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Brig SPS Kochar's Neovaginoplasty: Simple Technique

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CASE REPORT

Congenital anomaly in neonate is an alarming condition for parent as well as clinician. Mayer-Rokitansky-Kuster-Hauser (MRKH) syndrome a rare congenital malformation of the female genital tract, has an incidence of 1 in 4,000 newborn girls (1). The syndrome, caused by an embryologic failure of the Mullerian ducts, is characterized by complete or partial agenesis of the vagina and uterus and can be associated with urinary tract, skeletal, and other congenital abnormalities (2).Individuals with MRKH syndrome commonly present with a nor-mal female 46,XX karyotype and regular ovarian endocrine function, leading to the good development of secondary sexual characteristics and normal adolescent progress in girls . The etiology of the syndrome, which is the second most common cause of primary amenorrhea, is yet unknown (3). The aetiology may be due to multifactorial mode of inheritance, which including genetic and environmental factors, probably is the most likely explanation (4) . MRKH syndrome along with complete androgen insensitivity syndrome are the most common causes of vaginal agenesis.

The absence of a vagina has a profound psychologic impact on a young woman's sense of femininity, emotional stability, and self-confidence. For a normal sexual life requires the creation of an

adequate neovagina. .The treatment for vaginal agenesis remains controversial although vaginal dilation therapy is still widely considered the first line treatment because success rates are high and associated risks are low. Treatment need be deferred until adolescence so as to allow informed consent and compliance. Appropriate counseling and psychological analysis prior to surgery is a very important step for successful management. A variety of surgical options are also available,. Numerous procedures and techniques of vaginal reconstruction, both surgical and nonsurgical, have been proposed each with enthusiastic proponents. The goal of any method is to create a neovaginal canal of adequate diameter and length to allow for sexual intercourse Long-term outcome studies on most surgical techniques, however, are still lacking and until recently most studies have reported on success rate in terms of anatomical success only, without including sexual function. Moreover, the medical literature lacks prospective comparative outcome studies, meaning that current choice of surgical procedure relies greatly on the surgeon's preference and experience.(5)

The number of patient s with vaginal atresia being relatively low junior gynecologic surgeon may find it difficult to choose which type of surgical procedure should be performed as there is plethora of surgical procedures such as McIndoe , Vecchietti , Frank,Wharton, or Lin ,Willium by laparotomy, laproscopic approach ,use of autologous transplants, applica-tion of traction or pressure etc performed in the past.(6).

At this hospital a simplified technique of neovagina creation is being followed with good outcome. The use of amniotic membrane as graft for lining the neovagina was used. We had performed the neovaginoplasty in three young women with MRKH syndrome, one was newly married and two girls were diagnosed during evaluation of amenorrhea.

MATERIAL AND METHOD

The women were evaluated for other congenital anomaly, appropriate counseling and psychological assessment was done for the nature of treatment and post surgical care of regular vaginal dilator by gradually increasing sizes. There was no associated anomaly and karyotype was 46 chromosomes.

The amnion graft was harvested from healthy parturient women and treated by antibiotics to prevent sepsis. The mould was prepared from a 50ml plastic sterile syringe which nozzle was cut. The syringe was made porous with multiple puncture on its body to allow drainage of secretion. Two holes were made at the rear end of the syringe to suture it with labia majora for keeping it in place. The vaginal mould is prepared aseptically with the syringe, which was covered with sterile thin foam on the surface of which amniotic membrane was fixed with suture.

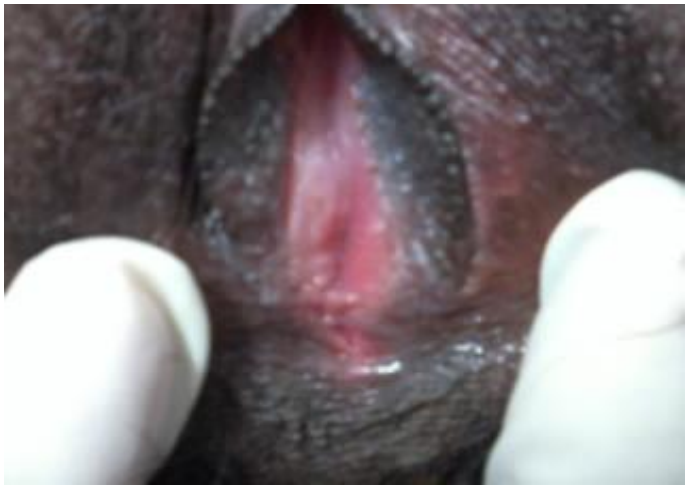

Fig 1. Prior to surgery

Fig 2.after surgery on regular dilatation.

Fig. 3. Plastic moulds of different size

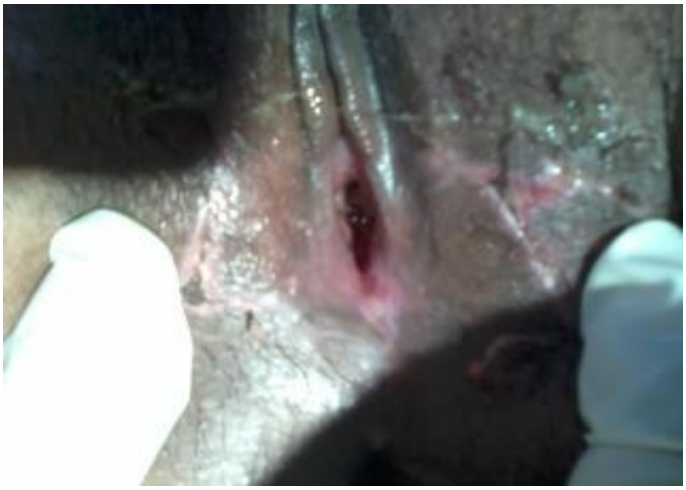

Fig 4. Post operative picture

Surgical procedure was performed in lithotomy position under general anesthesia. Laparoscopic visualization of pelvic organ was done simultaneously. Indwelling Folley's catheter is inserted into the urethra. The blind vagina usually has two small dimples in lateral to median raphea. A transverse incision is made up to the depth of mucosal thickness for joining two dimples. Heger's dilators in gradually increasing sizes are introduced in the dimples to enlarge the potential spaces. Gradual dilatation causes enlargement of the two the potential spaces and the intervening avascular soft areoler tissue becomes very thin and is excised without any risk of hemorrhage. The dimension of the space thus created has adequate length and breadth for the neovagina. The prepared vaginal mould was introduced in the space which was fixed with labia majora bilaterally. Post operatively she was managed with broad spectrum antibiotics and anti- inflammatory agent along with low fibre diet.

The vaginal mould was irrigated with antiseptic solution thrice daily. The mould was removed after 7 days; a new vaginal epithelium usually grows upward from vestibule.

Post operatively gradually enlarged sized soft smooth plastic moulds were used to keep the dilation of the vagina till regular intercourse was established. She was advised to use the mould continuously for first three months followed by intermittent dilatation. The patients were in regular follow up; they were satisfied with the neovagina. The operative procedure is very short and ranging from 20 min to 45 min.

DISCUSSION

Management of patients with MRKH syndrome is a complex process as it encompasses proper psychologic support, the creation of a neovagina to give affected women the opportunity to have a normal sexual life. several treatment options are available , including non operative methods such as progressive dilatation ; numerous surgical techniques using several m such as skin grafts fasciocutaneous flaps , buccal mucosa , amnion , peritoneal , intestinal , and vesical transplants); and epithelialization from the outer skin layer.

There is, however, no consensus about which procedure should be considered the ideal strategy. Functional sexual outcomes after nonsurgical and surgical methods were similar. Therefore, the Frank's method should be proposed as first line therapy because it is less invasive than surgical procedures. In the case of failure of this technique or of refusal by the patient, surgical reconstruction may then be offered. (7) Surgical treatment options must be functional, minimally invasive, quick, simple, reliable, safe, and cost effective. The neovaginoplasty described here seems to meet these criteria and represents an operative method of creating a functional vagina with high success rates, without most of the attendant disadvantages and complications of traditional procedures such as hemorrhage , infection etc. Cicatrisation and closure of the vagina due to the patient's neglect may be observed during follow-up in few cases. The dissection of generous vaginal space and placement of vaginal mould covered with foam and amnion to line the vaginal cavity, proper postoperative care and meticulous prolonged use of the mould by the patient are the essentials of functional neovagina .

CONCLUSION

The MRKH syndrome is associated with an absent uterus despite the presence of normal ovaries and normal external genitalia and common presentation is primary amenorrhoea. Basic treatment is the creation of a neovagina. Surgical intervention is usually delayed until the age of 17 years. Girls who are offered the vaginoplasty operation require a certain level of psychological and sexual maturity to be motivated and compliant with the dilation regimens necessary for a successful outcome. The simple technique described above is safe, simple and effective and very acceptable to the patients.

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