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Successful Pregnancy Outcome in a Couple with Retrograde Ejaculation

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Abstract: ***The new reproductive technologies, such as IUI and IVF, are becoming increasingly common, enabling infertile couples to become parents and create families. One of the rare cause of male infertility is ejaculatory dysfunction i.e., retrograde ejaculation which is characterized by absent or very low semen volume. It contributes to 0.3-2% of male infertility. The combination of dry orgasm and issue with fertility make the condition distressing to both patient and their partner especially when trying to conceive. Management includes usage of drugs that cause increase in strength of sphincter action. Imipramine or Pseudoephedrine. In our case report, 27-year-old female presented with primary infertility with regular periods. Husband semen analysis showed azoospermia and low volume semen with history of cloudy urine. Semen was retrieved from urine and semen analysis performed and was found to be within normal range. The diagnosis of retrograde ejaculation was made. The sperms were collected from urine after alkalisation and and IUI was done. The female became pregnant in first cycle only and ultrasound showed Diamniotic mono chorionic twins. In view of no vertex presentation of first twin in labour, patient was taken for emergency LSCS and delivered two healthy alive boy babies of birth weight 2.157kg and 1.695 kg respectively***.

Keywords: reproductive technologies, retrograde ejaculation, low semen volume, Imipramine, Pseudoephedrine, Diamniotic mono chorionic twins

1. Case Report

A 27 years old female came to our OPD with primary infertility. We had advised the hormonal profile and the ultrasound pelvis. Serum hormonal measurements were within normal range. Ultrasound showed normal uterus with normal ovaries. The husband's semen analysis showed Azoospermia and low volume semen with history of cloudy urine. USG Scrotum with doppler showed normal study. Semen was retrieved from urine and semen analysis performed. Reports showed a count of 40 million/ml, 45% rapid progressive motility and 55% normal morphology. A diagnosis of retrograde ejaculation was made. Male partner was started on medical treatment with imipramine and pseudoephedrine. Post medical management, female partner was given ovulation induction drugs and was followed up with follicular study for 6 months. The couple was then planned for IUI. Female partner was induced with clomiphene citrate 50mg from day 2 to day 6 of cycle followed by folliculometry. Folliculometry showed a dominant follicle of size 20x18mm followed by trigger with HCG was given. IUI was planned 36 hours following HCG administration. The male partner was advised to take alkalising agent from starting of cycle. Urine was collected after masturbation and semen was prepared by density gradient method. IUI was followed by. The patient became pregnant with Monochorionic diamniotic twins in the first IUI cycle. During the Antenatal period patient was found to have increased BP in view of which patient was started on antihypertensives. Rest of the antenatal period was uneventful. In view of non vertex presentation of first twin patient was taken for emergency LSCS and delivered two healthy alive boy babies of birth weight 2.157 and 1.695 respectively.

2. Discussion

Retrograde ejaculation (RE) accounts for less than 2 % of cases of male infertility. The process of ejaculation requires complex co-ordination and interplay between the epididymis, vasa deferens, prostate, seminal vesicles, bladder neck and bulbourethral glands. Upon ejaculation, sperm are rapidly conveyed along the vas deferens and into the urethra via the ejaculatory ducts. From there, the semen progresses in an anterograde fashion in part maintained by coaptation of the bladder neck and rhythmic contraction of the peri urethral muscles co-ordinated by a centrally mediated reflex. Any factor, which disrupts this reflex and inhibits the bladder neck (internal vesical sphincter) contraction, may lead to retrograde passage of semen into the bladder This condition can occur as a result of spinal cord lesions, neuropathies (diabetic autonomic neuropathy and multiple sclerosis), retroperitoneal surgery, acquired anatomic aetiologies (bladder neck surgery and transurethral resection of the prostate), congenital abnormalities, or pharmacological treatments (psychotropic medications and a-adrenergic blockers), and it can also be idiopathic

Retrograde ejaculation can also be a complication of diabetes especially in cases of diabetics with long term poor blood sugar control. This is due to neuropathy of the bladder sphincter. Post-pubertal males (aged 17 to 20 years) who experience repeated episodes of retrograde ejaculation are often diagnosed with urethral stricture disease shortly after the initial complaint arises. It is currently not known whether a congenital malformation of the bulbous urethra is responsible, or if pressure applied to the base of the penis or perineum immediately preceding ejaculatory inevitability may have inadvertently damaged the urethra. This damage is most often seen within 0.5 cm of the ejaculatory duct (usually distal to the duct).

Medications to treat high blood pressure, benign prostatic hyperplasia, mood disorders surgery on the prostate and nerve injury (which may occur in multiple sclerosis, spinal cord injury

Diagnosis is usually determined after a medical professional performs a urine analysis on a urine specimen that is obtained shortly after ejaculation. In cases of retrograde ejaculation, the specimen will contain an abnormal level of sperm. Especially in case of *orgasmic an ejaculation*, an ejaculation can often be confused with retrograde ejaculation, and they share some fundamental aspects of the cause. Urinalysis is used to distinguish between them.

The genitals are physically examined to ensure that there are no anatomical problems. The urine will be tested for the presence of semen. If there are no sperm in the urine, it may be due to damage to the prostate as a result of surgery or prior radiation therapy

The treatment depends on the cause. Medications may work for retrograde ejaculation but only in a few cases. Surgery rarely is the first option for retrograde ejaculation and the results have proven to be inconsistent. [11] Medications do not help retrograde ejaculation if there has been permanent damage to the prostate or the testes from radiation. Medications also do not help if prostate surgery has resulted in damage to the muscles or nerves. Medications only work if there has been mild nerve damage caused by diabetes, multiple sclerosis, or mild spinal cord injury. The medications which can be used are Tricyclic antidepressants like imipramine.

Antihistamines like chlorphenamine, Decongestants like ephedine and phenylephrine.

These medications tighten the bladder neck muscles and prevent semen from going backwards into the bladder. However, the medications do have many side effects and they have to be taken at least 1–2 hours prior to sexual intercourse. In many cases, the medications fail to work at the right time because most men are not able to predict when they will have an orgasm.

If a couple is experiencing infertility as a result of retrograde ejaculation and medications are not helping, the collection of the semen collection may undergo a special procedure. First, the patient alkalinizes his urine by intake of sodium bicarbonate (3g dissolved in water in the evening before going to bed and then another dose after complete emptying of the bladder just before going to the laboratory). Before collecting semen, the patient must empty his bladder. The patient must then masturbate in one container and immediately afterwards urinate in another container. The male ejaculate can be centrifuged from the urine and the isolated sperm can be injected directly into the female via intrauterine insemination. In more severe cases, in vitro fertilization with intracytoplasmic sperm injection can be used.

3. Conclusion

To our knowledge, this is the case of successful management of infertility due to retrograde ejaculation through this protocol. This method highlights the need for more invasive sperm retrieval techniques.

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