VAGINAL RECONSTRUCTION SPLIT THICKNESS GRAFT TECHNIQUE

(Report of 10 Cases)

by

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SUMMARY

Ten cases of vaginal agenesis operated by McIndoe's technique between March 1981 to March 1983 are reported. Except for patchy rejection of graft which occurred in few cases there were no other complications.

The mean neovagina depth obtained was 9.4 cms.

McIndoe's procedure is the most satisfacory treatment for vaginal agenesis.

It is interesting to note that renal agenesis on left side was found in 42.86% of cases.

Introduction

Vaginal agenesis is an infrequent condition. It was first described in 1572 by Realdus Columbus. According to Engstadt (1917) Vaginal aplasia occurs once in 5000 births. Bryans et al (1949) found it once in every 4000 female patient admissions at Mayo Clinic.

Formation of an artificial vagina was first attempted by Dupuytren in 1817. Since then numerous procedures have been described. McIndoe and Banister (1938) described the procedure of split thickness graft into the newly formed vagina which was held in place by vaginal mould. This is still the procedure of choice to-day.

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Material and Methods

Ten patients with congenital absence of vagina were operated between March 81 to March 83 at M.Y. Hospital, Indore.

Surgical Technique

Split thickness graft was taken from the thigh with the help of Blair Brown dermatome. This was sutured with 3-0 chromic catgut or vicryl 3-0 over a wax mould 9 cm. long, 3.4 cm. in diameter at the top and 2.9 cm. at the bottom. Then foley's catheter inserted into the bladder. A transverse nick was made in the

vaginal vestibule and the space dissected between urethra and bladder anteriorly and rectum posteriorly until the under surface of peritoneum was reached. The dissection was quite easy (Fig. 1). The bleeding points, if any, were caught and ligated, mould put in and the edges of graft sutured to the edges of the vaginal mucosa at the vestibule with prolene 2-0 (Fig. 2). Labial stitches applied over the mould. The mould was kept for 10 days and removed and replaced by Acrylic mould of the same dimensions (Fig. 3). This was removed and put in daily for 2 months and patient was advised to put it overnight for further 4 months. Follow up was done every month for 3 months and then at 3 months' intervals. (Fig. 4).

Table I depicts the clinical details of the patients and the results.

Cases varied between the ages of 16 years to 30 years. Two were unmarried and all others were married. They all came for primary amenorrhoea. All had well developed secondary sex characters of female. Vagina and uterus were absent in all.

Discussion and Conclusion

In vast majority of women born without vagina, there is failure of development of the uterus, frequently called Rokitansky Kuster-Hauser Syndrome. Less commonly the condition is seen in testicular feminization syndrome (androgen insensitivity syndrome), male hermaphrodites and male transexuals.

When the patients with Rokitansky syndrome are surgically explored the outer portions of the fallopian tubes are seen continuous with attenuated midline cord of the underdeveloped uterus. There may be bilateral non-canaliculated muscular buds of rudimantory uterus, described by Kuster (1910) as uterus biparticus solidus rudimentarius cum vagina solida. The ovaries are always present and function quite well.

Ulfelder (1968) suggested that laparotomy to determine the internal anomaly is no longer usually necessary, because the use of intravenous urography to define associated abnormalities and examination of nuclear chromatin to determine genetic sex will adequately settle the question whether exploration can be helpful, except perhaps in the younger age group with the history of moderate cyclic pain, which suggests the possibility of endometerium containing blind segment of Mullarian duct which needs to be excised for symptomatic relief.

MeIndoe's procedure is a simple safe and excellent procedure for vaginal reconstruction in vaginal agenesis. It produces vagina which is normal in depth, diameter and mobility. In our series, the neovagina depth varied from 6.5 cm. to 10.5 cm., the average being 9.4 cms.

In 6 cases, followed for more than 3 months coitus was satisfactory. Thompson, et al (1957) have reported 81% success rate after 10 years follow up.

A high percentage of patients with vaginal agenesis also have urinary tract anomalies such as absence of one kidney, horse shoe kidney, pelvic kidney or duplicate collecting system. Concomitant urological anomalies are estimated to occur in from 25-50% of patients with vaginal agenesis. According to Counsellor and Davis (1968) in travenous pyelogram is indicated in all cases. One of the kidneys may be located in pelvis or at bifurcation of aorta. One kidney may be entirely absent; when this occurs it is most often the left one.

A solitary pelvic kidney is rare and usually found on right side of pelvis for

TABLE I

Clinical Details and Results of 10 Cases Operated

Case	Age Yrs.	Marital Status	Symptoms	Examination Vagina/Per Rectum	Investigations		Follow Up	Results Vaginal Depth
					IVP/Sex	Chromatin		
1.	25	M 5 yrs.	Primary amenorrhoea. Pain in lower abdomen every 2-3 months for 2-3 days	Urethra dilated Vagina 3/4" P.R.-N.A.D.	—	—	100% take up of graft	10 cms. at 3 months
2.	18	Single	Primary amenorrhoea	Vagina absent, 2 dimples seen below urethra P.R.-N.A.D.	Left kidney absent	Positive	Raw area below urethra healed in 5 months Married after 8 months	10.5 cms. at 23 months
3.	30	M 10 yrs.	-do-	Vagina Absent P.R.-N.A.D.	—	—	100% take up of graft	10 cm. at 1 month
4.	20	M 2 yrs.	-do-	-do-	Normal	Not done	Raw area at Posterior vagina near the vault healed in 1 month	9 cm. at 1½ month
5.	17	M 3 yrs.	-do-	Fossa Navicularis admits 1 finger for 1 cm. P.R.-N.A.D.	Renal agenesis on left side	Positive	Raw area 1 cm x 1½ cm at vault of vagina healed in 3 months	9 cm. at 5 months
6.	20	M 1 yr.	Primary amenorrhoea	Vagina Absent P.R.-N.A.D.	Normal	Negative	100% take up of graft	10 cms. at 3 months
7.	16	M 2 mths.	-do-	2 dimples seen at Hyamenal membrane P.R.-Soft transverse band felt	Renal agenesis on left side	Positive	Graft did not take up in lower in half	6.5 cms. at 3 months

8.	21	Single	-do-	Vagina Absent P.R.-N.A.D.	Left — Normal Right— Pelvic Kidney	Positive	90% take up. Slight raw area on mid-posterior wall. Healed in 1½ month. Married after 3 months	10 cms. at 4 months
9.	18	M 1 yr.	Primary amenorrhoea, Intermittant Vague pain in hypogastrium	Vagina admits tip of finger for 1 cm. P.R.-N.A.D.	Normal	Positive	95% take up of graft	10 cms. at 3 months
10.	18	M 2 yrs.	Primary amenorrhoea	Urethra was dilated Vagina absent P.R.-N.A.D.	Not done	Positive	95% take up of graft except for Rt. lateral wall in mid-portion	9 cms. at 1 month

some reason that has not yet been explained.

Garcia and Jones (1977) found I.V.P. urinary tract anomalies in 17 cases out of 35 (48.5%). Unilateral agenesis was most frequent with 8 cases, and 4 of them had pelvic kidneys.

In our series, I.V.P. was done in 7 cases. 3 had normal kidneys, 1 had pelvic kidney on right side and 3 had renal agenesis on left side (42.86%), giving a high incidence of this condition in our cases. Counseller and Sluder (1944) investigated 15 cases of congenital absence of vagina urologically and found congenital absence of left kidney in 6 cases (40%).

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See Figs. on Art Paper I