

VAGINOPLASTY USING AMNIOTIC MEMBRANE IN CASES OF CONGENITAL ABSENCE OF VAGINA

(Case Reports)

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McIndoe's (1938) method is one of the very popular method of vaginoplasty. We are presenting 2 cases of vaginoplasty based on McIndoe's technique where the amniotic membrane was used instead of split skin graft with excellent results.

Case Report

Mrs. (S). 22 years, was admitted on 3-7-82 primary amenorrhoea. She was married for last 8 years. Secondary sex characters were well developed. Buccal smear was positive for sex chromatin. I.V.P. revealed normal excretory symptom. General and systemic examinations were normal. External genitalia were normal, vagina was absent, but two fingers could be introduced in introitus for 1" (due to normal marital life) (Fig. 1). P/R Uterus not felt. Both ovaries were felt. Diagnostic laparoscopy was done on 3-12-1981 (When she was admitted first time) revealed that both fallopian tubes were normally developed and there was non-fusion of both mullerian ducts. Both ovaries were normal. She was taken for vaginoplasty on 12-7-1982.

Case 2

Miss (S). 18 years, was admitted on 3-7-1982 for primary amenorrhoea. She was unmarried with normal secondary sex characters. General and systemic organs were normal. Buccal

smear was positive for sex chromatin. I.V.P. revealed normal excretory system. Complete absence of vagina with normal external genitalia (Fig. 2). P/R uterus not felt. Diagnostic laparoscopy was done on 12-7-1982 revealed normal fallopian tubes, very thick round ligaments, a cord like nodule in centre (non-functioning uterus). She was taken for vaginoplasty on same day.

This girl was engaged, going to be married soon. Her relatives were explained regarding her obstetrical career.

Method

In both cases, a space was created in between the urethra, (with catheter in) and bladder anteriorly and rectum posteriorly in loose areolar tissue by giving a transverse incision at the site of normal hymen and space of 12 x 5 cm was created (Fig. 3).

3. Preparation of Amniotic Graft

Placenta was obtained from a normal delivery case, taking all aseptic precautions, and amniotic membrane were separated from chorion immediately and washed well with normal saline and kept in sterile tray. A piece of membrane was sent for bacterial culture and sensitivity—later on found sterile. A glass mould of 10 x 4 cm size covered with a sterile con-

dom was used. Amniotic membrane keeping its shining surface over mould (internally) and mesenchymal surface towards the vaginal wall was put on the mould. Excess of amniotic membrane was excised and few interrupted stitches with chromic catgut 03 were applied to edges of amniotic membrane over condom to keep it in place and for approximation of edges (Fig. 4). The mould with amniotic membrane was placed in newly created vagina after getting haemostasis.

3. Labias were stitched together using silk sutures No. 1 to keep the mould in place for 2 weeks.

4. Self retaining catheter was kept in place for 2 weeks.

Post operative period was uneventful in both cases. There was no haemorrhage. In case No. 1 mould came out on 10th day, while in second case, it was removed on 14th day as planned.

Examination on 15th day showed spacious and deep vagina with epithelisation in both cases (Fig. 4)). Case 1 was asked to have the normal marital life and Case 2 was advised to use vaginal mould at night time. They were asked to report after 1 month of discharge.

Follow up after 1 month

Case 1: Spacious vagina showing epithelisation.

Case 2: Vagina admitting two fingers easily 8" x 4" she was asked to wear mould for 1 month more.

Both cases were asked to report monthly for 3 months, quarterly for 1 year for

complete follow up. There was no shrinkage of Vagina after one year.

Review

Amnion is the nearest thing to epidermis (Piggen, 1960) formed by ectoderm of the fetus. It is like the extension of fetal skin. Although there is no evidence that it reproduces skin, but some of its cells seem to undergo the same type of metaplasia as cornified cells of epidermis and in certain cases, it has been found to leave behind islands of skin.

Use of amniotic membrane to fill the skin defects or as a graft was known in early part of 19th century (Davis, 1910), but earlier experiments were failure (Choas *et al*, 1940). Brindeau, in 1935, used amniotic membrane in constriction of vagina in vaginal agenesis. Later on Beurger (1933) after his vast experience, found that epithelium grew and complete epithelisation of vagina took place.

Massee *et al* (1971) reported use of amniotic membrane in animals who had pelvic exenteration, but it was failure as also observed by other workers (Trelford, 1972 and Trelford, 1975).

Successful results using amniotic membranes in vaginal constriction in cases of vaginal agenesis by Tozam (1976) and by Trilford *et al* (1977) in case of pelvic exenteration operation were observed.

We have obtained good results by amniotic grafting eventhough used in 2 cases.

Benefits of Using Amniotic Membranes

- (1) Readily available
- (2) Easy technique

- (3) Reduces the proteins and fluid loss
- (4) Reduces the hospitalization
- (5) Reduces rate of complication
- (6) It has superb capacity for regeneration
- (7) It is rich in glycogen

(8) Hence the chances of graft rejection is less.

References

1. McIndoe, A. H. and Bannister, J. B.: J. Obstet. Gynaec. Brit. Emp. 67: 848, 1938.
2. Peggen, J.: Canadian Med. Ass. J. 83: 844, 1960.

See Figs. on Art Paper IX