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HYPOSPADIAS REPAIR – AN EXPERIENCE AT A TERTIARY CARE HOSPITAL

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ABSTRACT:

INTRODUCTION: *Hypospadias is a congenital anomaly of male urethra. Out 250 live births 1 patient is affected. More than 600 surgical procedures are being adopted to correct this deformity. All of these procedure aims to correct the abnormal anatomy and to create a sound urethra. This retrospective study was done to compare the effects of Bracka's technique with Wehrbien-Smith technique in the management of hypospadias in our setup.*

METHODOLOGY: *A retrospective comparative study was carried at the Department of Plastic & Reconstructive Surgery, Liaquat University of Medical and Health Sciences, Jamshoro, from April 2006 to May 2009. Forty four patients with moderate to severe form of hypospadias and in whom either Bracka's or Wehrbien-Smith procedure was performed, were included in the study. All variables of interested including type of hypospadias, complications including fistulae, stenosis, stricture, and graft or flap necrosis were noted on a predesigned proforma and data was later on analyzed through SPSS 17.*

RESULTS: *Age of the patients ranges from 4 - 22 years with mean age of 11 years. Majority of the patients suffered from proximal penile form of disease 40%. Fourteen cases of penoscrotal and perineal hypospadias 31% and 13 cases of mid penile hypospadias 30% were included in the study. The complications rate was common with Wehrbien-Smith as compared to Bracka's. An increased incidence of urethrocutaneous fistula 27.77% was found patients who underwent Wehrbien-smith technique.*

CONCLUSION: *Bracka's Two-Stage repair for hypospadias offer superior results as compared to Wehrbien-smith's technique as complication rates in patients who underwent Bracka's two stage repair is significantly lower than Wehrbien-smith's technique specially in terms of fistulae formation.*

KEYWORDS: Hypospadias, Bracka's two stage repair, Wehrbien-Smith technique, hypospadias fistulae

INTRODUCTION:

Hypospadias is a congenital anomaly of male urethra. It is believed to affect 1 in 250 live births[1]. Instead of a normally placed urethral meatus, the urethra opens into the ventral surface of penis. From its milder form, where the urethral opening is present in the coronal region to most severe scrotal or peno-scrotal variant, it is a subject of much research in terms of surgical correction. Over 600 procedures are being practiced to correct this abnormality. These procedures, though different on technical grounds, aim towards the formation of an anatomically sound urethra[2]. This in turn helps in restoration of normal urinary stream, improves fertility and provides psychological relief to the affectees[3]. All of these procedures are invariably associated with certain complications, commonest being the urethrocutaneous fistula[4]. Since the Department of Plastic Surgery receives an enormous load of hypospadiac patients, this retrospective study was done to compare the effects of Bracka's technique with Wehrbien-Smith technique in the management of hypospadias. It study helped us in recognizing the efficacy of both the procedures in the prevention of urethrocutanous fistula.

MATERIALS AND METHODS:

This retrospective comparative study was carried at the Department of Plastic Surgery, Liaquat University of Medical and Health Sciences, Jamshoro, from April 2006 to May

2009. Forty Four patients with moderate to severe form of disease and in whom either Bracka's or Wehrbien-Smith procedure was performed, were included in the study. Patients, who did not show compliance to both stages of the procedures, were excluded. The variables including type of hypospadias, severity of the disease and graft site complications, were recorded on a pre-designed proforma and data was later on analyzed through SPSS 17.

RESULTS:

At the end of our data collection and calculation, we have found a large difference in the efficacy of the two procedures, commonly practiced in our set up for the correction of hypospadias. Patients who underwent Wehrbien –smith technique was assigned the label of Group A, whereas those for Bracka's, Group B. In our study the age of the patients ranges from minimum 4 years to maximum of 22 years (mean 11 years). Majority of the patients suffered from proximal penile form of disease 40%). Then in descending order of frequency 14 cases of penoscrotal and perineal hypospadias (31%) and 13 cases of mid penile hypospadias (30%) were included in the study. The complications rate was common with Wehrbien-Smith as compared to Bracka's. We have observed an increased incidence of urethrocutanous fistula in patients, who underwent werbein-smith technique, 6 out of 22 patients developed this complication. One of these patients had to go through revisional surgery. Rest of them responded well to conservative treatment. Whereas, in-group B, only 3 patients suffered from urethrocutanous fistula post operatively. Urethral stricture and graft failure was only observed in patients belonging to group A, with 2 patients suffering from each problem respectively. In contrast to this, urethral diverticula were seen in one of the patients operated by Bracka's technique. None of the patients in Group A (Wehrbien smith) suffered from this problem. We have found that 15 patient in group B went home without any complication. This was less frequently observed with patients in Group A, where only 10 patients were free of complications at the end of procedure.

TABLE I
TYPE OF HYPOSPADIAS

	Frequency	Percent	Valid Percent	Cumulative Percent
Mid penile	13	28.9	28.9	28.9
Proximal penile	18	40.0	40.0	68.9
Penoscrotal and Perineal	14	31.1	31.1	100.0
Total	45	100.0	100.0	

TABLE II
COMPLICATIONS

Complications	Procedures		Total
	Wehrbien-Smith	Bracka's repair	
Urethrocutaneous fistula	6	3	9
Stenosis	1	2	3
Stricture	2		2
Diverticula		1	1
None	10	15	25
Revision	1	1	2
Graft/flap failure	2		2
	22	22	44

DISCUSSION:

Penile amputation for hypospadias? Yes, pages from the history reveals that, in ancient times, this was the sole treatment for the correction of the deformity in the first mellenium[4]. For a long period of time, the aim has changed from mere surgical correction of the deformity irrespective of complication rate, to more sophisticated approach where prevention of postoperative complications is near important[5-6]. This study showed that, those patients who underwent Bracka's technique for the treatment of hypospadias, suffered less from morbidity as compared to Wehrbien–smith technique. There was marked difference noted in the development of postoperative urethrocutanous fistula formation utilizing and comparing both techniques. In our series of 22 patients, only 3 (13%) faced the complication of urethrocutanous fistula utilizing Bracka's technique. This is more in comparison with case series reported by Obaidullah et al [7] but is half of the number observed in our own case series of 22 patients, who were managed with Wehrbien –smith technique (26%). We have found that, cosmetically both techniques were equally acceptable. Meatal stenosis was more and urethral diverticula were observed only, with Bracka's technique. Metal stenosis is reported more with the MAGPI procedure as reported by Ayub et al [8,9] Whereas urethral stricture was only seen in patients, who underwent Wehrbien- smith technique [10].

CONCLUSION:

Bracka's Two-Stage repair for hypospadias has an edge over Wehrbien-smith's technique as postoperative complication rates in patients who underwent Bracka's two stage repair is significantly lower than Wehrbien-smith's technique specially in terms of fistulae formation.

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