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Hypospadias Surgery at Korle-Bu Teaching hospital, Ghana: A Review of 36 Patients

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Abstract

Background: This study aimed to review experience in the management of hypospadias at a tertiary Paediatric Surgery Centre, Accra, Ghana.

Patients and Methods: This was a prospective study of patients managed for hypospadias at the Paediatric Surgery Unit of the Korle-Bu Teaching hospital, between 1st January 2004 and 30th September 2005. Data analysed included the types of hypospadias seen, the types of operations done, the complications and outcomes of management.

Results: A total of 1196 patients were operated within this 21-month period. Out of these, 120 operations were urological. Thirty-six of the 120 urological operations were for hypospadias. The patients operated for hypospadias were aged between 3 and 15 years (mean = 5.4 years). Majority of the hypospadias were penile in 22(61%). Tubularised incised plate urethroplasties (TIPU) was the most frequent procedure done in 27 (73%), followed by meatal advancement glanuloplasty incorporated (MAGPI) and Duckett's tubularised inner prepuce in 4 patients each. The complications included 4(15%) urethro-cutaneous fistulae, 4 (7%) meatal stenoses, 1(4%) retracted meatus with a fistula, and 1(4%) meatal stenosis with a fistula in those with TIPU, 1 case each of failed repair after MAGPIs and meatal stenosis after island onlay flap repairs. Two (50%) patients developed urethro-cutaneous fistula and 1(25%) of the 4 patients who had Duckett's repair developed meatal retraction and stenosis.

Conclusion: Most penile Hypospadias without severe chordee can be successfully managed by TIPU with an acceptable complication rate.

Key words: Hypospadias, TIPU, Results, Complications.

Introduction

Hypospadias accounts for about 45 % of all urological conditions in the Paediatric Surgery Unit of the Korle-bu Teaching Hospital. A variety of surgical operations have been described in managing this condition[1]. In recent times Tubularised Incised Plate Urethroplasty (TIPU) has been popularized in various centres as a very useful means of managing distal and sometimes proximal hypospadias with good results[1-4]. This paper reviewed the management of hypospadias at a tertiary health facility, Accra, Ghana.

Patients and Methods

This was a prospective study of children managed for hypospadias at the Paediatric Surgery Unit of the Korle-Bu Teaching hospital, Accra, Ghana, between January 2004 and September 2005. Data were analysed for types of hypospadias, the types of operations done, the complications and outcome.

Results

A total of 1196 patients had operation within this 21 month period. Out of these, 120 (10.3%) operations were urological. A total of 36 patients were operated for hypospadias within this period. Their ages ranged between the ages of 3 and 15 years (mean= 5.4 years). The types of hypospadias included 1(3%) perineal, 2(6%) penoscrotal, 22(61%) penile, 6(17%) subcoronal, and 5(14%) glanular (Table 1). The types of operations done included 27 (73%) tubularised incised plate urethroplasties (TIPU), 4 (11%) meatal advancement glanuloplasty incorpo-rated (MAGPI), 2(5%) preputial island onlay flaps and 4(11%)Duckett's tubularised inner prepuce.

Out of 27 tubularised incised plate urethro-plasties, there were 10 complications comprising urethro-cutaneous fistulae 4 (15%), meatal stenoses 4 (7%), retracted meatus with a fistula 1(4%), and meatal

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stenosis with a fistula 1(4%). Other complica-tions are shown on Table 3.

Of the 7 urethro-cutaneous fistulae, 3 healed spontaneously. Six patients with meatal stenoses had successful serial dilations. The 2 meatal retractions were considered acceptable by the parents, and so were left alone. The only case of failed repair subsequently had a successful repeat corrective surgery (Table 4).

Thirty one (86%) had a good stream and needed no further surgery. Five patients including one recurrence and 4 fistulae required a re-operation: the recurrence has had a successful re-operation, but the fistulae are awaiting further surgery.

Table 1: Types of Hypospadias

Types	Number	Percentage
Glanular	5	14
Subcoronal	6	17
Penile	22	61
Penoscrotal	2	6
Perineal	1	3
Total	36	100

Table 2: Complications

Type of Operation	Type of Hypospadias	Complications		%
Magpi 2 (11%)	Glanular 1 Subcoronal 3	Recurrence	1	25
Tipu 27 (73%)	Glanular 3 Subcoronal 4 Penile 20	Fistula Meatal Stenosis Retracted Meatus & Meatal Stenosis Fistula and Meatal Stenosis	4 2 1 1	15 7 4 4
Island Onlay Flap 2 (5%)	Penile 1 Penoscrotal 1	Meatal Stenosis	1	50
Duckett 4 (11%)	Granular 1 Penile 1 Penoscrotal 1 Perineal 1	Fistula Retracted Meatus and Stenosis	2 1	50 25

Table 3: Outcomes

Complications	No.	Percentage of Total	Eventual Outcomes
Meatal Stenosis	6	17	Dilated Successfully
Fistulae	7	19	3 Healed Spontaneously
Retraction of Meatus	2	6	Was accepted by Parents
Recurrence of Hypospadas	1	3	Re-operated successfully
Total n=36	16	48	
Total needing further Surgery	5	14	

Discussion

About 92% of all hypospadias in this review were either mid penile or glanular. This compares with reports[1,2]. Tubularised incised plate urethroplasty (TIPU) was the most common procedure in this report, with impressive outcome. TIPU was popularised initially by Snodgrass for distal and later for proximal penile hypospadias surgery[3,4]. Our experience, like others[5], showed that TIPU is a good method of hypospadias repair and is associated with good outcome. The technique has been widespread for the repair of penile hypospadias because of its good cosmetic outcome with a vertically oriented urethral meatus and minimal complication rate[1-2,6-8]. As in other report[1], it was possible to use the native urethra for a TIPU in the majority (70%) of our patients. The complication rate in the present study compares with reports[1,9-11].

MAGPI had 75% complication-free outcome in this report. Duckett[5] reported a high success rate following MAGPI. In the present study, however, the number of patients with this procedure is too small to warrant any meaningful conclusions.

About 50% of the fistulae healed without further surgery. The lesson learned here is that it is unnecessary to hasten post-hypospadias fistula since a

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La chirurgie pour l'hypospadias au centre hospitalier de Korle-Bu au Ghana: une révision de 36 malades

Résumé

Arrière-plan: Cette étude a pour objectif d'examiner l'expérience de la gestion de l'hypospadias à un centre tertiaire de chirurgie pédiatrique, à Accra au Ghana. ***Malades et méthode:*** C'était une étude prospective de malades soignés pour l'hypospadias à l'unité de chirurgie pédiatrique du centre hospitalier de Korle-Bu entre le premier janvier 2004 et le 30 septembre 2005. Les données analysées comprennent les types d'hypospadias soignés, les types d'opérations effectuées, les complications et les résultats de la gestion. ***Résultats:*** En tout, 1196 malades ont été opérés pendant cette période de 21 mois. 120 malades ont subi des opérations urologiques. Sur les 120 opérations urologiques, 36 étaient destinées à soigner l'hypospadias. Les malades opérés pour l'hypospadias étaient âgés de 3 à 15 ans (moyenne = 5,4 ans). Une grande part de l'hypospadias était d'ordre pénien chez 22 malades (61%). L'opération la plus fréquemment effectuée chez 22 malades (73%) était l'urétroplastie au moyen d'un placage tubulaire incisé (UPTI). Il y avait ensuite, chez 4 malades, la glanuloplastie méatale incorporée et chez quatre autres malades, il y avait le prépuce tubulaire interne à la Duckett. Les complications comprennent 4 cas (15%) de fistule urétro-cutanée, 4 cas (7%) de sténose du méat, 1 cas (4%) de méat rétracté avec une fistule, et 1 cas (4%) de sténose du méat avec une fistule pour ceux ayant subi l'urétroplastie par placage, 1 cas, des deux côtés, d'une réparation échouée après la granuloplastie et la sténose du méat après des réparations consistant à greffer un morceau de peau insulaire. Deux (50%) malades ont contracté la fistule urétro-cutanée et 1(25%) des 4 malades ayant subi la réparation à la Duckett a contracté la rétractation et la sténose du méat. ***Conclusion:*** La plupart des cas d'hypospadias pénien sans courbure descendante sévère peuvent être soignés avec succès par l'urétroplastie par placage en entraînant un taux de complication acceptable. ***Mots-clés:*** Hypospadias, complications

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