Original Article

Case Report on Cryptorchidism with Small Penis Since Birth

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Abstract

Background: Male sex glands that produce sperm and sex hormones are known as testicles (testes). Both testicles are usually found in the scrotum. Undescended testicle (UDT), also known as cryptorchidism, is a frequent reason for young males to be referred for urologic evaluation. The genitourinary tract is affected, and it is the most typical congenital defect. A 10-year-old male child is presented with a history of undescended testes with a small penis since birth. As per the narration of the parents, the child was born through full-term normal vaginal delivery with a birth weight of 3.2 kg. He was normally growing with the age but they came to know that the child's penis is not growing as per age. On Physical Examination, abnormalities occur in the genital region. The non-palpable testicle was found along with the micropenis. Initially, the child is treated with hormonal therapy including Human Chorionic gonadotropin and the luteinizing hormone are given for 8 days. Orchiopexy is performed under general anesthesia by surgeons. A common condition in the pediatric population is cryptorchidism, which is characterized as the absence of at least one testis in the scrotum. Compared to the general population, patients with cryptorchids have a relative risk of testicular cancer that is approximately five times higher.

Keywords: Undescended testis, Human Chorionic gonadotropin, Orchiopexy.

Introduction

A male genital deformity known as cryptorchidism, which affects 2%–4% of male neonates, is more prevalent in preterm babies. Testicular descent occurs in two distinct stages. (1) The estimated incidence of cryptorchidism in term and/or normal-weight males at delivery ranges from 2% to 8%, according to prospective investigations. (2)

After the age of two, operations on cryptorchid testicles only improve the unfavorable effects of cryptorchidism on fertility, increase the risk of future gonadal cancer, and prevent the unrepaired unilateral cryptorchid testis from functioning in maturity. (3) In epidemiological research, several cryptorchidism risk factors have been identified.

Low birth weight, being born small for gestational age (SGA), and premature delivery has all been identified as risk factors in various research. Some incidences of cryptorchids may be caused by environmental factors. (4)

Case scenario

A 10-year-old male child is presented with a history of undescended testes with a small penis since birth. As per the narration of the parents, the child was born through full-term normal vaginal delivery with a birth weight of 3.2 kg.

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Access this article online

Quick Response Code:

Website: www.pnrjournal.com

DOI: 10.47750/pnr.2022.13.03.141

How to cite this article: Manjari R. Ingle, Savita Pohekar, Ruchira Ankar, Ranjana Sharma, Aniket Pathade, Case Report on Cryptorchidism with Small Penis Since Birth, J PHARM NEGATIVE RESULTS 2022;13: 924-926.

He was normally growing with the age but they came to know that the child's penis is not growing as per age. At the age of 3, he was brought for the same problem but the parents were not ready for the surgery now he is a 10-year-old male child, and after taking the surgeon's opinion he is now brought for surgical intervention.

On Physical Examination, abnormalities occur in the genital region. The non-palpable testicle was found along with the micropenis. Testicular Ultrasound report shows, that a Hypoechore structure of size 10.4 *4.9mm is visualized in the left inguinal region, and small testes and the scrotal sac is empty bilaterally. And blood reports are in a normal range.

Initially, the child is treated with hormonal therapy including Human Chorionic gonadotropin and the luteinizing hormone are given for 8 days. Orchiopexy is performed under general anesthesia by surgeons and afterward, he was treated with analgesics, antibiotics, and antipyretics. The child shows a great improvement on the 5th day of hospitalization, the child's vitals were stable. Medical management continued and the patient's prognosis was good and advised the patient for a regular 15-day follow-up.

Discussion

The ability to diagnose an undescended testis depends heavily on the investigator's experience and the way the examination is conducted. The youngster is examined during a clinical examination in a warm environment while lying on their back, with their legs crossed, and, if feasible, standing up straight. The scrotum is also visually described. Unilateral or bilateral cryptorchidism is suggested by an asymmetric and hypoplastic scrotum, respectively. (2-10) In unilateral cases, late orchidopexy would only help to detect neoplastic degeneration before the appearance of pain or symptoms from metastases because cryptorchid testicles operated on after the age of two years only provide hormonal supply adequate for the development of secondary sexual features but not fertility. The first therapy choice for adult cryptorchidism should be orchiectomy if there are no significant psychological or aesthetic factors. (11-22)

Infertility, testicular cancer, and mental discomfort are all linked to true cryptorchidism. The chance of developing cancer is reduced to normal if the disease is treated by age 10. Treatment during the second trimester of life seeks to stop his topological alterations and is not linked to more complications under the care of skilled pediatric surgical teams than when carried out later in life. The essence of treatment is surgery. Palpable or even non-palpable testes have often been treated using inguinal or high scrotal techniques. When it comes to the diagnosis and treatment of non-palpable testes, laparoscopy has become the norm. (23)

In assessing undescended testing, diagnostic imaging is largely ineffective and does not change how they are managed. Additionally, imaging adds much more to annual health care costs for Medicare beneficiaries and is expanding more quickly than any other physician-prescribed treatment due to its high cost. (7) In the normal assessment of males with undescended testes, diagnostic imaging plays no part. Due to ultrasound's subpar diagnostic capabilities and heavy usage in this situation,(24-28)

Conclusion

A common condition in the pediatric population is cryptorchidism, which is characterized as the absence of at least one testis in the scrotum. Compared to the general population, patients with cryptorchids have a relative risk of testicular cancer that is approximately five times higher. The condition known as cryptorchidism is linked to 10% of all testicular cancers. At age 6 to 12 months, without a routine biopsy, surgical orchiopexy is the most effective method of treatment for cryptorchidism. The chromosomal sex and hormonal status must be determined if there are no palpable testicles or other hypovirilization symptoms, such as hypospadias. The best method for identifying and treating intra-abdominal testes is laparoscopy.

References

1. Hutson JM, Balic A, Nation T, Southwell B. Cryptorchidism. Seminars in Pediatric Surgery. 2010 Aug 1;19(3):215–24.
2. Virtanen HE, Bjerknes R, Cortes D, Jørgensen N, Rajpert-De Meyts E, Thorsson AV, et al. Cryptorchidism: classification, prevalence, and long-term consequences. Acta Paediatrica. 2007;96(5):611–6.
3. Lee PA, Houk CP. Cryptorchidism. Current Opinion in Endocrinology, Diabetes, and Obesity. 2013 Jun;20(3):210–6.
4. Virtanen HE, Toppari J. Epidemiology and pathogenesis of cryptorchidism. Human Reproduction Update. 2008 Jan 1;14(1):49–58.
5. Alonso Domínguez FJ, Amador Sandoval BV, Fragas Valdés R, Ares Valdés Y, Carballo Velázquez L. [Cryptorchidism and cancer]. Arch Esp Urol. 2005 May;58(4):365–72.
6. Gapany C, Frey P, Cachat F, Gudinchet F, Jichlinski P, Meyrat BJ, et al. Management of cryptorchidism in children: guidelines. S W I S S M E D W K LY. :8.
7. Tasian GE, Yiee JH, Copp HL. Imaging Use and Cryptorchidism: Determinants of Practice Patterns. Journal of Urology. 2011 May;185(5):1882–7.
8. Tasian GE, Copp HL, Baskin LS. Diagnostic imaging in cryptorchidism: utility, indications, and effectiveness. Journal of Pediatric Surgery. 2011 Dec 1;46(12):2406–13.
9. Lomte, Sunayana, Sourya Acharya, and Vijendra Kirnake. "Efficacy of Octreotide Versus Terlipressin along with Endoscopic Variceal Ligation (EVL) in Preventing Re-Bleeding and Mortality in Acute Bleeding Esophageal Varices in Cirrhosis: A Randomized Prospective Study." Journal of Pharmaceutical Research International, June 22, 2021, 95–102. https://doi.org/10.9734/jpri/2021/v33i32B31748.
10. Luharia, Anurag A. "Critical Appraisal and Proposal of Audit Protocol In-Vogue in India with Respect to Radiation Facilities – A Study Protocol." Bioscience Biotechnology Research Communications 14, no. 6 (June 15, 2021): 280–83. https://doi.org/10.21786/bbrc/14.6.59.
11. M. Lokade, Amitkumar, Priya G. Shete, Neha G. Shete, Deepak S. Khobragade, Awdhut D. Pimpale, Rahul W. Gawali, Pranita S. Jirvankar, and Shital A. Chandewar. "Formulation and Evaluation of Orodispersible Tablet for Anti-Asthamatic Drug." Journal of Pharmaceutical Research International, November 22, 2021, 187–99. https://doi.org/10.9734/jpri/2021/v33i51A33484.
12. Madaan, Sparsh, Arpita Jaiswal, Pankaj Banode, Archana Dhok, and Deepika Dewani. "Spontaneous Twin Ectopic Pregnancy Managed

Successfully With Methotrexate-Mediated Ultrasound-Guided Fetal Reduction: A Fertility-Preserving Approach." Cureus, August 10, 2021. https://doi.org/10.7759/cureus.17077.

13. Madaan, Sparsh, Dhruv Talwar, Sunil Kumar, Arpita Jaiswal, Neema Acharya, Sourya Acharya, and Dhruva Halani. "Metabolic Ketoacidosis in a Gravida Diagnosed with COVID-19: A Case Report." Journal of Pharmaceutical Research International, October 1, 2021, 328–33. https://doi.org/10.9734/jpri/2021/v33i45A32750.
14. Madaan, Sparsh, Dhruv Talwar, Sunil Kumar, Arpita Jaiswal, Neema Acharya, and Manila Reddy Eleti. "Dengue Shock Syndrome Complicating High Risk Twin Pregnancy during Late Gestation: Extinguishing Fuel Added Flames." Journal of Pharmaceutical Research International, September 13, 2021, 315–19. https://doi.org/10.9734/jpri/2021/v33i43B32557.
15. Madan, Poonam, Bharat Rathi, Renu Rathi, Sonali Wairagade, and Dhiraj Zade. "Pharmaceutical Development, Standardization and Clinical Evaluation of Efficacy of a Polyherbal Hair-Pack and Hair Gel in Dandruff Control." Journal of Pharmaceutical Research International, June 12, 2021, 69–78. https://doi.org/10.9734/jpri/2021/v33i31B31692.
16. Madavi, Sanket V., Samruddhi Gujar, Ranjana Sharma, Ruchira Ankar, Savita Pohekar, Sheetal Sakharkar, Vaishali Tembhare, and Kanchan Bokade. "A Case Report on Malignant Ovarian Germ Cell Tumor." Journal of Pharmaceutical Research International, December 8, 2021, 43–47. https://doi.org/10.9734/jpri/2021/v33i54A33717.
17. Madke, Bhushan, and Rajeshwar S Bute. "Rodent Bites in a Quadriplegic." Tropical Doctor 51, no. 3 (July 2021): 431–32. https://doi.org/10.1177/0049475520981255.
18. Mahajan, Janhavi, Dhruv Talwar, Sunil Kumar, Sourya Acharya, and Yogesh Kakde. "ECAST Syndrome (Exercise Collapse Associated with Sickle Cell Trait): First Knock of Sickle Cell in a Young Bodybuilder." Journal of Pharmaceutical Research International, December 13, 2021, 74–78. https://doi.org/10.9734/jpri/2021/v33i56A33887.
19. Mahajan, Satish, Akhilesh Annadatha, Dhruv Talwar, Vankadari Venkata Sesha Satya Sagar, and Anuj R Varma. "Snake Bite and Dengue: A Twin Tragedy." Cureus, October 28, 2021. https://doi.org/10.7759/cureus.19097.
20. Mahajan, Satish, Vankadari Venkata Sesha Satya Sagar, Dhruv Talwar, Annadatha Akhilesh, and Chitturi Venkata sai Akhil. "Management of Acute Kidney Injury in Patient with Dengue and COVID-19 Illness Simultaneously." Journal of Pharmaceutical Research International, December 14, 2021, 170–75. https://doi.org/10.9734/jpri/2021/v33i57A33981.
21. Mahajan, Satish, Dhruv Talwar, Sunil Kumar, Sourya Acharya, Sandeep Iratwar, and Akhilesh Annadatha. "Atlantooccipital Assimilation and Basilar Invagination Treated Successfully in a Young Male With Marfanoid Features: A Stich in Time." Cureus, November 8, 2021. https://doi.org/10.7759/cureus.19365.
22. Mahatme, Kirti Gujarkar, Pratibha Deshmukh, Priyanka Deshmukh, and Shiliveri Sadhan Siddardha. "Eclampsia: A Well Preparedness Can Save the Day." Journal of Pharmaceutical Research International, July 9, 2021, 106–9. https://doi.org/10.9734/jpri/2021/v33i36A31932.
23. Mahatme, Kirti Gujarkar, Pratibha Deshmukh, Parag Sable, and Vivek Chakole. "Ultrasonography: The Third Eye of Anaesthesiologist." Journal of Pharmaceutical Research International, July 15, 2021, 235–38. https://doi.org/10.9734/jpri/2021/v33i37A32004.
24. Mahawar, Rajat, Suresh Chandak, and Meenakshi Yeola. "A Prospective Study on Clinico-Radiological Correlation and Conservative Management of Non-Traumatic Acute Abdomen at a Tertiary Care Centre." Journal of Pharmaceutical Research International, June 22, 2021, 119–24. https://doi.org/10.9734/jpri/2021/v33i32B31758.
25. Malani, Shailesh, and Bhushan Madke. "Dermoscopy of Epidermization of Lip Indicating Focal Compact Sebaceous Metaplasia." Dermatology Practical & Conceptual, July 8, 2021, 2021026. https://doi.org/10.5826/dpc.1103a26.
26. Maldhure, Swati, Vaibhav Sonwani, Ranjeet Ambad, and Dhruba Hari Chandi. "Awareness about Nanotechnology among Upcoming Clinicians in Vidarbha, Maharashtra." Journal of Pharmaceutical Research International, July 12, 2021, 126–31. https://doi.org/10.9734/jpri/2021/v33i36B31958.
27. Malhotra, Geetika, D. D. Wagh, and Meenakshi Yeola. "Study of Clinical Profile of Carcinoma Breast and Prognostic Significance of Serum Lactate Dehydrogenase as Tumor Marker in Carcinoma Breast." Journal of Pharmaceutical Research International, July 30, 2021, 162–67. https://doi.org/10.9734/jpri/2021/v33i39A32155.
28. Mallick, Rizwana, Sweta Kale Pisulkar, and Srinivas Gosla Reddy. "Assessment of Outcomes of Immediately Loaded Dental Implants in Orofacial Cleft Patients: Protocol for a Single-Arm Clinical Trial." JMIR Research Protocols 10, no. 5 (May 5, 2021): e25244. https://doi.org/10.2196/25244.