

Orchidopexy for undescended testis among Saudi children: is it conducted at the optimal age?

Khalid Fouada Neel

Division of Urology, Department of Surgery, King Saud University, Riyadh, Saudi Arabia

Abstract

Current evidence-based studies indicate the need to perform orchidopexy for undescended testicles early in life, between the ages of 6 and 12 months. Despite this evidence, we observed a significant delay in the actual age that such a procedure is performed in Saudi Arabia. Therefore, we retrospectively examined all of our patients who received an orchidopexy, identified their age at the procedure, and, if the procedure was performed after 12 months of age, noted the reason for the delay. We found that the mean age at orchidopexy in our cohort was approximately four and half years old, indicating the need for greater awareness of the recommended time frame for this procedure among health providers and parents of patients.

Key words: Undescended testis, orchidopexy, timing of surgery, age, Saudi Arabia

Accepted July 21st 2009

Introduction

Proper function of the undescended testis depends strongly upon the age at which the testicle descends into its normal scrotal position [1]. The current evidence-based recommendation is to perform orchidopexy, between 6 and 12 months of age [1-4], which prevents additional testicular damage and its subsequent impact on fertility [3].

Although assessment of testicular position is a well-established part of the initial general check-up of a neonate, there are alarming reports suggesting that the age at which orchidopexy is performed is significantly later than the recommended time frame, with various explanations for this delay [5-7].

In this study, we examined the age at which orchidopexy is performed in Saudi Arabia to assess if a similar delay is occurring. If so, we hope that this report will draw this problem to the attention of medical practitioners in Saudi Arabia and provide information on how to prevent it.

Material and Methods

We retrospectively reviewed the charts for all patients who underwent orchidopexy over a 10-year span (1998-2008) in two hospitals in Riyadh, one a private open access hospital and the other a general hospital, all per-

formed by one surgeon (KN). We looked at the age at which the problem was identified, whether this identification was by the parents or if they were referred to us by a medical practitioner, when the problem was actually referred to the surgeon, and the age at which the procedure was performed.

Results

Between 1998 and 2008, 345 boys underwent orchidopexy by a single surgeon in both hospitals. Of this cohort, 58 received a bilateral orchidopexy (16.8%). Only 170 patients (49.2%) were diagnosed with cryptorchidism before the age of 12 months. Of the patients diagnosed

Table 1: Age presentation of Saudi patients with undescended testis

Total #	Diagnosed before the age of 1 year	Diagnosed after the age of 1 year	Diagnosed at pre-school checkup
345 patients (bilateral in 58 patients)	170 (49.2%)	155 (45%)	20 (5.8%)

Table 2: Age at surgical intervention

Total #	Surgery before the age of 1 year	Surgery after the age of 1 year
345 patients	102 (29.5%)	243 (70.5%)*

*62 patients (18%) were diagnosed at optimum age but surgery was delayed.

after 12 months of age, 20 patients (5.8%) were identified during their pre-school health check up, and 155 (45%) were diagnosed by their parent or pediatrician after their first year of life (Table 1).

Out of the 345-patient cohort, 102 had their surgery before 12 months of age (29.5%), while 62 patients (18%) diagnosed before the age of 12 months were counseled that the testicle may descend on its own, and therefore were not referred for early evaluation. The actual age of orchidopexy ranged between 6 and 144 months, with a mean age of 54.8 months (Table 2).

Discussion

Despite previous controversy, current evidence-based studies indicate that early intervention for an undescended testis may improve fertility⁽¹⁻⁴⁾ and decrease the risk of testicular cancer^(8,9). Therefore, the current recommended age for orchidopexy is between 6 and 12 months of age⁽²⁻⁴⁾. Accordingly, it is recommended that patients with an undescended testicle be referred to a specialized surgeon early to prevent any future damage.

Unfortunately, our data showed that there is a significant delay in the referral of patients with an undescended testicle either because the condition was not identified early on, or the doctor gave false reassurance that the testicle may descend by itself even after the age of 6 months, or the parents of the patient failed to seek proper surgical advice because they feared surgery and didn't appreciate its importance. This resulted in a significant delay in the timing of orchidopexy, shifting the average age of surgical intervention to four and a half years. This average age is consistent with the average age at orchidopexy observed in other studies⁽⁵⁻⁷⁾, indicating the need for more health awareness.

It is imperative that proper examination of male genitalia is carried out soon after delivery as well as during the early immunization schedule, and if there is any suspicion of an undescended testicle, the child should be referred to a specialized surgeon for further assessment and follow-up. The current recommendations is: 1. If the testis (unilateral or bilateral) is either felt in the groin and can't be brought down to the scrotum, or the testis is not palpable,

or it's felt in the groin and can be pulled to the scrotum but returns at once to the groin, the child should be referred for operation between the age of 6 and 12 months. 2. if the testis can be pulled to the scrotum and remains there after traction is released, the child is diagnosed with retractile testis, and he needs an annual follow-up to detect later ascend. 3. in case of bilateral nonpalpable testis and either hypospadias or micropenis the child should be seen immediately by a DSD team⁽³⁾. The current evidence shows that orchidopexy, if indicated and done early in life, will improve fertility [1,4].

Although the results of this retrospective study are worrying, similar studies in a large population in different Saudi cities should be carried out to further explore this problem.

Conclusion

Current evidence based studies clearly recommend the referral of patients with undescended testis to a specialized surgeon by the age of 6 months. However, the mean age at which orchidopexy is performed is significantly delayed beyond the recommended timeframe in Saudi patients, indicating the need for more health awareness among health providers and the community.

References

1. Murphy F, Sri Paran T, Puri P. Orchidopexy and its impact on fertility. *Pediatr Surg Int* 2007; 23:625-632.
2. European Association of Urology guidelines 2007 <http://www.uroweb.org>
3. Martin Ritzen E, Bergh A, Christiansen P, Cortes D, Haugen SE, Jørgensen N et al. Nordic Consensus on treatment of undescended testis. *Acta Paediatrica* 2007; 638-643.
4. American Academy of Pediatrics, Section on Urology. Timing of elective surgery on the genitalia of male children with particular reference to the risks, benefits, and psychological effects of surgery and anesthesia. *Pediatrics* 1996; 97:590-594.
5. McCabe JE, Kenny SE. Orchidopexy for undescended testis in England: is it evidence based? *J Ped Surg* 2008; 43: 353-357.
6. Bonney T, Southwell B, Donnath S, Newgreen D, Hutson J. Orchidopexy trends in the pediatric population of Victoria 1999-2006. *Journal of Pediatric Surgery* 2009; 44: 427-431.
7. Bruijnen CJP, Vogels HDE, Beasley SW. Review of the extent to which orchidopexy is performed at the optimal age: Implications for health services. *ANZ J Surg* 2008; 78: 1006-1009.
8. Pettersson A, Richiardi L, Nordenskjöld A, Kaijser M, Akre O. Age at surgery for undescended testis and risk of testicular cancer. *N Eng J Med* 2007; 356:1835-1841.

9. Walsh T, Dall'Era MA, Croughan MS, Carroll PR, Turek PJ. Prepubertal orchidopexy for cryptorchidism may be associated with lower risk of testicular cancer. *J Urol* 2007; 178: 1440-1446.

Correspondence:

Khalid Fouda Neel
Division of Urology, Department of Surgery
King Saud University
P.O. 2925 Riyadh 11461
Saudi Arabia

e-mail: kfouda@KSU.EDU.SA

Manuscripts may be submitted directly to:

Managing Editor, Current Pediatric Research
87- Greater Azad Enclave, Aligarh 202 002, India

e-mail: biomedical44@yahoo.co.in

Current Pediatric Research

http://www.pediatricresearch.info

e-mail: biomedical44@yahoo.co.in

Volume 13 Number 1 & 2

CONTENTS

October 2009

-
- | | |
|-------|---|
| 1-3 | Supraventricular tachycardia from a left bundle branch block- An unusual presentation of Wolff-Parkinson-White syndrome.
<i>Abdul Rahim Wong, Nabil AbdurRazak, Saad Mohammad, Al-Hadlaq, Aida Hanum Ghulam Rasool, Abdullah Al-Jarallah (iyadh, Saudi Arabia/ Kelantan, Malaysia)</i> |
| 5-7 | Chronic renal failure in children at Aseer Region.
<i>Abdulla A. Al-Harthi (Taif, Saudi Arabia)</i> |
| 9-12 | Do children with developmental disorders have low gross motor abilities? -A comparison with normal children, using Motor Ability ests for young children.
<i>Koji Shimatani, Yoshifumi Tanaka, Masaki Hasegawa, Sadaaki Oki, Hiroshi Sekiya (Hiroshima Japan)</i> |
| 13-15 | Isolated Simple Anhidrosis: A rare cause of fever of unknown origin.
<i>Dua'a Ba Armah¹, Sultan Al-Khenaizan¹, Anwar Al Wakeel(Riyadh, Saudi Arabia)</i> |
| 17-21 | The impacts of pericardial effusion on the heart function of infants and young children with respiratory syncytial virus infection.
<i>Muslim M. Al Saadi, Abdullah S. Al Jarallah (Riyadh, Saudi Arabia)</i> |
| 23-26 | Hearing impairment among children.
<i>Renitha R, Vishnu Bhat B, Manish Kumar (Puducherry, India)</i> |
| 27-29 | Dicephalus dibrachius dipus: A case report.
<i>Renitha R, Vishnu Bhat B, Manish Kumar, Ramachandra Rao, Parkash Chand, Jayaprakash T (Puducherry, India)</i> |
| 31-34 | Pattern of systolic and diastolic blood pressure in healthy newborns from 0-28 days by Dinamap.
<i>Uzma Firdaus, Syed Manazir Ali, M. Ashraf Malik, A. J. Ahmed (Aligarh, India)</i> |
| 35-38 | Prevalence of Hepatitis C virus infection among children with liver disease.
<i>Mudasir Mushiaq, Seema Alam, Indu Shukla, Rana Sherwani, S Manazir Ali (Aligarh, India)</i> |
| 39-42 | Oil instillation pneumonia- A social evil.
<i>Ginigeri Chetan, Rathi Sharmila Ramar, Narayanan. P, Vishnu Bhat. B, Srinivasan.S (Pondicherry, India)</i> |
| 43-49 | Clinical Study: XIST Gene and Pattern of X-Inactivation in Children with Ring-X Turner Syndrome.
<i>Mohamed AM, Kamel AK, Kayed HF, Meguid NM, Hussein HA. (Cairo, Egypt)</i> |
| 51-54 | Frequency of complications of persistent rhinorrhoea in children.
<i>Seema Sharma, Ashwani Sood, Dipty Jain (Nagpur, India)</i> |
| 55-57 | 46XX Male with ambiguous genitalia- A case report.
<i>Venkatesh. C, Vishnu Bhat B, Ramachandra Rao, Prakash Chand, Sangeetha A, Nandakumar S, Jayaprakash T (Puducherry, India)</i> |
| 59-61 | Glue sniffing intoxication.
<i>Mangla Sood, Ashwani Sood (Shimla, India)</i> |
| 62-66 | The role of reactive oxygen species in pathogenesis of nephrotic syndrome in children.
<i>Santoshi R. Ghodake, Adinath N. Suryakar, Rajesh D. Ankush, Raghavendra V. Katkam, Kayyum Shaikh, Ashok V. Katta (Gulberga, India)</i>

To evaluate the levels of antioxidant enzymes and trace elements in children suffering from protein energy malnutrition in Indore district (M.P.). |
| 67-70 | <i>Poornima Dey Sarkar, G.G. Pottey, A.K. Shrivastava, Jagdish Mandliya, Ravinder. K. Arora, Mohd. Nadeem Khan (Indore, India)</i> |
| 71-73 | Short communication: Knowledge Attitude and Practice (KAP) study of families on vaccine preventable diseases in urban slum of north India.
<i>Ubaid Hameed Shah, Sumaiyah Yousuf, Kamran Afzal, M Ashraf Malik (Aligarh, India)</i> |
-

Current Pediatric Research, 87- Greater Azad Enclave, Aligarh 202 002, India