DELAYED HYPOSPADIAS REPAIR IN ADOLESCENCE AND ADULTS: A PLASTIC SURGERY PERSPECTIVE

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ABSTRACT

BACKGROUND: Hypospadias is a congenital anomaly and most are corrected in childhood in our setup, where the health facilities are suboptimal, many of the cases presents late. Although local studies on these late presenters are nonexistent, foreign literature reports higher complication rates as compared to surgeries performed in early childhood..

OBJECTIVE: To find out post operative complication rates in Hypospadias patients above ten years of age.

MATERIAL AND METHODS: This descriptive study was carried out in Plastic Surgery and Burn Unit Lady Reading Hospital, Peshawar. Record of Hypospadias patients aged above ten years was reviewed from January 2011 to December 2015 (five years). Only primary case with no previous attempt for correction and with more than one year follow up were included.

RESULTS: Out of total 307 Hypospadias repair 53 (17.26%) patients fulfilled the study criteria and were included in this study. Mean age was 16.65 year (range 11-65years). 34 (64.16%) were distal and rest were mid penile or proximal. Three techniques used were two stage, GAP and Snodgrass. A total of 19 (24.52%) complications occurred in 13 patients. Ten patients (18.86%) developed fistulae which needed additional procedures for correction.

CONCLUSION: Delayed Hypospadias repair is associated with higher complication rates as compared to younger pediatric population. Where ever possible, Hypospadias should be corrected at an early, preferably before school going age.

Key Words: *Hypospadias, Delayed Repair, Adult, Complications.*

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INTRODCTION

Hypospadias is one of the most common congenital anomaly of the male genital tract, with an incidence of 1:300 male live births[1]. Optimum timing for surgical correction of this defect has been debated since long. American Academy of Pediatrics recommends corrective surgery of genitalia at the age of 6-12 months[2]. The second best option is considered to be at 3-4 years of age if previous one is missed[3]. These guidelines for surgery timings are generally followed in developed countries where most babies are delivered at hospitals and diagnosed early.

In a developing country like ours, with lack of health facilities and health education, it is not unusual for a hypospadias patient to present late in adolescence or adulthood. Delayed hypospadias repair carries higher complication rates as compared to surgeries performed in early childhood[4,5]. Most local and foreign studies on hypospadias cover pediatric population. This study encompasses patients above 10 years of age to analyze complication rate in this subset of population.

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MATERIALAND METHODS

Record of all the Hypospadias patients (according to inclusion/ exclusion criteria) from January 2011 to December 2015 was retrieved from our electronic, manual and photographic data. Variables included were age, meatus site before surgery, type of surgery performed, early/ late complication, follow up period and final outcome.

Inclusion Criteria:

1: Hypospadias patients undergoing surgery at age above ten years were included.
2: Only Primary cases were included.

Exclusion Criteria:

1: Patients 10 years and below were excluded
2: All patients with previous hypospadias surgery or complication were excluded.
3: Patients less than one year follow up were excluded.

RESULTS

During the study period of 5 years (January 2011 to December 2015) a total of 307 hypospadias patients were operated. 53(17.26%) patients of age above 10 years fulfilled the study criteria and were included in this study. Mean age was 16.65 years (range 11 -65 years). Site of meatus was divided into Distal (glandular, coronal and distal penile) Mid penile and Proximal (proximal penile, penoscrotal, scrotal and perenial). Table No: 1.

TABLE NO 01: SEVERITY OF HYPOSPADIAS

No	Type of Hypospadias	No (%age)
1	Distal	34 (64.15%)
2	Mid Penile	7 (13.20 %)
3	Proximal	12 (22.64%)
		53 (100%)

Three different techniques used were two stage Aivor Bracka 30(56.6%), GAP repair 11cases (20.75%) and Snodgrass repair in 12 cases (22.64%). Complication were divided into early (appearing within 7 days) and late (appearing beyond 7 days) Table No: 2.

TABLE NO 02: COMPLICATIONS

Early Complications	n	Late Complications	n
Infection	2	Fistula (needing correction)	10
Catheter blockage	2	Minor leaks(closed spontaneously)	3
Erection/bleeding	1		
Excessive edema	1		

A total of 19 complications occurred in 13 patients (24.52%). Five of the six early complications happened in same patients who developed fistula as later stage. Three patients developed tiny leaks which closed spontaneously without any additional procedure. 10 patients (18.86%) needed additional surgical procedures for fistula closure.

DISCUSSION

Hypospadias repair may be delayed due to a variety of reasons including socioeconomic status of the parents, lack of health facilities and co-morbid states of the patients. Many studies have shown that delayed surgery for the Hypospadias is associated with higher complication rates and is an independent predictor of outcome[4]. Various theories are proposed to explain the relatively poor outcome in adolescence and adult, though without substantial evidence. These include frequent episodes of erection/ hematoma, infection, different hormonal milieu and poor wound healing in this subset of patients[6,7].

Out of total 307 patients operated during study period, 53 patients (17.26%) were above ten years at the time of surgery. The exact reason for this delayed presentation is not known and needs to be explored in future study.

Mean age in this study was 16.65 years (range 11-65years) and we noticed fistula complication in 10 (18.86%). In pediatric population we reported a fistula rate of 3.8% and 9% in two previous studies[8,9] . This significantly high complication rate in older population is in agreement with other studies[10,11].

Bhat et al compared 60 patients each from above16 years and less than 5years and noted a complication of 16.7% and 6.7% with statistically significant difference[7]. They attributed higher complication in older patients as due to erections, infection and decreased vascularity. In a similar study on 31 patients of age ten years and above, Jennifer et al noted an overall complication of rate of 48%, which is quite high comparing our results of 18.86%[6]. Limitation in their study was lack of a control group. Another significant deficiency in their study was its span which spread over 22 years. Surgical techniques evolve very rapidly and must have been, in this case also, producing a confounding factor. Hensle et al noted overall complication of 52.3% with 37.5% in primary cases[12]. His study included only 8 primary cases, too small to rely upon. They concluded that adult hypospadias is a different entity and high complication rate should be explained to the patients' pre operatively.

Two studies from Turkey reported somewhat lower complication rates of 10.1% and 8.7% respectively[10,13]. Although both studies were conducted on adults, the hypospadias in both studies was of distal type. Cankon et al also reported similar outcome in distal hypospadia[14]. In our study 36% patients were of mid penile or proximal type. Severity of hypospadias is well recognized predictor of higher complication rate[5,13].

Strength of our study is that all patients were operated by single surgeon(Aslam M) and same techniques/ suture material were used. Although we have conducted several studies on

hypospadias in pediatric[1,8,9], lack of control group in this study is a limitation.

CONCLUSION

Hypospadias in adolescence and adult is a special subset and carries higher post operative complication rate as compared to younger counterpart. Effort should be made to operate hypospadias patient in preschool children when adverse events are reasonably low.

Conflict of Interest: Nil

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