Andrology and fertility

Communicating seminal vesicles leading to indirect vasal communication: A case report

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ABSTRACT

We are presenting a case of 42 year old male, suffering from secondary infertility. Nine years ago he developed bilateral scrotal pain followed by azoospermia and infertility. At our center during vasography we found that the dye was not seen in bladder or prostatic urethra. But interestingly a direct communication was observed between both seminal vesicles, and through that channel an indirect communication was observed between both vas deferens. It is suggested that the patient developed obstructive azoospermia as a sequel of epididymo-orchitis. It is also concluded that seminal vesicle communication was initially not a primary problem for patient’s fertility.

Introduction

Male infertility can be caused by obstructive azoospermia (OA), which is treatable by microsurgical vasoepididymal anastomosis in many cases. While managing infertility and OA we may come across various reproductive tract anomalies. Congenital malformations of the genital tract are usually discovered during childhood, but sometimes they remain silent until incidentally detected at a later age. Reproductive tract anomalies include rare entities, e.g. congenital bilateral absent vas deferens, Wolffian duct remnants, Müllerian duct remnants, cysts and other abnormalities of the seminal vesicles, prostate and ejaculatory duct/vas deferens etc. and most of them are detected in adult hood.

Seminal vesical communication is a rare anomaly. In literature one case report of direct communication between seminal vesicles, and another personal experience in a textbook, of communication between both vas due to a midline prostatic cyst have been presented. We are presenting a rare case of direct seminal vesical communication leading to indirect vasal communication.

Case presentation

Patient & methods

Institutional review board (IRB) of Fatima Memorial Hospital College of Medicine & Dentistry granted approval for publication. Written informed consent of the patient was obtained and details of the case were carefully documented.

Results

A 42-year-old male suffering from secondary infertility presented to our Andro Urology clinic. He got married 16 years ago and had a 15 years old daughter. Nine years ago he developed bilateral scrotal pain followed by decreased size of right testes. Later he developed azoospermia. On Examination he had smaller right testis but normal left testis. His left epididymus was full but right was thinner. Vas deferens was palpable on both sides. On testicular fine needle aspiration normal spermatogenesis was found in left testis. He had normal hormonal profile including follicle stimulating hormone (FSH). His semen volume was 3.0 ml, pH was 7, semen fructose was positive and had azoospermia on repeated semen analysis.

Scrotal Colour Doppler ultrasound (CDUS) revealed small heterogeneous right testes (volume: 4.4ml) and normal left testes (volume: 15.6 ml). The patient was managed on the line of obstructive azoospermia. We planned for vasography & proceed to microsurgical reconstruction. Left vasography with methylene blue was done but dye was not retrieved from bladder. Right vasography was performed with the aim of trans vaso-epididymal anastomosis. Again the dye could not be retrieved from bladder but interestingly, the dye started pouring out from left vas deferens, at the incision site of vasography. Under fluoroscopy, radio opaque dye was introduced from left vasography site. The

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left seminal vesicle was found to be communicating with the right seminal vesicle & outlining the contralateral vas as well (Fig. 1, Video 1). The dye was not seen in the bladder or prostatic urethra & was seen away from the verumontanum and ejaculatory ducts area. So the procedure could not be carried out further and the patient was referred for intracytoplasmic sperm injection (ICSI).

The above findings were further evaluated by transrectal ultrasonography (TRUS) and Magnetic resonance imaging (MRI). TRUS showed bilateral severe dilatation of seminal vesicles and extraprostatic part of ejaculatory ducts. MRI Pelvis with & without contrast revealed right small atrophic testis but normal left testes & significantly dilated seminal vesicles with intercommunication (Fig. 2).

Supplementary video related to this article can be found at https://doi.org/10.1016/j.eucr.2020.101256

Discussion

In literature to the best of our knowledge there is one case report of seminal vesicle fusion detected during robotic assisted radical prostatectomy and another description of communicating vas through a midline ejaculatory duct cyst, incidentally diagnosed during vasography.

We are presenting seminal vesicle communication with a concrete clinical evidence in the form of vasography (Fig. 1, Video 1) This was an incidental finding in a patient of secondary infertility and azoospermia, during bilateral vasography when dye started pouring out from the vasography incision site of contralateral vas & was further confirmed by contrast vasography (Fig. 1, Video 1). It can be clearly seen in Fig. 1 and video 1 that a direct communication between the two seminal vesicles was observed and the dye stayed away from ejaculatory ducts, verumontanum or prostatic urethra.

The case becomes further interesting by the fact that the patient was fertile before epididymo-orchitis. So it can be concluded that a communication between seminal vesicles alone, may not influence fertility and may behave as an innocent entity.

It is surprising that the patient had good semen volume, semen pH 7 and fructose was positive, which makes the diagnosis of ejaculatory duct obstruction less likely. Due to this reason we proceeded with vasography. This discrepancy can be explained to some extent by the fact that the above tests were performed one month ago at the time of “surgery plan”. It is possible that the disease/fibrosis progressed further during this time. Further evaluation was done in postoperative period by TRUS & MRI. Both are key investigation for evaluation of prostate, vas deferens, seminal vesicles and other pelvic abnormalities. No other pathology was found except seminal vesicle communication. It was also observed that on comparison, although the communication was visible on both MRI and TRUS, it was better delineated on vasography.

Conclusion

It can be suggested that the patient had direct seminal vesicle communication leading to indirect vesal communication, which was initially not a problem for fertility. The patient’s secondary infertility was due to post infective OA.

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