

Laparoscopic Management of Impalpable Testis

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ABSTRACT

Objectives: To see the outcome of laparoscopic management of impalpable testis.

Design: Prospective

Period: 1st April, 2006 to Dec, 2007.

Setting: Department of Paediatric Surgery Children's Hospital and Institute of Child Health, Lahore.

Materials and Methods: All cases of impalpable testis managed by laparoscopy during 1st April, 2006 to Dec, 2007 were included in the study.

Results: 51 children's were managed over period of 1 & quarter year with age ranging from 1 to 12 years. 28 (54.9%) had bilateral impalpable testis while 23 (45.09%) had unilateral impalpable testis.

Conclusion: Results of laparoscopic management of non palpable testis are excellent. It reduces the morbidity and hospital stay. Pediatric laparoscopic may have wider role in future.

Key Words: Impalpable testis, Laparoscopic orchidopexy.

INTRODUCTION

Intraabdominal testis is usually located within few centimeters of internal inguinal ring with the vas deferens and the testicular vessels. Such tests are difficult to find through extra peritoneal approach but relatively easy to identify and manage by laparoscopy. Cryptorchidism is defined as failure of the testis to descend from its intra abdominal location into the scrotum. The exact etiology of cryptorchidism is not known. Over past few years, laparoscopy has proved to be excellent diagnostic and therapeutic tool for these children. We present our study of 22 children with undescended testis which were managed laparoscopically.

MATERIALS AND METHODS

We studied 51 children's over 1 ¼ year period. All patients underwent laparoscopic management. Under general anesthesia supraumbilical transverse incision given through which 10 mm trocar was introduced into the abdominal cavity. Pneumoperitonium with a pressure of 10 mm was created by Co₂ insufflations. Abdomen was inspected for location of testis, presence of vas deferens and testicular vessels using 3mm starz camera. Two 5 mm port were introduced through each iliac fossa depending upon findings. All children underwent definitive procedure in the form of laparoscopic assisted orchidopexy, staged orchidopexy or no further procedure depending upon the findings.

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RESULTS

Fifty one children's were managed over period of 1 ¼ year with age ranging from 1 to 12 years (table-1). 28 (54.9%) had bilateral impalpable testis while 23 (45.09%) had unilateral impalpable testis (table-2).

Table 1

| Age in years | No of Patients | % age |
|--------------|----------------|-------|
| 1 – 5 | 15 | 29.4 |
| 5 – 8 | 16 | 31.37 |
| 8 – 12 | 20 | 39.21 |
| Total | 51 | 100 |

Table 2

| Side | No of Patients | % age |
|------------|----------------|-------|
| Bilateral | 28 | 54.9 |
| Unilateral | 23 | 45.09 |
| Total | 51 | 100 |

Preoperative ultrasound was helpful in only 8 patients (15.6%). At laparoscopy, 28(54.9%) had bilateral undescended testis including one case of mullerian duct syndrome, 13 (25.495%) had vanishing testis, in 10(19.6%) testis were present at level of internal rings 18(35.29%) patients underwent fowler Stephen stage I, in 9(17.64%) fowler Stephen stage II orchidopexy was done. In 10(19.6%) laparoscopic assisted single stage orchidopexy was done. In 12(23.52%) cases of vanishing testis nothing was done. Only opposite testis was fixed. In one case of mullerian duct syndrome open orchidopexy and hysterectomy.

| Findings | =n | %age |
|---|----|-------|
| Bilateral undescended (higher up, above internal ring) testis | 27 | 52.9 |
| Mullerian duct syndrome (Bilateral undescended testis at internal ring) | 1 | 1.96 |
| Vanishing testis | 13 | 25.49 |
| Testis at internal ring (peeping testis) | 10 | 19.60 |
| Total | 51 | 100 |

| Procedures | =n | %age |
|---|----|-------|
| Stage I Fowler Steven | 18 | 35.29 |
| Stage II Fowler Steven | 9 | 17.64 |
| Laparoscopic Assisted Orchidopexy one stage | 10 | 19.6 |
| Nothing done | 13 | 25.49 |
| Open orchidopexy | 1 | 1.96 |
| Total | 51 | 100 |

DISCUSSION

The incidence of cryptorchidism varies from 21% in preterm infants to 18.40% in term boys¹. This incidence decreases to 0.8% at 1 year age¹. Out of this incidence, 20% have impalpable testis^{2, 3}. Scott used laparoscopy for management of undescended testis in 1982.

We encountered 51 cases in our study during 1¼ year period while a series of 20 cases with impalpable testis during 1½ year has been published by shahetal⁴. In another study one hindered consecutive patients underwent laparoscopy for 128 impalpable testis⁵. We had 28 (54.9%) cases with bilateral impalpable testis. In another series only 4 patients (20%) have bilateral undescended testis⁴. In our study ultrasound was helpful in only 8 (15.6%) cases. Sieme⁶, Elder⁷, Maghei⁸ and Hrebinkor⁹ have sown the inaccuracy of imaging studies like ultrasound and MRI as compared to laparoscopy for definitive diagnosis of a nonpalpable undescended testis. There were 13 patients (25.49%) of vanishing testis in our series. Shah (et al) has evaluated 7 cases in his series⁴. In present study we found 28 bilateral UDT of which 18 patients (35.29%) underwent stage I Fowler Stephen and in 9 (17.6%) cases stage II fowler Stephen was performed. Post operative course was uneventful in all cases. By

laparoscopy we can be planned definite line of surgical management for high intraabdominal testis and laparotomy may be avoided in cases with intra abdominal vanishing testis and testicular agenesis. One study describes that 12.5% - 47% of patients can get benefit from diagnostic laparoscopy^{10, 11}. In most series good results have been reported with laparoscopy as compared to obtain with open technique regarding complications, morbidity and hospital stay.

We conclude that results of laparoscopic management of non palpable testis are excellent. It reduces the morbidity and hospital stay. Pediatric laparoscopic may have more wider role in future.

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