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Shehata Technique at Two Months of Age: A Case Report of Successful Early Laparoscopic Orchiopexy

Mary Zylinski[1,2*], Aidan Kennedy[1], Shivam Patel[1], Bernadette Zwaans[1], Christopher Jaeger[1]

[1]Department of Urology, Corewell Health William Beaumont University Hospital, Royal Oak, Michigan, United States
[2]Oakland University William Beaumont School of Medicine, Rochester, United States

ABSTRACT

Cryptorchidism is a common condition affecting 3% of males with 20%-30% of undescended testes being non-palpable, possibly indicating an intra-abdominal location. The AUA Guideline on the Evaluation and Treatment of Cryptorchidism recommends evaluation by a surgical specialist if spontaneous descent has not occurred by 6 months of life. Here, we report a case where a staged laparoscopic traction-orchiopexy (Shehata orchiopexy) was successfully utilized to fix an intra-abdominal testis discovered incidentally in a 2-month-old child during diagnostic laparotomy for a small bowel obstruction.

Key Words: Cryptochordism, Orchiopexy, Infant, Shehata-technique

✉ ***Mary Zylinski***
Department of Urology,
Oakland University William Beaumont School of Medicine,
Rochester, United States
E-mail: mzylinski@oakland.edu

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Introduction

Cryptorchidism is a common condition in males. About 3% of full-term and 30% of pre-term infants are born with one or both testicles undescended. Most undescended testicles will spontaneously descend within the first 3 months of life, with approximately only 1% of males having persistently undescended testes at 6 months of age [1]. If an undescended testicle does not descend spontaneously by 6 months of age, patients are at an increased risk for the development of testicular cancer and infertility [2].

According to contemporary AUA Guidelines, infants with cryptorchidism should be evaluated by a surgical specialist if spontaneous descent has not occurred within 6 months of life [3]. Patients with non-palpable testicles raise concern for Intra-Abdominal Testis (IAT), and should undergo a diagnostic laparoscopy and orchiopexy, ideally performed between 6 and 18 months of age. The surgical approach for orchiopexy varies based on surgeon preference and intraoperative findings. In 1959, the Fowler-Stephens approach was introduced, leveraging the multi-vessel vascular supply of the testis by dividing the testicular vessels and mobilizing the testis into the scrotum [4]. This one stage approach was later modified into two stages by Ransley due to high rates of testicular atrophy. This modified two stage technique included an interval between vascular ligation and testicular mobilization, allowing for the development of collateral vascular supply within an undisturbed inguinal canal [5]. First

described in 2008 as an alternative to the popularized Fowler-Stephens approach, the Shehata technique utilizes traction achieved by fixing the testicle to the contralateral abdominal wall to lengthen the testicular vessels without ligating them [6]. The Shehata technique has shown increased success and lower atrophy rates than the staged Fowler-Stephens orchiopexy [7].

Previous studies have reported the use of the Shehata technique in patients as young as 6 months of age. To our knowledge, this is the first description of this technique being used in a 2-month-old patient.

Case presentation

A 2-month-old boy born at 36 weeks and 3 days *via* spontaneous vaginal delivery was admitted to our hospital in March 2025 for non-bloody, non-bilious emesis. Upper gastrointestinal fluoroscopy and ultrasound showed significantly dilated loops of small bowel consistent with a small bowel obstruction. He then underwent an emergent diagnostic laparoscopy with pediatric surgery. A cecal perforation secondary to an internal hernia with an adhesive band was discovered. The pediatric surgeon also encountered an intra-abdominal right testis adhered to adjacent inflammatory tissue for which pediatric urology was consulted intraoperatively (Figure 1). Upon evaluation, the right gubernaculum had been transected, eliminating any chance of spontaneous descent, prompting the pediatric urologist to consider orchiopexy at that time in an effort to minimize future procedures needed by the child. The testicle was then mobilized laparoscopically, but did not adequately reach the contralateral inguinal ring and was deemed to require a staged orchiopexy. Given the patient's relatively young age, the Fowler-Stephens approach was deemed to carry a high risk for testicular atrophy. We then proceeded with the Shehata technique after obtaining parental informed consent.

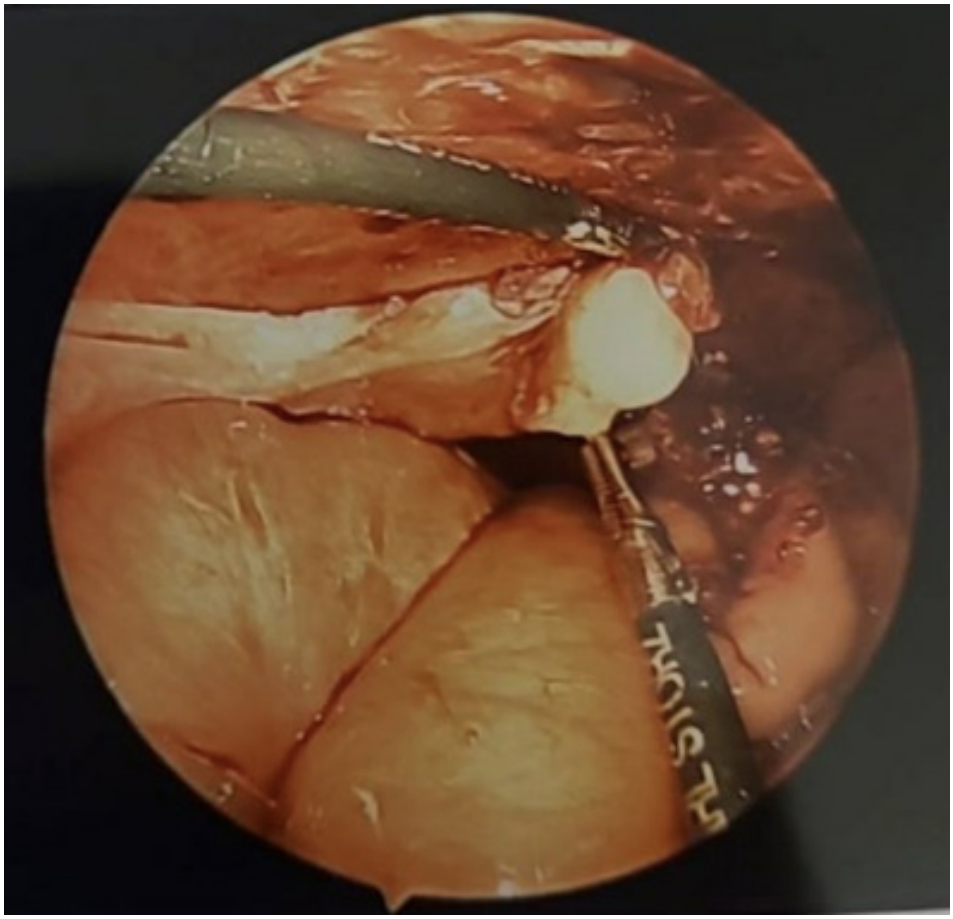

Fig. 1. Magnetic resonance cholangiopancreatography.

The Shehata technique was performed as described in the seminal manuscript. The contralateral anterior superior iliac spine was identified, and the skin was incised medial and cephalad to the bony landmark. A suture was passed through the incision and placed through the tunica albuginea of the right testicle and sutured above the fascia. After being secured to the contralateral anterior abdominal wall, the right testicle appeared viable. The patient was discharged 9 days later after recovering from his small bowel obstruction and cecal repair. He was scheduled for a planned second stage Shehata orchiopexy 4 months later.

In August 2025, a diagnostic laparoscopy was performed confirming the presence of an intact right intra-abdominal testicle. The right testicle was then dissected off of the abdominal wall. The testicle was stretched to the contralateral inguinal ring with ease indicating sufficient length for the orchiopexy. The Prentiss maneuver was then performed by passing the testicle into the scrotum medial to the inferior epigastric vessels. The testicle had sufficient length and was fixed in the scrotum without tension.

Despite multiple attempts at contact, the patient was lost to follow up after the operation.

Discussion

Surgical correction of testicles that have not spontaneously descended by 6 months of age is standard of care to prevent Sertoli cell atrophy and reduce lifetime risk of testicular cancer [1]. The median age at the time of referral for orchiopexy is typically around 5 months with surgery occurring electively within the next year [8]. However, in this instance, intervention for management of an intra-abdominal testis was expedited by an emergent diagnostic laparotomy performed for small bowel obstruction, prompting the decision to perform a first stage traction orchiopexy earlier than recommended by current guidelines to minimize the number future laparoscopic procedures needed.

The Shehata technique is relatively novel compared to the Fowler-Stephens orchiopexy. However, in sparing the testicular vessels and maintaining the complete testicular blood supply, there is a reduced risk of testicular atrophy. In a prospective randomized study of 45 patients, patients undergoing two-stage Fowler-Stephens orchiopexy had a testicular atrophy rate of 14% compared to 0% for patients undergoing Shehata technique at 6 months follow-up [9].

Conclusion

This case demonstrates the safety and efficacy of the Shehata technique in infants younger than 6 months of age in highly select instances where spontaneous descent is unlikely. Here, we were able to avoid the morbidity of an additional surgery and anesthetic by performing an early first stage orchiopexy, rather than waiting until the patient reached six months of age. This is significant because our case demonstrates a preservation of testicular viability in infants who are not able to have their testicular vessels transected due to an injury to the vas deferens. Our technique may also prove to be helpful in cases of aberrant anatomy or a unilateral testicle that cannot risk atrophy. This case demonstrates that the Shehata technique may be safely performed earlier than six months in select circumstances, such as intra-abdominal testis found incidentally during exploratory surgery.

References

[1] Leslie SW, Sajjad H, Villanueva CA. Cryptorchidism. StatPearls. 2024.

[2] Schneuer FJ, Milne E, Jamieson SE, et al. Association between male genital anomalies and adult male reproductive disorders: A population-based data linkage study spanning more than 40 years. Lancet Child Adolesc Health. 2018;2(10):736-743.

[3] Kolon TF, Herndon CA, Baker LA, et al. Evaluation and treatment of cryptorchidism: AUA guideline. J Urol. 2014;192(2):337-345.

[4] Fowler R, Stephens FD. The role of testicular vascular anatomy in the salvage of high undescended testes. Aust NZJ Surg. 1959;29(1):92-106.

[5] Ransley PG, Vordermark JS, Caldamone AA, et al. Preliminary ligation of the gonadal vessels prior to orchidopexy for the intra-abdominal testicle: A staged Fowler-Stephens procedure. World J Urol. 1984;2(4):266-268.

[6] Shehata SM. Laparoscopically assisted gradual controlled traction on the testicular vessels: A new concept in the management of abdominal testis. A preliminary report. Eur J Pediatr Surg. 2008;18(6):402-406.

[7] Tian Q, Zhao X, Zhang C, et al. Compared outcomes of high-level cryptorchidism managed by Fowler-Stephens orchiopexy versus the Shehata technique: A systematic review and meta-analysis. J Pediatr Urol. 2023;19(3):313-319.

[8] Bajaj M, Upadhyay V. Age at referral for undescended testes: Has anything changed in a decade. NZ Med J. 2017;130(1457):45-49.

[9] Dawood W, Youssif M, Badawy H, et al. Laparoscopic staged management of high intrabdominal testis: A prospective randomized study. J Pediatr Surg. 2021;56(12):2385-2391.