

PREGNANCY FOLLOWING REPAIR OF OBSTETRIC FISTULAE AND ITS SEQUELAE†

by

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and

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Three hundred and fifty cases of obstetric vesico-vaginal fistulae have been rehabilitated so far by various types of operative procedures in one of the teaching units of the Osmania Medical College, Hyderabad, from February 1950 to April 1967.

Forty-four women out of these had reported pregnancy after repair. There were 65 pregnancies between them.

The purpose of this presentation is to bring to light certain findings during the follow up of the women who became pregnant after repair. A deeper understanding of these problems would lead to better obstetric care.

Radiographic study of the pelvis was carried out on a certain number of the cases on admission for repair. It was interesting to find that many were associated with some abnormality of the pelvis giving rise to cephalo-pelvic disproportion and

obstructed labour which had resulted in pressure necrosis and subsequent fistula formation.

The results of obstetric management are compared in the two series studied as shown in Tables I and II.

Mode of delivery and outcome for mother and infant as published in the earlier series (Naidu and Sundari 1963) are shown in Table I.

Commenting on these, there were 4 vaginal deliveries among a total of 37 pregnancies and 32 of the cases had been delivered by the abdominal route. These comprised 26 lower segment, 3 classical sections and 3 cases which required caesarean hysterectomy on account of obstructed labour and severe intrapartum infection. One woman of the last group who had gone elsewhere for delivery had a ruptured uterus and lost her life even though a hysterectomy was reported to have been carried out. Lastly, there was a case of abortion after five months' amenorrhoea. The vaginal deliveries shown in the table call for further comment. One of them, a ninth gravida, repaired of a small mid-vaginal fistula with hardly any scar tissue, came in labour at term and delivered a live mature infant spontaneously, while her previous history had remained in the

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TABLE I

Mode of delivery and outcome for mother and infant as published in the earlier series (28 cases during 37 pregnancies—1950-62)

| Mode of delivery | All cases | Infants alive | S.B. | N.N.D. | P.M. |
|--|-----------|---------------|------|--------|------|
| Vaginal | 4 | 2 | 2 | .... | 2 |
| Abdominal | 32 | .... | .... | .... | 6 |
| Caesarean section 26 (L.S.) | .... | 21 | .... | 5 | .... |
| Caesarean (classical) 3 | .... | 2 | .... | 1 | .... |
| Caesarean hysterectomy (obstructed labour)3* | .... | .... | 3 | .... | 3 |
| Abortion at 20 weeks | 1 | .... | 1 | .... | 1 |

*One maternal death. Perinatal mortality, 32.4%.

dark until later. Another woman delivered a premature infant under similar circumstances. A third woman was responsible for the remaining two vaginal but disastrous deliveries. For the first time after repair she had, in her village, a premature still-birth resulting in the reopening of a large 'combined' type of fistula. After this recurrent fistula had been repaired, she entered the hospital quite early during her first pregnancy following the second repair. But on a certain night, in the 34th-35th week of her pregnancy, she drew the attention of the duty nurse to the repair of fistula but only after she had painlessly expelled a foetus by the breech up to its neck. By a careful craniotomy and extraction of the head, the second repair had been saved. The foetus had weighed only 4 pounds. But once again when she returned pregnant, that is, for the second time after the second repair, a lower segment caesarean section was performed at 34th-35th week, resulting in a live infant weighing 4½ pounds.

In all the 29 caesarean sections the operations had been carried out as soon as it was recognised that the patient was in labour. But even then

every fifth infant—6 out of the 29 in this group—was found to be already labouring under severe stress and could not be saved. In addition to this, 3 stillbirths had resulted from frank obstruction when these patients had gone into labour at their own homes.

The following 2 cases are illustrative of the course of events in some of the other women who had been waiting in the ante-natal wards.

A second gravida, 34-35 weeks pregnant, was found to be suddenly bearing down in her bed without any warning of her being in labour. The foetus was found to be already in a state of distress, with a caput protruding through the scarred vagina. Although a caesarean section was carried out the infant, weighing 3½ pounds, expired on the next day. Autopsy showed evidence of aspiration pneumonia.

A fourth gravida, in her 34th-35th week went into the closet and came out holding a loop of prolapsed pulsating cord. The os was already 4 cm. dilated. She was safely delivered of a live infant, weighing 4 pounds, by caesarean section.

The events, as depicted by the above cases, are admittedly the result

of women experiencing a kind of painless labour. It is obvious that these women could not draw the attention of the nursing staff because they themselves had failed to appreciate the fact of their being in labour. Out of the 37 pregnancies only 25 infants could be salvaged. There were 6 instances of foetal loss and 6 cases of neonatal deaths resulting in a perinatal mortality of 32.4 per cent. In addition to the case of abortion at 20 weeks all the 11 foetuses and infants who were lost had weighed less than 5 pounds.

repaired was of a combined type, representing great loss of tissue. The anterior vaginal wall was very short and the portio vaginalis of the cervix was totally absent. There was also a fibrous ring in the vagina tacked down at the level of the ischial spines. Neonatal death resulted in a woman who went into labour at 34 weeks due to mild poly-hydramnios. The fistula repaired was of a juxta-urethral type, complex in nature and adherent to the symphysis pubis. The anterior vaginal wall was very short.

Perinatal mortality in this series

TABLE II
Mode of delivery and outcome for mother and infant in the second series of 16 cases during 24 pregnancies + 4 pregnancies in the older cases (1960-1967)

| Mode of delivery | All cases | Infants alive | Still-birth | Neonatal death | Perinatal mortality |
|---|-----------|---------------|-------------|----------------|---------------------|
| Vaginal | None | | | | |
| Abdominal-caesarean section (lower segment) | 27 | 25 | 1 | 1 | 2 |

Based on the foregoing experience, a later group of women who got pregnant were advised to get admitted into the hospital at about 28 weeks to enable us to study the causes leading to the early and painless onset of labour. The amount of scar tissue at the site of repair and the distortion of the cervix if any were recorded. All the 27 cases in this series were delivered by lower segment caesarean section. Out of these, 25 infants were alive. The only stillbirth (weight 2 lbs. 9½ ozs.) that occurred was in a woman admitted at 28 weeks in labour in transverse lie with prolapse of cord. The same case had previously aborted at 16 weeks. The vesico-vaginal fistula

was as low as 7.1% compared to the rate (32.4%) in table 1 which is decidedly due to early admission for observation and timely caesarean section.

Correlating the cases of early onset of labour with the type of fistula which had been repaired, it was noted that the latter were either of the juxta-urethral (situated in the neck of the bladder) or of the combined type (represented by extensive loss at the base as well). These cases usually presented considerable anatomical disturbances noticeable both before and after surgical closure. From the foregoing it is possible to infer that cases with mid-vaginal fistulae were those with the least

amount of scarring and distortion. Here the pregnancy would naturally be carried for the longest period without disturbance.

Case 29 associated with a juxta-cervical fistula had to be delivered abdominally at 36 weeks at the onset of labour. From the above informa-

TABLE III
Type of fistula and duration of gestation at the time of delivery (all cases)

| Type of fistula | Number of cases | 28-32 weeks | 33-35 weeks | 36 weeks and above |
|--|-----------------|------------------------------|-------------|--------------------|
| Juxta-urethral simple | 12 | 1 (20 wks) | 2 | 9 |
| Complex | 21 | 5 | 1 | 15 |
| Combined type | 9 | 2 { 16 wks } 2 { 28 wks } | 4 | 3 |
| Midvaginal | 16 | .... | 1 | 15 |
| Juxta-cervical | 4 | .... | .... | 4 |
| Juxta-urethral complex + juxta-cervical. | 2 | 1 (Anencephaly) | .... | 1 |
| Patulous urethra with recto-vaginal fistula. | 1 | .... | .... | 1 |

The single case of mid-vaginal fistula (case 43) who was delivered by an elective caesarean section at 35 weeks was associated with total absence of the portio-vaginalis which led to a patulous os with protruding membranes.

Case 41, also with a combined type of fistula, had an abortion at 16 weeks and a caesarean section done at 28 weeks, for transverse lie with the cord prolapsed resulting in a still-birth (2 lbs. 9.5 ozs.)

Cases 14 and 31, though associated with a combined type, could go to near term, as the scarring and distortion of the cervix were not as severe as in case of juxta-urethral type.

Case 27, associated with a juxta-cervical fistula, had been delivered by caesarean section between 37 and 38 weeks in labour on 2 occasions and electively once during her three pregnancies showing that the distortion was not great.

tion one could understand that it is not the type of vesico-vaginal fistula repaired, but the amount of scarring of the tissues surrounding the cervix which is responsible for the premature onset of labour in some of the cases.

By carrying out routine weekly vaginal examinations during the second and third trimesters to note the amount of scarring in anterior vaginal wall and distortion of the cervix, it was possible to forecast which cases would get into labour prematurely. Hence elective caesarean section could be done in some of the cases as soon as the foetus was deemed to have reached adequate clinical maturity.

Where the cervix was either partially or totally destroyed (due to the previous obstructed labour) there was always a tendency for the cervix to become patulous allowing the membranes to be felt often right from the 24th week of pregnancy.

On noting this finding the patient was strictly put to bed dreading the onset of painless labour at any time as particularly experienced by these cases. This is comparable to a form of incompetency of the cervix during pregnancy the cause being actual loss of tissue with or without scar tissue stretching it radially. The reason for the painless labour could probably be attributed to the destruction of the sensory nerve endings of soft tissues involved in fibrous scarring.

A careful evaluation of these data created a keen awareness in the study of the problem in order to appreciate these aspects, in the second series.

A study of the pelvis, as referred, showed some of these abnormalities; line drawings of x-rays are included in Fig. 1-8.

Generally these women admitted for vesico-vaginal fistulae belong to the lower socio-economic strata, usually coming from the under-nourished areas in the Telengana region of Andhra Pradesh. Their

stunted growth (height 4' 6" and 4' 10") is probably due to malnutrition during intra-uterine life and infancy.

The hazard of allowing these women with an abnormal pelvis to hope for a safe vaginal delivery cannot be under-estimated.

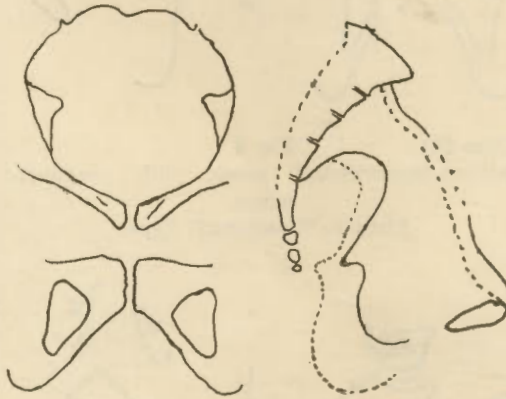


Fig. 2

(Case 27)
Pelvis—Gynaecoid inlet with funnelling. Note massive ischial spines.
Fistula—"combined" type with hour-glass contraction of vagina.

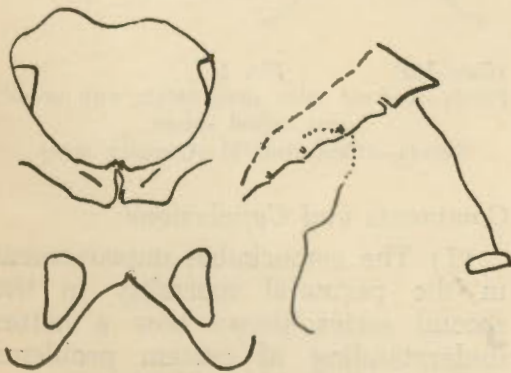


Fig. 1

(Case 21)
Pelvis—Note android tendencies and straight sacrum. Mild spur behind symphysis pubis. Large justa-urethral (complex) fistula. A tail of the fistula was adherent to pubic bone.

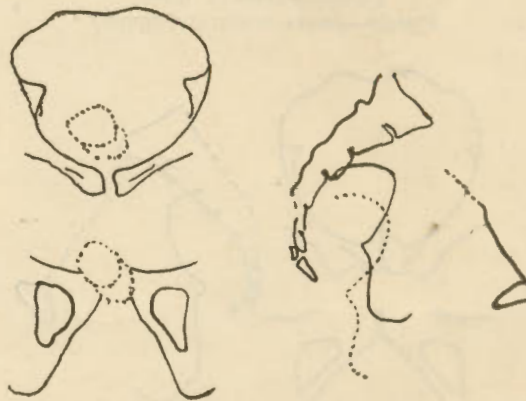
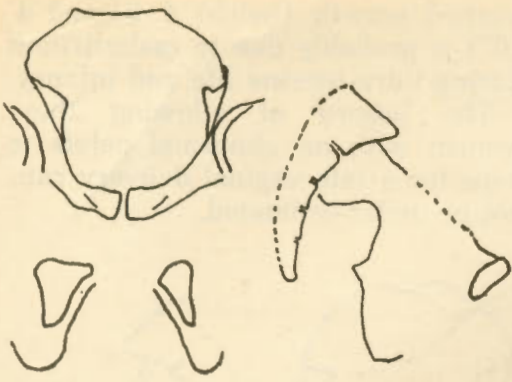
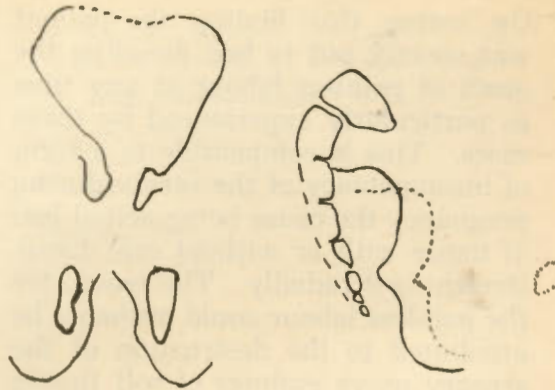


Fig. 3

(Case 23)
Pelvis—Android—gynaecoid inlet with prominent ischial spines.
Fistula—Juxta-cervical with vesical calculi.



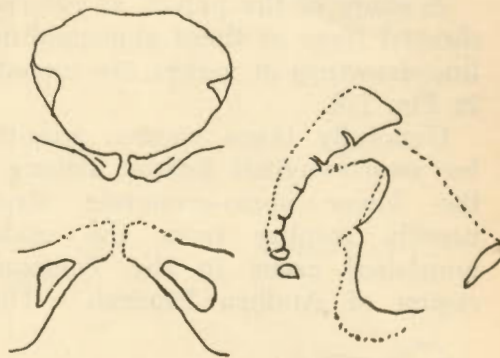
(Case 53) Fig. 4
Pelvis—Asymmetrical pelvis with prominent spines.
Fistula—"Combined" type.



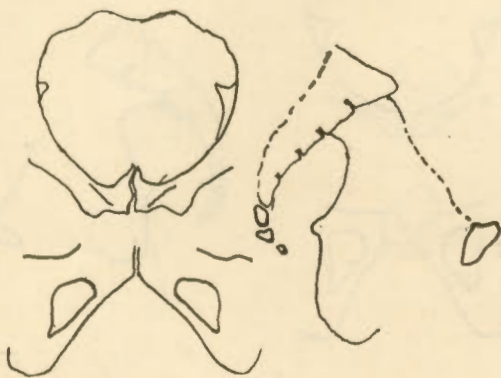
(Case 159) Fig. 7
Pelvis—Osteomalacic pelvis with marked beaking of symphysis pubis. Note very narrow pubic arch.
Fistula—Juxta-urethral.



(Case 119) Fig. 5
Pelvis—Naegale's type.
Fistula—Juxta-urethral (simple)



(Case 169) Fig. 8
Pelvis—Android inlet, deep pelvis with prominent ischial spines.
Fistula—Juxta-urethral (Complex type).



(Case 127) Fig. 6
Pelvis—Note prominent spur on the posterior aspect of symphysis pubis.
Fistula—Juxta-urethral (complex type).

Comments and Conclusions

(1) The remarkable improvement in the perinatal mortality in the second series shows how a better understanding of certain problems arising subsequent to repair can contribute towards better obstetric management.

(2) The cause of obstructed labour, resulting in vesico-vaginal fistula in practically all cases, was

TABLE IV
A Review of the Second Series of Pregnancies (16 Cases—28 Pregnancies)

| Case No. | Type of fistula repaired | Clinical findings before delivery | Number of pregnancies | Duration of pregnancy at the time of Section | Weight of infant | | Result | Remarks |
|---------------|--|---|-----------------------|--|------------------|--------|--------|-----------------------------------|
| | | | | | pounds | ounces | | |
| 29 | Juxta-cervical | Cervix taken up. Os 1 cm. dilated. | 1 | 36 weeks (in labour) | 5 | 10 | Alive | |
| 30 | Juxta-urethral Complex. | | 2 | Full time } (elective) | 5 | 10 | Alive | |
| 31 | Combined | | 2 | Full time } (elective) | 6 | 14 | Alive | |
| 32 | Mid-vaginal | | 1 | Full time (in labour) | 6 | 8 | Alive | |
| 33 | Juxta-urethral simple | | 1 | Full time (elective) | 7 | .. | Alive | |
| 34 | Juxta-urethral simple | Cicatrization of the anterior vaginal wall with a ring of scar tissue. | 1 | 38 weeks (in labour) | 6 | .. | Alive | |
| 35 | Juxta-urethral complex (Vesicourethral Anastomosis and R.V.F. repair). | Anterior vaginal wall short, anterior lip of cervix pulled up, os patulous. | 1 | 36 weeks (elective) | 5 | .. | Alive | |
| 36 | Patulous urethra with R.V.F. repair. | | 1 | Full time (elective) | 6 | 11 | Alive | |
| 37 | Juxta-urethral simple | Cervix short and distorted Os—1 cm. dilated. | 1 | 34 weeks (in labour) | 4 | 4 | Alive | |
| 38 | Mid-vaginal | | 3 | 36 weeks } (elective) | 5 | 8 | Alive | |
| | | | | 39 weeks } (elective) | 6 | 4 | Alive | |
| 39 | Juxta-urethral simple | | 2 | Full time } (elective) | 6 | 4 | Alive | |
| 40 | Mid-vaginal | | 2 | Full time } (elective) | 6 | 5 | Alive | |
| 41 | Combined | Anterior vaginal wall short portio-vaginalis, cervix absent. A fibrous ring at the level of ischial spines. | 2 | Full time } (elective) | 6 | 10 | Alive | |
| | | | | 16 weeks (abortion) | 5 | 9½ | S.B. | Transverse lie and cord prolapse. |
| | | | | 28 weeks (L.S.C.S.) | 2 | | | |
| 42 | Juxta-urethral simple and R.V.F. | Anterior vaginal wall short, cervix taken up, os 1 cm. dilated. | 2 | 36 weeks } (elective) | 5 | 8 | Alive | |
| | | | | Full time } (elective) | 6 | 8 | Alive | |
| 43 | Mid-vaginal | portio vaginalis, cervix absent. Anterior vaginal wall short/ os 1 cm. dilated. | 1 | 35 weeks (elective) | 4 | 8 | Alive | |
| 44 | Juxta-urethral Complex (Adherent to the bone). | Anterior vaginal wall short | 1 | 34 weeks (in labour) | 2 | 12 | N.N.D. | Poly-hydramnios. |
| 21 Old cases. | Juxta-urethral com- | | 1 | 36 wks. | 6 | | Alive | |
| 27 | Juxta-cervical | | 2 | 39 wks. and } (elective) | 6 | 8 | Alive | |
| | | | | F.T. } (elective) | 6 | 8 | Alive | |
| 28s | Juxta-cervical + Juxta-urethral Complex | Anterior vaginal wall short, scarring at the bladder neck. | 1 | 38 weeks (elective) | 6 | | Alive | |

found to be cephalo-pelvic disproportion occurring in primigravidae. Most of the pelves in these cases indicated gross abnormalities of shape and/or size.

(3) Vaginal delivery following repair is not advised not only because of the expected cephalo-pelvic disproportion but also for fear of the fistula recurring even if the infant is small.

Summary

1. Obstetric management of pregnancy following repair of vesico-vaginal fistulae in 44 cases during

their 65 pregnancies has been reviewed.

2. The recognition of the factors leading to the onset of premature labour, often painless, has been highlighted.

3. The need is stressed not only for routine caesarean section in these cases, but for performing it at times even at about 34th-35th where severe cicatricial distortion in and around the site of repair is present.

References

1. Naidu, P. M. and Krishna, Sundari: J. Obst. & Gynec. Brit. Comm. 70: 473, 1963.