

Vaginal Agenesis

Joya Chowdhury, M.B.B.S., F.R.C.S., F.R.C.S. (Ed.)

Calcutta Medical College Hospital, Calcutta.

THE composite nature of the embryonic development of the vagina predisposes it to various development defects. Complete congenitally absent vagina, or vaginal agenesis is one of these defects. According to Conway and Stark, vaginal agenesis occurs in 1 in 4000 births. No statistical data seem to be available in India about the incidence of this condition.

Clinical Data

During the one year period from July 1967 to June 1968, vaginal agenesis was seen, in 8 cases and 3 were operated upon. Of these 8 cases, one was a neonate and the mother had observed the absence of the vaginal orifice. The baby was normal in all other respects, chromosomal studies done later confirmed the sex. No treatment was envisaged at this early stage. Of the remaining 7 cases 4 were unmarried girls between 17 to 20 years of age, in whom agenesis was discovered at puberty. All had primary amenorrhoea. No treatment was sought till the girls parents were arranging their marriages.

The other three cases were married girls. All had been married within 6 months of their seeking treatment. The youngest aged 16 years, stated that she and her parents were unaware of the condition till she found intercourse not possible.

The other two were aged 17 years, and

there respective parents were aware of the condition but had concealed this knowledge hoping that marriage would improve matters. Intercourse had not been possible.

These two girls were well adjusted, accepted by their husbands, and anxious to have reconstructive operation. The girl aged 16 years was a Muslim, and her Muslim husband was agreeable to keeping her, but was about to remarry. All the girls were well developed, with normal secondary sex characters. The external genitalia were normal, and a dimple represented the site of the vagina. The three cases operated upon were the three married girls, all having primary amenorrhoea and no uterus. All of them were anxious to undergo the operation and were very co-operative.

Reconstructive Technique

Various methods of reconstruction in vaginal agenesis have been tried and are still in use. These range from the Frank's procedure of continuous pressure, to complex colonic transplants and flap swinging operations. However, the most practical and safe procedure, and the one most commonly followed is the use of the inlay skin graft, originally described by Abbe and Esser and perfected as the McIndoe Counsellor operation. One of the principal factors of this procedure is the maintenance of the patency of

the skin graft lined cavity until the contractile phase is over.

McIndoe advised "a hollow vulcanite mould completely closed at both ends roughly the size and shape of a distended virginal vagina." The acrylic moulds now used are of various sizes, the average being 12.5 c. m. long and 4 c. m. in diameter. However,, in some instances the use of the rigid moulds has resulted in complications, such as failure of complete take of the graft, maceration, discharge, infection and bleeding, and more serious complications are the occurrence of recto-vaginal and vesico-vaginal fistulae. Jayes in 1966 reported the occurrence of such complication both in the original McIndoe series and in his personal series using the conventional McIndoe technique, and modified the technique using a soft mould during the post operative period.

Some patients find the hard mould difficult to retain due to reflex contraction of the perineum, early extrusion of the mould leads to poor graft take and the purpose of the mould is lost leading to rapid contracture of the cavity. In 1955 Polycratis presented a modification of the McIndoe technique, Castanares has modified the McIndoe procedure and the operative techniques here are based on these.

Operative Procedure

The dissection of the cavity is an in the conventional McIndoe procedure. A Foley catheter is in situ during the operation. No diathermy is utilized, as this occasionally caused small areas of coagulative necrosis in

the rectal or bladder wall, which are not detected during the operation, but lead to post operative fistulae. Haemostasis is obtained by fine plain corgut ties cut short, and ice cold saline gauze pack.

A 12" x 4" intermediate thickness split skin graft is taken with a skin grafting knife, from the thigh. The edges of the graft should be cut straight and not ragged or torn.

Six mosquito artery forceps are clipped on to the graft—four at each corner and two in the middle of the long edges—one on either side. The graft is folded upon itself in the centre of the long axis at the site of two artery forceps. The raw surface is inside and the epidermal surface out. The assistant holds the artery forceps stretching out the lateral edges. The lateral edges folded on each side are sutured together with 4/0 atraumatic plain catgut using a tight continuous blanket stitch.

Thus a skin pouch or sack is formed. The sac is then turned inside out so that the raw surface is on the outside and the suture line and the knots on the inside.

The dissected cavity is checked to see that there is complete haemostasis, and is sprayed with penicillin—streptomycin solution.

A block of previously autoclaved U—foam (Poly Urethane) 6½" x 3" x 3" is trimmed to make a rough cylindrical shape. The foam cylinder is pushed through a lubricated Fergusson's speculum till it just protrudes beyond the speculum.

The skin sac with the four forceps still attached to its open end is fitted on the

speculum. The speculum carrying the graft is inserted into the cavity. With a sponge holding forceps the foam is pushed firmly into the blind end of the skin sac. The speculum is gradually withdrawn while pushing the foam in. When the speculum is removed the artery forceps are also taken off. The free edges of the graft are sutured over the end of the foam protruding at the introitus.

The labia are sutured together. The suture line is covered with a dressing Ne-ba-sulph and a tight T-bandage is applied. The Foley catheter is left in situ. The patient is on complete bed rest for 14 days. Antibiotics are prescribed. On the 14 days under G.A. the external sutures are removed and the foam taken out.

The graft lined cavity is cleaned.

A firm but soft mould is used to keep the cavity patent instead of the rigid McIndoe type mould. The soft mould used has been a firm condom filled with a U-foam cylinder. The end of the condom is tied leaving a loop through which a retaining cord is passed. No retaining mechanism is used after a few days, as the light mould is readily held in place by the perineum like an ordinary tampon. These moulds are

worn continuously, night and day for six months. except for a few minutes when they are removed, the cavity cleaned and mould reinserted. The moulds are cleaned in Savoln and water and insertion facilitated by K-Y jelly.

The patient is given several such moulds.

Intercourse is encouraged after 3 months.

In the series presented the first case was operated in July 67, the second in August 67 and the third in March 68. In all the cases graft take was 100%. The following up periods range from 3 months to 1 year. The vaginae admit two fingers quite readily to a depth of 4". The first two cases have resumed normal intercourse.

Discussion

A modified McIndoe Counsellor technique is presented in three cases of vaginal agenesis operated upon out of a series of eight. The substitution of the soft mould for the rigid hard mould ensures better fixation, graft immobilisation, with 100% take. The complications which may occur with the use of the hard mould are prevented.

The use of the soft mould post operatively is very comfortable, easily retained, with no tendency to extrude and thereby ensuring continuous dilation of the graft lined cavity during the contractile phase.