ORIGINAL ARTICLE

A three Years Audit of Surgical Management of Un-descended Testis - Experience at King Fahad Hospital, Al Baha, KSA

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ABSTRACT

Aims: To collect the data regarding age, preoperative, operative findings & postoperative outcomes and complications. To compare our results with national and international literatures.
Duration: 3 years (January, 2011 to December, 2013)
Study Design: Retrospective analysis.
Setting: Department of Pediatric Surgery, King Fahad Hospital, Al Baha, KSA.
Methods: A retrospective study was conducted from Jan 2011 to Dec 2013. The data of all operated cases of UDT was retrieved from Operation Theatre Register, Inpatient Department, OPD and from medical record office. The files of these patients were reviewed regarding age at presentation, preoperative and postoperative findings and outcomes. All operative cases were included in the study except with incomplete record and missing file.
Results: A total of 141 patients were operated but due to incomplete records or missing files, only 116 patients were analyzed for results. The operated patients have age ranging from 8 months to 11 years. 68(58.6%) patients have age up to 2 years and 48(41.3%) were more > 2 years age. The mean age at surgery was 34 months (almost 3 years). 58(50%) were operated as daycare surgery and discharged on same day while 55(47.4%) were admitted as inpatient and discharged on first postoperative day. Three patients of undescended testis presented in emergency as case of testicular torsion.
Conclusion: We conclude that majority of the patients of UDT presented or operated late and also in late operated cases, testis was small size, which has bad impact on fertility in these children. So there is need to run awareness program through symposiums and media among general practitioners, pediatrician and public about early diagnosis, preoperative timing and early surgical management thee children to prevent complications like infertility, sub-fertility, malignancy and psychological stress.
Keywords: Un-descended testis, Surgery, Outcome, Improvement factors.

INTRODUCTION

Un-descended testis, one of the most frequent congenital anomalies which we face in Pediatric Surgery. Its incidence is around 4-5% at birth[1]. After one year of age, incidence decreases to 1-2%[2]. Incidence is much more in premature babies' upto 30%[3]. Usually, these children present in OPD at variable ages from premature up to 12 years. We observed in our OPD that different factors are responsible for delayed presentation due to which there is delay in surgical management, which is great dilemma about the good outcome of the results regarding testicular size and fertility. By keeping in mind, all these issues we plan to do audit of surgical management of undescended testes. This is the first study from Al-Baha State regarding un-descended testis.

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MATERIAL & METHODS

We reviewed retrospectively operated cases of undescended testes in our Tertiary Referral King Fahad Hospital at Al-Baha. This study was conducted at Department of Pediatric Surgery from January, 2011 to December, 2013. The data of all operated cases of UDT was retrieved from operation theatre register, inpatient department, OPD and from medical records. We analyzed the records of these patients regarding age at presentation, preoperative, intra-operative findings and postoperative outcome. The patients with incomplete file records or missing files were not included in the study.

RESULTS

A total of 141 patients were operated but due to incomplete records or missing files, only 116 patients were analyzed for results. The operated patients have age ranging from 8 months to 11 years. 68(58.6%) patients have age up to 2 years and 48(41.3%) were more > 2 years age (Table 1). The mean age at surgery was 34 months (almost 3 years)

(Table 1). 58(50%) were operated as daycare surgery and discharged on same day while 55 (47.4%) were admitted as inpatient and discharged on first postoperative day (Table 2). Three patients of undescended testis presented in emergency as case of testicular torsion (Table 2). On clinical examination, 116 patients (in which 145 testis were operated) we found 131 (90%) palpable testis and 14(10%) impalpable testis (Table 3). 101(69.65%) orchidopexies were done through inguinal approach, 30(20.68%) through scrotal approach and 14 (9.65%) were operated with laparoscopic approach (Table 4).

Regarding operation findings, we found adequate size testis (76.55%) while 25(17.24%) testis were documented as small size comparatively and 5(3.44%) were atrophic testis with only testicular nibbon tissue attached to vas and vessels (Table 5). We also found 4(2.58%) vanished testis in our series (Table 5). We also observed for postoperative complications in our study like scrotal hematoma, granuloma, disruption of wound, testicular atrophy and wound infection (Table 6). Majority of our patients (75%) came in follow up once only (Table 7).

Table 1: Age distribution (n=116)

Age	n	%age
< 1 year	15	12.93
> 1 year – 2 year	53	45.68
> 2 year – 5 years	25	21.55
> 5– 11 years	23	19.82

(Mean age of Operation 34 months (almost 3 years)

Table 2: Mode of Admission and Area (n=116)

Mode of admission	n	%age
DSU	58	50
Inpatient	55	47.40
Emergency	3	2.58

Table 3: Clinical Examination (n=145)

	n	%age
Palpable Testis	131	90
Impalpable Testis	14	10

Table 4: Surgical approach (n=145)

Type of approach	n	%age
Inguinal	101	69.65
Scrotal	30	20.68
Laparoscopic	14	9.65

Table 5: Operative Findings (n=145)

Findings	n	%age
Normal testis	111	76.55
Small size	25	17.24
Atrophic	5	3.44
Vanished	4	2.58

Table 6: Postoperative Complications

	n	%age
Hematoma	3	2.58
Disruption of scrotal wound	2	1.72
Granuloma	1	0.86
Wound infection	1	0.86
Atrophy	1	0.86
Total	8	6.89

Table 7: Follow Up

No. of visits	n	%age
1	88	75
2	22	18.96
3	5	4.31
4	1	0.86

DISCUSSIONS

We operated 116 patients (145 Orchidopexies) in our study during 3 years. In another study 169 Orchidopexies were done in 2 years period[4] while in a study by Gyawali B et al 76 boys were operated in 2 years period[5]. In Aseer Central Hospital Abha KSA 290 patients were operated in 6 years period, which is comparable to our number of patients[6] while operated patients in study from Nigeria is very less comparatively (27 patients operated in 10 years period)[7]. In a study from Pakistan159 patients were operated in 10 years period[8]. While in Ireland, 97 orchidopexies were DONE in 3 years period[3].

.In our study 48(41.3%) patients presented more than 2 years of age. While in study from Australia, only one quarter of total operated patients presented beyond 2 years of age[4]. In Nigerian; study, 66.7% patients were above 2 years of age[7]. In study from King Saud University, Riyadh, 45% patients diagnosed beyond 1 year of age[9].

We have 3(2.58%) patients with torsion of testis while in another study 11(3.8%) out of 290 patients presented with torsion of un-descended testis[6]. In our study 131(90%) testis were palpable in inguinal region While in another study 67.5% testis were palpable (4).We found 14 impalpable testis while in another study from Tabuk, KSA 19 patients were diagnoses as impalpable testis in 2 years period[10].

We did 101(69.65%) orchidopexies through inguinal approach and 30 (20.68%) through scrotal approach while in another study 82.2% orchidopexies were done through inguinal approach and 1.8% through scrotal approach[4]. Misra D et al has operated 58 patients with undescended testes through scrotal approach which is more numbers than our study[11]. In another study from Canada 125 undescended testes were operated through low scrotal incision[12]. We operated 14 testis through laparoscopic approach in

3 years while in another study 24 testis operated through laparoscopic approach in 2 years period[10]. Israel Franco operated 80 impalpable testes through laparoscopic approach[13].

We found 5 atrophic testis (3.44%) in our series while in another series atrophic testis were present in 20 patients (11.8%)[4]. We did orchidectomy for one atrophic testis while in other 4 cases parents did not give consent for orchidectomy so we brought this testicular nibbon down in scrotum.

Postoperative complications were observed in 8(6.8%) patients in our series (Table 6). While in another series 6(4.2%) patients developed postoperative complications[4]. According to one study done in Sweden surgical treatment done at 9 month age .resulted in beneficial effects on testicular growth observed in follow up of 4 years as compared to surgery done at 3 years age. As testicular volume is an approximate measure of spermatogenic activity, this gives hope that early orchidopexy done at 9 month age may improve future spermatogenesis[14].

CONCLUSION

By doing this audit we conclude that most of our results are comparable to national and international literature but we found more delay in presentation and surgery of patients with undescended testis. We observed that factors causing delay were at level of general practitioner ,general surgeons, pediatrician, parents, pediatric surgeons and tertiary hospital. The reason for delay can be due to unawareness of early diagnosis and surgical management, improper counseling with parents about complications of delay in surgery, incomplete newborn examination especially to look for all congenital anomalies and social factors. So we recommend that there is need to run awareness program through symposium, workshops and media about early diagnosis and timed surgical management of all congenital anomalies especially undescended testes to prevent complications like infertility, sub fertility, malignancy and psychosocial stress. There is need to establish normal newborn examination clinic to screen newborn congenital anomilies by pediatrician as well as by qualified experienced pediatric surgeon to prevent delay in surgery..

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