The vitality was supposed to be unsettled till the eighth month; hence, it was regarded that a premature, born before the eighth month of gestation was less likely to survive.

Multiple pregnancies were supposed to occur, when the sperm and the menstrual blood were internally divided by air, while monstrosities were supposed to be the result of the defects in the sperm or the womb or due to the sins of parents.

Antenatal Care

Pregnancy was diagnosed by symptoms like amenorrhoea and the pica or perverted appetite, and by clinical signs, such as enlargement of abdomen and the breast changes.

Sushruta mentions that at a clinical examination, normally, a single foetus would be palpated, lying curled up with head downwards (vertex presentation). But he was also aware of the other abnormal pregnancies like twins and the compound presentations.

Great emphasis was laid by Sushruta on the antenatal care. He has vividly described the antenatal management, right from the early months of pregnancy. He puts forth certain general rules as follows:

A pregnant woman should always be in a pleasant mood, wearing sacred ornaments and white clean garments; be calm and should keep herself busy in worshipping God and the elderly for their blessings. She should not touch any dirty objects; she should avoid bad scenes and should not listen to depressing stories. She should avoid eating dry, odoury, stale or dirty food. A pregnant woman must avoid factors dangerous to gestation such as, carrying heavy loads, fatiguing exercises, repeated massage with oil or repeated fomentations. She should take a soft, oleaginous and nutritious meal.

In the eighth month an enema was given its ingredients being drugs like Bala, Badar, Atibala, Shatapushpa and Palal, along with milk, oil, buttermilk, salt and ghee. In the ninth month, oil enema was given and an oily pessary was kept in the vagina so as to lubricate it thoroughly.

The instructions were similar for both primigravidae and multigravidae.

Charak has specifically warned against the use of emetics, purgatives, and procedures like blood-letting during pregnancy.

Complications During Pregnancy

Amongst the complications of pregnancy, they were aware of "Garbhapatan" or abortion. In Atharvaveda, abortion is attributed to defective semen.

Sushruta has tackled the problem of threatened abortion at great length. In such cases vaginal douche of cold water and cold bathing were practised. Internally, medicated milk and ghee were given. If pain be severe, milk prepared with decoction of certain herbs was given along with sugar and honey. For retention of urine, milk with a diuretic decoction was given. If there be much discharge of blood from the vagina, a piece of cloth soaked in an astringent solution was stuffed into the vagina, and orally also astringent medicines were given.

Sushruta probably refers to the condition of missed abortion, when he states that "sometimes wind dries up the foetus, when mother's belly does not enlarge and foetus does not move". For such condition strengthening broths and milk preparations were advised.

Sushruta refers to post-maturity by stating "sometimes by deranged wind, foetus is retained for more than ten lunar months and may be destroyed." In such cases mother was advised to take nutritious and oleaginous food like flesh, ghee and rice.

Oedema in pregnancy has been mentioned by Charak, indicating that cases of toxaemia of pregnancy might be quite prevelent in his time.

Management During Labour

Sushruta has dealt with this most important art of midwifery at great length in the tenth chapter of Sushruta-samhita.

Delivery was expected to occur in the ninth or the tenth lunar month. On an auspicious day, the pregnant woman was transferred to "Suthika-Griha" or delivery home. When time of delivery approached, four midwives were summoned. These used to be the experienced women with a genial temperament and who could win the confidence of the patient. Sushruta further warns that their finger-nails must be well trimmed and they must wear clean, white garments.

When it was definitely diagnosed that the patient was in labour, she was given a bath with warm water after anointing her body with oil. Then a sour gruel was given in large quantity. Patient was asked to lie on her back, with thighs seperated and legs flexed and drawn up. (i.e. resembeling modern lithotomy position).

When labour was in progress, the midwives used to attempt manual ironing of vaginal introitus. It was also stressed that the patient should make expulsive efforts only during pains. In the absence of pains, she should not strain, as this would exhaust her and may affect the foetus. Straining efforts were to be maximum when the foetus was distending the vulva.

If the labour was prolonged, the smoke of skin of black serpent or some other disagreeable substance was applied to the vagina. It was believed that such measures will produce irritation of genital tract, which will be manifested in vigorous expulsive efforts.

When the infant was born, its nose and mouth were cleaned and cold water was splashed upon its face as a rescussitative measure. Then the umbilical cord was tied with a string, about eight fingerbreadth (about 6″) from the naval and divided. One end of the string was kept long and bound around the infant's neck. Here it seems that Sushruta has stressed the importance of keeping the umbilical stump of quite a sizable length. Probably, he was aware of the vitello-intestinal duct protruding into the umbilical cord which, if cut unwittingly, may give rise to severe complications.

Sushruta was aware of the complication like retained placenta. For this he advised simple measures like. introducing a finger covered with

hair into the patient's throat, which would produce vomiting and expulsion of secundies due to increased intra-abdominal pressure. Alternatively, he advised application of some disgusting substances like smoke of pumpkin, mustard, skin of serpent with milk or oil, to the vagina, or rubbing them over abdomen. In case all these measures failed, Sushruta advised manual removal of placenta.

After delivery, in order to reduce after-pains, the patient was given a mixture of roots of long pepper, asafoetida (hedysarum alghai) Bach (iris germanica), Atibhisha (annona squamova), Rassia (dolichosinesis) and Çhaba (cicer arientinum). External genitalia were cleaned with a decoction of cirisa (achryanthes aspera) and kakuba (diospyres melanoxylon).

Abnormal Labour

Sushruta has discussed the problem of "Mudha-garbha" or obstructed labour in great detail. He mentions the causes of obstructed labour as a deformity of foetal head or of the pelvis of mother. According to him, varieties of abnormal presentations are- "Parigha" or shoulder presentation; "Killa" or breech; "Prathikhara" or compound presentation. In order to overcome such abnormal situations, internal podalic version, breech extraction and such other allied procedures were performed. Wine was administered as an analgesic agent prior to any obstetric manoeuvre.

Sushruta advised caesarean section in cases where either the foetal head or maternal pelvis were extremely deformed, rendering it difficult for vaginal delivery of a live baby. He also advised post-mortem caesarean section, when a pregnant woman near full-term died suddenly with a live foetus in the womb.

In a case of intrauterine foetal death mutilitating operations were performed.

Care of Mother During Puerperium

Sushruta was aware of "Makkala" or puerperal sepsis. In order to avoid this, he advised daily bathing during puerperal period, after anointing the woman's body with oil and a decoction of Bella (terminalia bellria). In cases where sepsis developed, Sushruta advised administration of a mixture of Hasta-pippuli (aramacrorhizon), Chitrika (limonia pentagyn) and Seringaveer (querens lancifolia). This was given for 3-4 days and followed by a decoction of rice, barley gruel, cardamum seeds, Byagri (ficus indica), jawari and milk for three days. Afterwards rice with broth of wild animals was given for fifteen days.

Management of Infant

Child was covered with silk cloth. Oiled cloth was daily applied to child's head and face. Room was fumigated with scented gums and wood daily.

For two days the newborn was not breast fed. It was considered that milk appeared in the breast on the third night after delivery, and on the fourth day mammae were filled heavily with vessels carrying digested food in the form of milk. Then onwards, infant could be regularly breast fed. If the mother was not

getting a good amount of milk, a healthy wet-nurse was sought for the purpose of breast feeding.

Diseases of infants like kuhumaka (purulent ophthalmia) and parigarbhika (marasmus) were known to Sushruta.

Operative Obstetrics

Ancient accoucheurs were using plenty of obstetric instruments. For vaginal examination, they used Yoni-Vraneksana (vaginal speculum) or Yoni-Vraneksana Yantra (bivalve speculum). They had Yantra-satak (lithotomy table). In their armamentarium, they had vaginal and uterine syringes, Garbhashanku (foetal traction hook), Yugmashanku (obstetric forceps), Mandalagrashastra (round-headed decapitation knife), Mudrika or finger-knife (perforator), Susi, (episiotomy suturing needles) and Savarimukhashastra (episiotomy scissors).

Amongst the obstetric manoeuvres, version and breech extraction were commonly practised. Forceps were rarely applied. Caesarean section

SURGICAL INSTRUMENTS USED BY ANCIENT INDIAN ACCOUCHEURS.

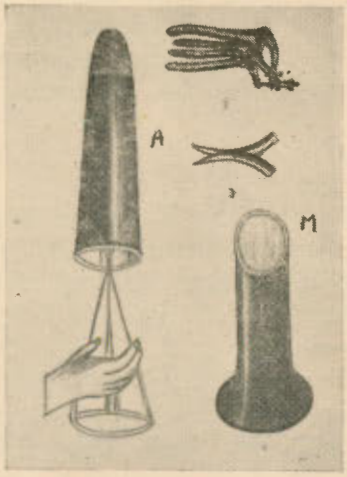

Fig. 1
Vaginal Speculum
A — ancient, M — modern.

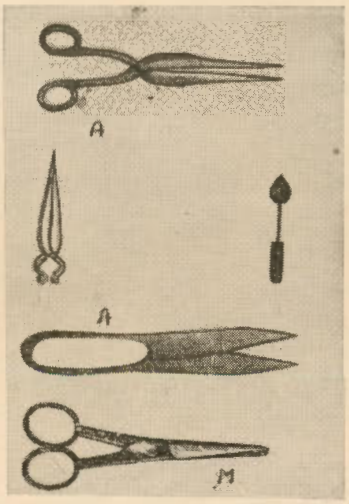

Fig. 2
Episotomy scissors
A — ancient, M — modern.

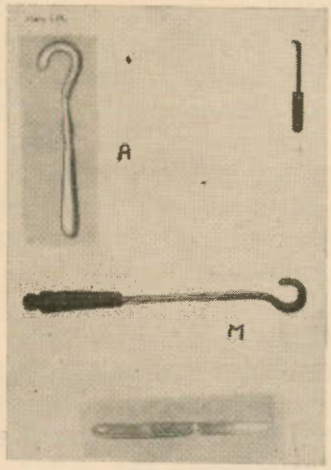

Fig. 3
Decapitation knife
A — ancient, M — modern.

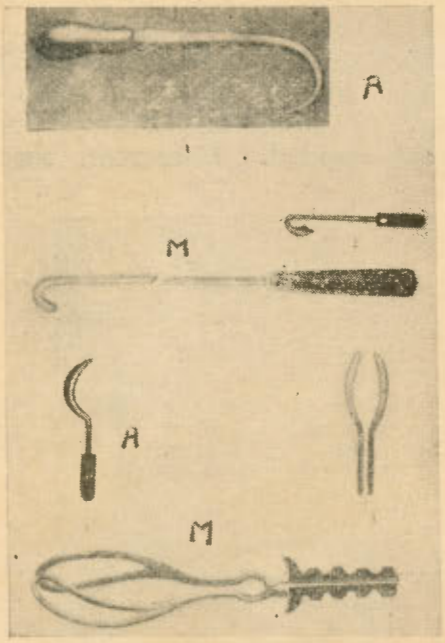

Fig. 4
Foetal traction hook
A — ancient, M — modern.

was practised in a case of obstructed labour with failure of vaginal delivery and if child be alive; it was also practised in a mother dying suddenly with a live foetus in utero. Sushruta has also described the destructive operations resembling craniotomy, decapitation and evisceration. This all indicates versatile knowledge and miraculous skill of these ancient accoucheurs.

Evaluation

Indian midwifery exists right from 4000 yrs. B.C. (vedic period). It flourished in Sushruta-era (600 B.C.) and Charak-era (150 A.D.). It is surprising to see the marvellous progress achieved at such an ancient period. Unfortunately, this knowledge was handed down through generations not by faculties, colleges or research centres, but through individual training of pupils by the skilled practitioners. This resulted in the subjective variations and introduction of superstitions. Hence, in order to get real insight into the practice of midwifery in ancient India, we have to unveil this curtain of superstitions, penetrate through the ages and study the original literature. In epilogue, it can be said that after studying this ancient literature, we can really get inspiration for future progress.

Acknoledgement

I am indebted to the Asiatic Society, Bombay, for allowing me to take the photographs of surgical instruments from the plates included in the book of — "The Surgical Instruments Of Hindus" by Girindranath Mukhopadyaya.

I am extremely grateful to Dr. Ajit C. Mehta, Hon. Asst. Obstetrician to Nowrosjee Wadia Maternity Hospital, Bombay, for his keen interest and able guidance in preparing this article.

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Vaginal Cytology for Prediction of Labour—Sarosh and Parvati. pp. 290-293.

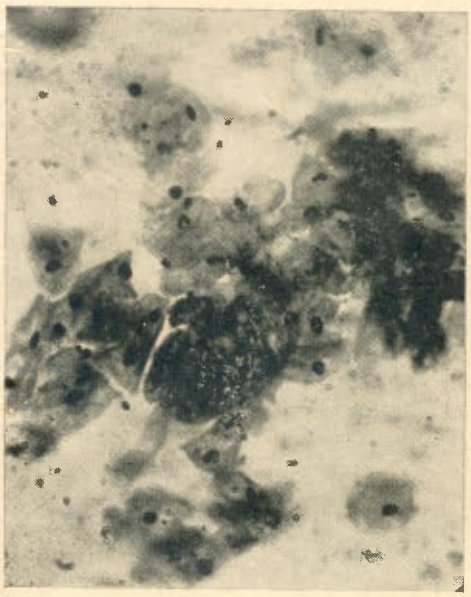


Fig. 1
1st Trimester smear.

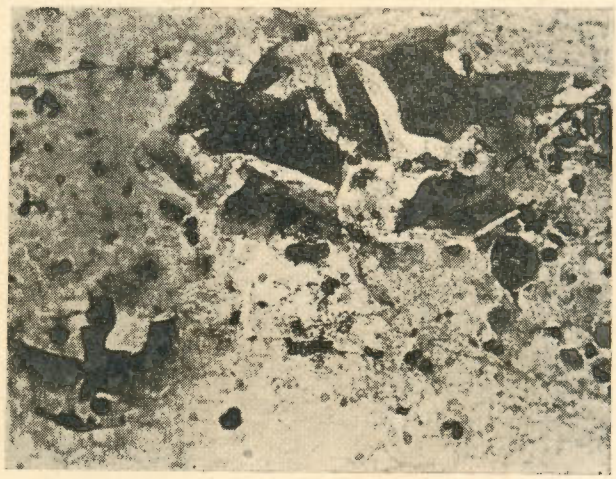


Fig. 2
Term smear.

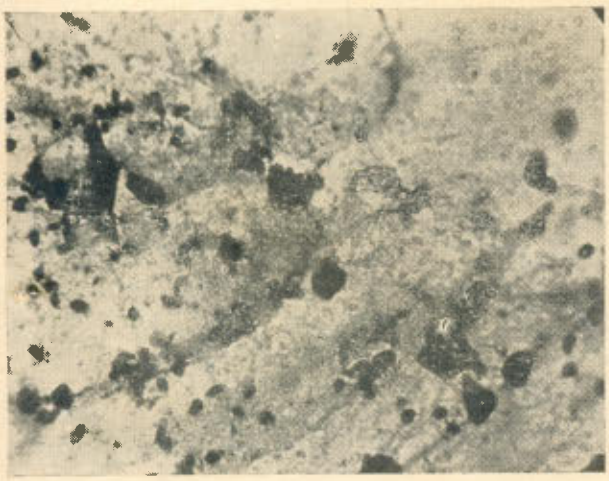


Fig. 3
Smear in labour.

Refractory Dysmenorrhoea—Phadnis. pp. 330-332.

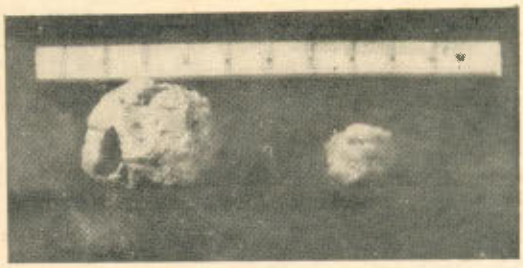


Fig. 1
(a) Fibroid removed from case No. 1;
(b) Fibroid removed from case No. 2.

Fig. 1
Photograph showing the extent of lesion.

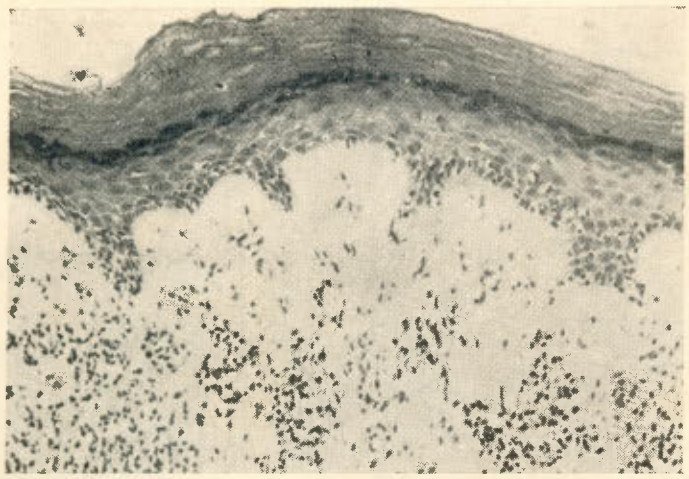
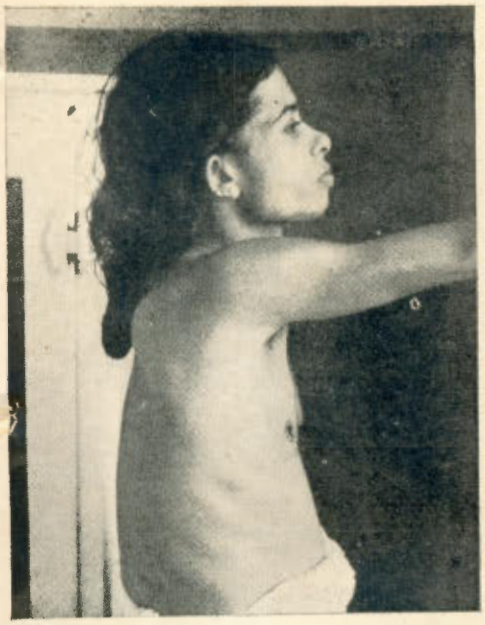


Fig. 2
Histological section showing epidermal atrophy and hyaline appearance of upper dermis (H. & E. x 200).



Clinical photograph showing facial hirsutism, atrophy of breasts—before operation.

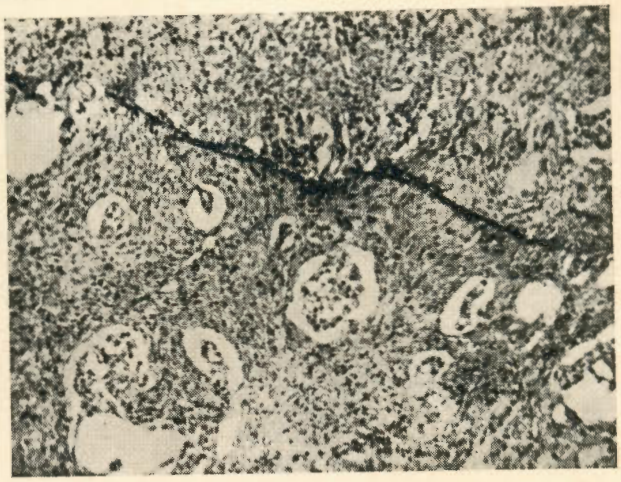


Fig. 3
Microphotograph showing perfect tubule formation.

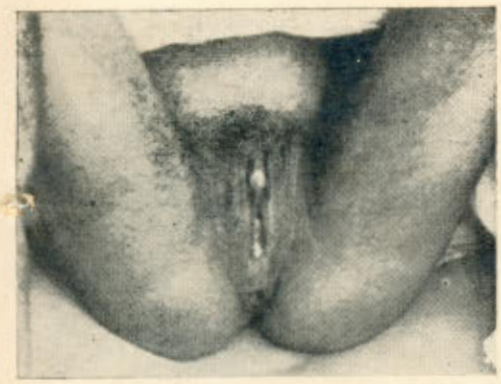


Fig. 2
External genitalia showing hypertrophy of the clitoris.

Fig. 4
Microphotograph showing sarcomatous appearance.

Arrhenoblastoma of Ovary—Iype & Mukerjee. pp. 339-341

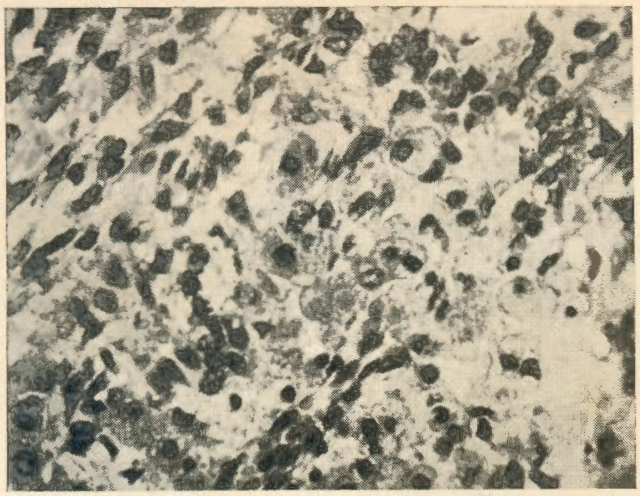


Fig. 5
Microphotograph showing interstitial cells.

Fibrosarcoma of the Round Ligament—Shah et al. pp. 344-347

Fig. 1
Tumour of the round ligament seen arising from left side.

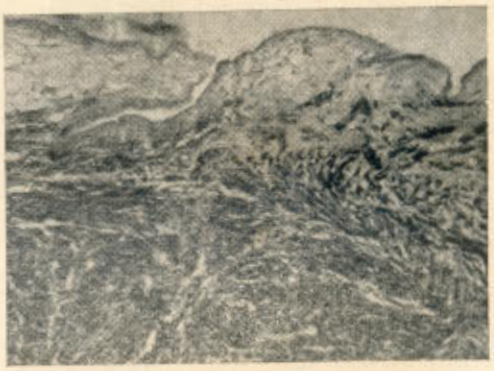


Fig. 3
Microphotograph of fibrosarcoma of the round ligament showing serosal covering at the top.

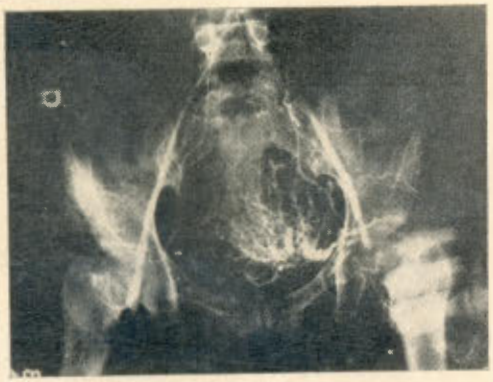


Fig. 2
Pelvic angiography showing corkscrew appearance. Suggestive of fibromyoma.

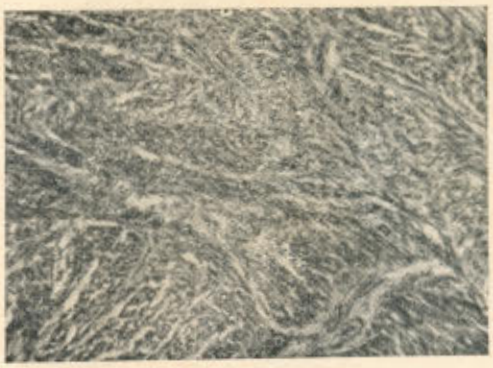


Fig. 4
Microphotograph showing marked cellularity suggestive of malignancy.

Fig. 1
Post-operative specimen of ureterocele.

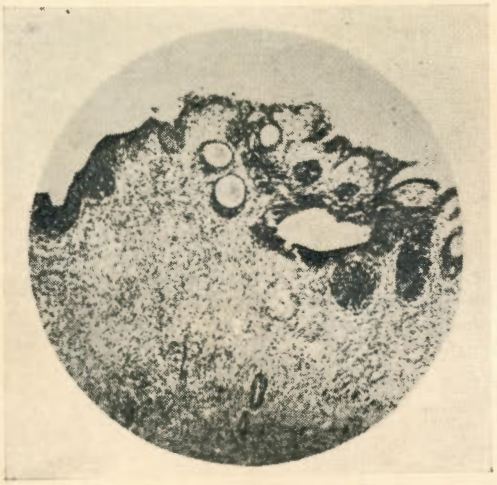


Fig. 2
Microphotograph of ureterocele showing transitional epithelium and sub-mucosa infiltrated by inflammatory cells.

Fig. 3
Microphotograph of ureterocele showing well defined muscular layer.

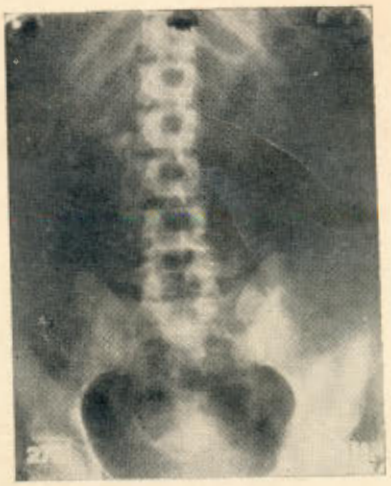


Fig. 4
Urogram showing filling defect in bladder and absence of left kidney and ureter (pre-operative).

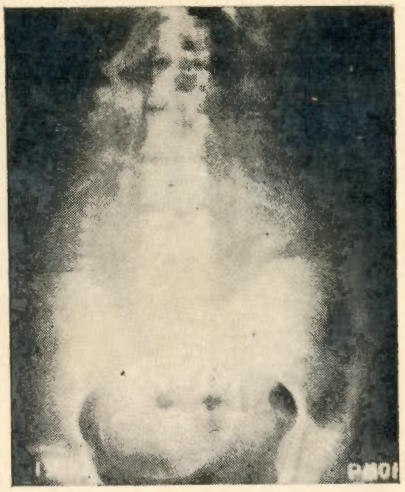


Fig. 5
Urogram taken six months after operation. Foetus of second pregnancy is seen along with pregnancy changes in right kidney (Hydronephrosis and hydroureter).

Utero-cutaneous Fistula—Logambal. pp. 352-354.

Fig. 1
Antero-posterior view showing the sinus—tract.

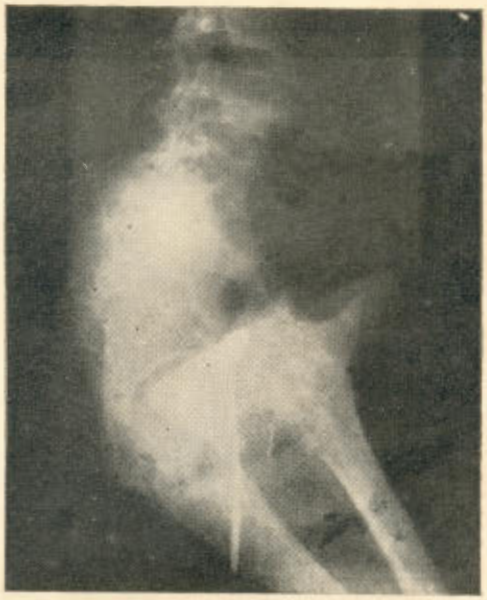


Fig. 2
Lateral view showing the sinus tract.

Unusually Short Umbilical Cord—Rajpal & Mallik. pp. 355-356.

Fig. 1
Showing the attitude of the foetus and also the relationship with the placenta during delivery.

Fig. 2
Showing the short cord invested by membranes. Note also the exomphalos and exposed viscera.

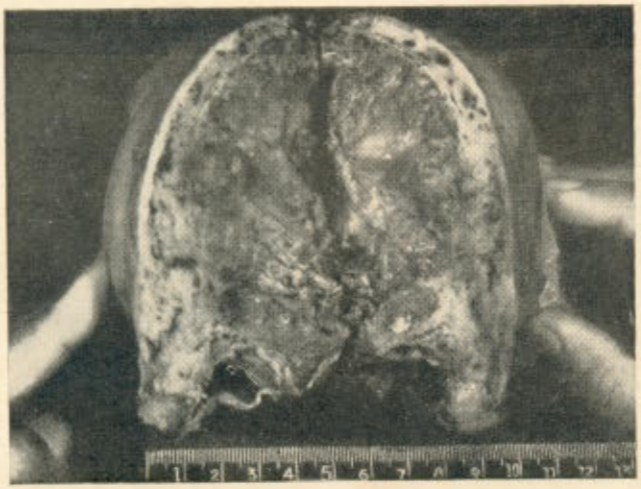


Fig. 1

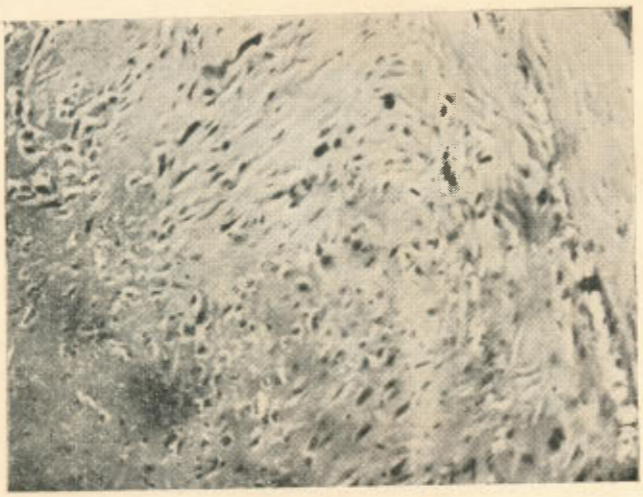


Fig. 2

Fig. 1
Necrotic placenta being expelled through the abdominal wall near the umbilicus.

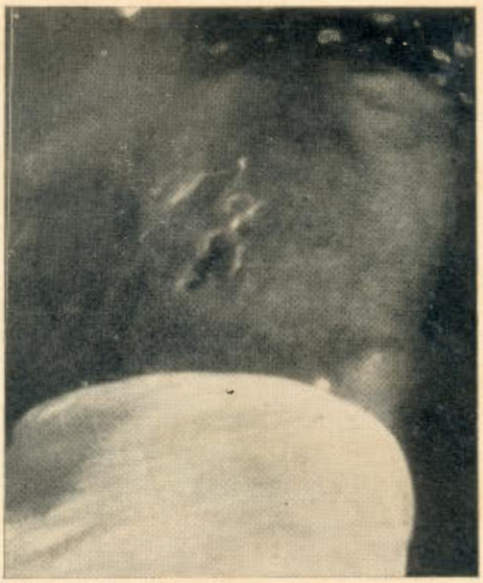


Fig. 2
Partly healed abdominal wound after expulsion of placenta.

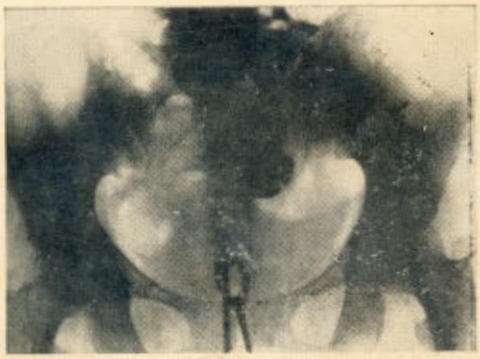


Fig. 3
Hysterosalpingograph after full recovery. The dye is found direct into the abdominal cavity. No definite uterine outline detected.

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