MANAGEMENT OF HYPOSPADIAS IN CHILDREN

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ABSTRACT

Objective  To find out result of hypospadias repair following Mathieu’s technique.

Study design  Descriptive study.

Place & Duration of study  Department of Paediatric Surgery, Unit II, Bolan Medical College, Sandeman Provincial Hospital Quetta, from March 2007 to February 2008.

Patients and Methods  All patients attending outpatient department of our unit were included. The upper limit of age was kept at 13 years. Patients with distal penile hypospadias without or minimal chordee were included. Glandular variety and those having moderate and severe chordee were excluded. Polyglycolic 5/0 sutures were used for repair and urethral catheter of appropriate size was kept as stent for 10 days. Simple occlusive dressing was applied in all cases.

Results  A total of twenty six patients were operated in one year period. The age of the patients ranged from 12 months to thirteen years. Associated anomalies found in four cases and included one case each of inguinal hernia and scrotal hydrocele and two cases of undescended testis. General complications like swelling and hematoma of operative sites were not given much importance as they settled over period of time. Urethrocutaneous fistula occurred in five cases. None of the patients developed sloughing of flaps and meatal stenosis.

Conclusions  Mathieu technique of hypospadias repair is an effective method of repairing distal penile hypospadias. Urethrocutaneous fistula rate though high but was comparable with reported literature.

Key words  Hypospadias, Mathieu repair, Complications.

INTRODUCTION:

Hypospadias is one of the commonest penile anomalies in children.\(^1\) It remained the topic of discussion as various techniques evolved over centuries to deal with this anomaly.\(^2\) The location of external urinary meatus varies from just proximal to tip of glans to perineum. The more proximal the urinary opening the more severe is the chordee and small size of penis. The incidence of associated anomalies also increases as the location becomes more proximal.\(^3\)

The techniques of repairing hypospadias kept evolving over period of time as none gave satisfactory results. The procedures did not work equally in the hands of various surgeons. However the technique described by Snodgrass (tubularized incised plate -TIP) urethroplasty became widely accepted in recent times.\(^4\)\(^,\)\(^5\) Many surgeons prefer this single stage technique of repair as it is versatile and easy to learn. However, Braka’s two stage procedure is recommended for more proximal type of anomaly.\(^6\) Recently a term Snodgraft is applied, in which both the principles are combined.\(^7\)
The incidence of hypospadias varies in different countries.

The location is anterior in 50% of cases, middle in 20%, and posterior in 30%; the subcoronal position is the most common.

DISCUSSION:

Hypospadias is a congenital defect that occurs during the development of urethra between 8-20 weeks’ gestation. The surgical principles behind these techniques are quite time tested. The Mathieu repair was first reported in detail in 1932. Many subsequent surgeons reported varied degrees of success in older children in comparison with those operated early. The Mathieu repair was first reported in detail in 1932. Many subsequent surgeons reported varied degrees of success in older children in comparison with those operated early.

The time tested technique of Mathieu is still practiced and also makes surgical site prone to infection. We usually find more edema and oozing in early postoperative period. They usually cause no significant problem.

Hypospadias repair in the pubertal and postpubertal period is associated with complications, primarily urethrocutaneous fistula.

Associated anomalies were found in four cases and included glandular variety and those having chordee were included. Glandular variety and those having chordee were included. Glandular variety and those having chordee were included.

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Even better results are reported by Retik et al in a series of 294 patients with Mathieu’s anastomosis which was harvested either from prepuce or families; the familial rate of hypospadias is about 7%.

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The incidence of hypospadias is greater in whites than in blacks. A genetic component may be present in certain families; the familial rate of hypospadias is about 7%.

In the United States, the rate of hypospadias doubled from 1970-1993. A link has been reported in boys born prematurely with their meatus at the tip of the glans (urethroplasty), which is made more natural by creating conical configuration (glansplasty). The final aim is to achieve cosmetically acceptable penile skin coverage. The resulting penis should be suitable for future sexual intercourse and enables the patient to void while standing.
remove the dressing on 5\textsuperscript{th} day and leave the area open. It helps in identifying and infection and devitalization of skin flaps.

Urethrocutaneous fistula is a major complication after hypospadias repair. The rate of fistula formation generally is less than 10\% for most single-stage repairs but rises with the severity of hypospadias, approaching 40\% with complex reoperative efforts.\textsuperscript{19} Fistulas rarely close spontaneously and are repaired using a multilayered closure with local skin flaps 6 months after the initial repair. After repair fistulas may recur in approximately 10\% of patients. In our study fistula occurred in five patients. Most of the patients were less than 3 years of age. Meatal stenosis does not occur with this technique as final urethra is quite wide although not vertically oriented.

Long term complications include urethral strictures. So far none of our patients developed this. Another long term complication is urethral diverticula and which is not uncommonly associated with stricture. So a long term follow up is must while reporting the final outcome. Diverticula are generally associated with graft or flap-type hypospadias repairs, which lack the subcutaneous and muscular support of native urethral tissue. The redundant urethral tissue is generally excised, and the urethra is tapered to an appropriate caliber.

Many surgeons in recent times have switched over to Snodgrass technique of TIP urethroplasty. Favorable results have been documented. However we believe experimenting between various techniques is not appropriate. One should master a technique and then excel in it. In one study various techniques have been used and reported complication rate was 26\%.\textsuperscript{19} It is thus suggested that a sound protocol should be adhered to, when managing patients with hypospadias. A long term follow up is also important as one should find out psychological adjustments and quality of life in these patients. This aspect is often neglected.\textsuperscript{20}

REFERENCES:

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