



Spontaneous pregnancy post orchidopexy of bilateral retractile testes in an adult: A case report

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ABSTRACT

Retractile testes have been associated with male factor infertility. However, whether surgical correction is indicated in those males is unknown. Herein, we report a case of a 37 year old male with primary infertility for 7 years with no apparent cause other than retractile testes. Bilateral orchidopexy was done and his wife achieved spontaneous pregnancy and delivery of a healthy girl.

1. Introduction

A retractile testis defined as testis that resides in the extrascrotal area and can be manipulated easily and replaced in a scrotal position, remains in the scrotal position for a while but ascends back up by the contraction of the cremaster muscle. The clinical correction of retractile testes and its effect on fertility remains an area of contention. The evidence available are retrospective, lack comprehension and include small numbers likely of adults from infertility clinics.

Studies that looked into males with infertility due to no other apparent cause other than retractile testes suggest a possible correlation between retractile testes and infertility [1,2]. Which might be explained by the reduction in testicular size, histopathological changes and abnormal semen parameters seen in these patients [1–3].

However, whether or not retractile testes should be managed surgically in adults with infertility remains controversial. There are no studies that look into paternity rates in infertile males with retractile testis after surgical correction.

2. Case report

We are reporting a case of a 37 year old male who presented to our clinic at the age of 31 with primary infertility for 7 years. He is otherwise healthy and had a normal sexual life, normal erection, ejaculation, and libido. He is nonsmoker, does not drink or use illicit drugs, and was not exposed to occupational hazards. His wife was 28 years-old at the time of presentation. She is medically free, has regular menstrual cycles and was evaluated by a gynecologist to exclude female factor infertility.

The patient was diagnosed with retractile testes since childhood. On examination, the patient had normal secondary sexual characteristics. Normal penile shaft, phallus size and meatus. Palpable bilateral vas deferens, with no clinical varicocele. Both testes were palpable extrascrotally at the level of the scrotal neck with normal size. The testes can be pulled down, remained in a scrotal position but they get retracted back to the scrotal neck after a while.

At the time of diagnosis his semen parameters showed oligoasthenozoospermia with a total sperm count of 7×10^6 /mL (Table 1). Hormonal profile was within normal levels (Table 2).

Scrotal ultrasound showed homogeneous testis without intratesticular lesions or varicocele. The volume of the right testes was 11.87 mL and the left was 12.86 mL. After excluding other possible causes of the severe oligospermia, the decision was made to proceed with bilateral orchidopexy. The procedure was done under general anesthesia without complications. Post orchidopexy the semen analysis showed significant improvement in sperm count, from 7 to 120 million sperms per milliliter as well as increase in sperm concentration from 1.75 to 40 million sperms per milliliter. Six years after the procedure the couple achieved spontaneous clinical pregnancy and delivery of a healthy girl.

3. Discussion

The impact of retractile testes on spermatogenesis is not well understood. We know that a temperature between 2 °C and 4 °C is needed for testicular maturation, which is lower than the normal core body temperature of 36.5 °C. In case of retractile testis it is difficult to determine the duration spent by the retractile testes in an extrascrotal

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Table 1
Semen analysis at the time of diagnosis and post orchidopexy.

Parameter	2014	2021	Normal
E2 (pmol/L)	–	47.3	28–156
FSH (IU/L)	4.5	6.2	1.5–12.4
LH (IU/L)	4.3	5.9	1.7–9.6
Prolactin ug/L	–	6.3	4.1–18.4
Testosterone (nmol/L)	22.12	27.8	≥17 yrs, 9.9–26.8
TSH (mU/L)	1.89	1.79	0.270–4.2

Table 2
Hormonal profile at the time of diagnosis and post orchidopexy.

Parameters	At the time of diagnosis 2014	Post orchidopexy 2018	2021	Normal Value (WHO 2010)
Volume (mL)	4	3	2	≥1.5
Appearance	Flaky	Turbid	Turbid	Turbid
pH	7.6	7.6	8.6	≥7.2
Sperm Concentration (10 ⁶ /mL)	1.75000	40.0000	43.00000	≥15
Total sperm count (10 ⁶ /mL)	7.000000	120.000000	86.000000	
Sperm motility (%)	65	10	15	≥40
Progressive motility (%)	5	3	10	≥32
Total Motile (sperms)	4.550000	12.000000	12.900000	
Semen analysis diagnosis	Oligoasthenozoospermia	Asthenoteratozoospermia	Asthenoteratozoospermia	

position and the andrologic alterations caused by heat on the testes.

Histopathological changes of the retractile testes in boys reported contradicting results. There are studies that reported tissue degeneration in retractile testis similar to that of cryptorchidism and that those boys tend to have abnormal semen analysis when they became adults. [1–3]. Therefore, these studies suggest that hormonal and/or surgical intervention in prepubertal age is necessary to prevent morphological changes and future complications. Improvement in sperm count was seen in 9 out of 15 adult males who underwent surgical correction of retractile testes but fertility outcome was not reported [2].

On the other hand, some investigators reported no significant difference in histopathological structure and spermatogonia count in patients with retractile testes and therefore concluded that intervention is not necessary [4].

One prospective study looked into 22 males with infertility with no other identifiable cause than bilateral retractile testes who undergone orchidopexy. One year follow up did not show improvement in testicular volume or sperm density, however improvement in sperm motility was reported. They did not report subsequent paternity rates [5].

4. Conclusion

In conclusion, evidence in the literature with regards to fertility outcomes in males with retractile testes is limited and difficult to interpret. Therefore prospective cohort studies on infertile males with no apparent cause other than retractile testes should be conducted. Such

studies should be comprehensive; measuring testicular volume, semen parameters, hormonal profile, testicular histology and paternity rates. Until such evidence is available we recommend surgical correction of retractile testes in males with infertility.

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Conflict of interest

The authors declare no conflict of interest.

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