

Pregnancy Following D & C and Hydrotubation after Failed IUI - A Rare Case Report

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Abstract:

Infertility is defined as failure to achieve a pregnancy after 12 months or more of regular, unprotected sex. It affects millions of people of reproductive age worldwide and has an impact on their families and communities. Having babies gives an unparalleled satisfaction to parents and lack of baby may make one's life miserable at times.

Here we are presenting a case where a lady who got pregnant and gave birth to a child just following Dilatation & Curettage and Hydrotubation (tubal flushing) when other measures like diagnostic laparoscopy and IUI failed. Dilatation and curettage and tubal patency test/ hydrotubation (D & C & TPT) was an old diagnostic procedure before the advent of ultrasonography and laparoscopic technique. It is an easy, minor operative procedure to evaluate the condition of uterus and tubes. Examination under anesthesia gives information regarding parametrium also to a considerable extent.

Keywords: hydrotubation; pregnancy; hysterosalpingography

Introduction

Infertility is defined as failure to conceive after 12 months or more of regular, unprotected sex [1]. Almost 10- 12% of couples seek treatment for infertility. According to WHO, about 48 million couples and 186 million individuals live with infertility globally [2].

Infertility could be primary with no history of pregnancy or secondary with a history of prior conception. In about 30% of cases, female reproductive system is at fault, in about 30% cases the males are responsible and in rest both may be responsible.

Here we are presenting a case where a lady, 30 years old, with a history of tubal surgery and failed IUIs conceived lastly following D & C and hydrotubation.

In males, a simple sperm analysis is sufficient to tell the etiology and prognosis of male partner. On the other hand, in women, causes could be in the hypothalamic pituitary ovarian axis, in the ovaries, tubes, uterus or outflow tract. Hormonal test can detect the integrity of HPO axis. Uterus may be evaluated by ultrasound or MRI. When no pathology is found in male or female, it is termed as unexplained infertility [3].

For tubal patency in women, we always need invasive test in form of HSG, or Sono-Salpingography and it needs equipments like X-ray machine, Ultra Sonography machine and expert radiologist. On the other hand Dilatation

and curettage is an old simple clinical test which has got diagnostic and therapeutic values, although it's more subjective.

Case history

A lady, 34 years old, reported in the Gynecology Department at urban unit of Lord Buddha Koshi Medical College, on 7th Dec 2019 with 10 years of infertility. She had consulted at Mehrauli, New Delhi, then was referred to AIIMS, New Delhi for tubal blockage. Her FSH, LH was within range. Husband's semen count was 28 million with 10% motility. Diagnostic laparoscopy and hysteroscopy was done on 9th Oct 2018. Both tubes and ovaries were found healthy with bilateral spillage. Tissues were sent for HPE. After one year, on 17th Oct 2019, IUI was done on AIIMS,

Delhi. No Pregnancy resulted.

She finally came to have a trial of D& C + Hydrotubation here. Her LMP was 28th Nov 2019. HSF was 56 million per ml and other blood reports were within range. Although I was initially apprehensive to perform D&C but finally on their utmost request, D & C and tubal patency test (Hydrotubation) was done under IV Ketamine anesthesia the next day on 8th Dec 2019. Cervix was dilated with difficulty with Hegar's dilator no. 6. A sterilized rubber catheter no. 8 was passed through cervix and 20ml of fluid was pushed through it slowly. Fluid contained normal saline,

hydrocortisone and an antibiotic. Fluid passed under pressure. Then curettage was done. Endometrial cavity was smooth but curettings were thin. Recovery was good and lady was discharged same day with an advice of letrozole, HMG and dydrogesterone for subsequent cycle.

She went back to Delhi.

On 17th Feb, 2020, the lady reported at AIIMS OPD with 5 weeks of amenorrhoea. Her LMP was 12th Jan, 2020. Her pregnancy test was positive. She again consulted on 2nd March with 7 weeks of pregnancy. Folic acid and Eltroxin 75 µgm were prescribed and she was advised for NT scan and dual marker test at 11-13 weeks of pregnancy.

On 8th June 2020, the lady reported back here with 5 months of pregnancy. Ultrasound level II scan confirmed 21 weeks of pregnancy. She had regular visits thereafter and delivered a healthy male boy by C-Section on 20th October 2020.

She gave birth to her second male baby on Dec 2021 by LSCS again. Bilateral tubal sterilization was done on request.

Discussion

Infertility is defined as the inability to conceive after one year of unprotected sex. It's a tragedy for many couple, bringing a sense of loss, failure and exclusion. Relationship between couples can be very strained when children are not forthcoming. One partner may seek the other as being defective or unwilling [4]. The desire for children is quite primitive as people search their own reflection in their babies so not having a baby could be source of personal misery.

In general, according to Sharlip et al 50% of infertility cases are due to female factor, pure male factor accounts for 20-30 of the problem and remaining 20-30% is due to both male factor and unknown causes comprising to unexplained infertility [5].

If HSF is within range then a brief marital history may exclude the husband.

In women, tubal factors may account upto 35% cases of infertility. Partial and complete bilateral tubal obstruction may result from pelvic inflammatory disease, which is usually caused by a sexually transmitted infection, endometriosis or adhesions.

In our case, hysterosalpingography was done by some local doctor and lady was referred to AIIMS Delhi for treatment of blocked tubes. Diagnostic Laparoscopy and hysteroscopy was done on 8th Oct 2018. Uterus and tubes were found to be normal with free spillage from tubes. Intra Uterine Insemination (H) for 2 cycles was done thereafter.

Dilatation and curettage is a very old procedure to access the uterine cavity. It can detect the congenital malformations of uterus, Asherman's syndrome, polyp etc. and small polyps can be removed too. Even we can access the functional status of endometrial cavity with the thickness of curettings. Cervical incompetence may be diagnosed if no. 8 Hegar's dilator is passed without resistance.

Hydrotubation is added to see the patency of tubes. Although we can't say whether one or both tubes are patent, still the free, smooth flow of fluid is highly suggestive of patent tubes. Sometimes fluid is passed after initial resistance. It could be due to tubal obstruction by some inspissated mucus plug.

Other methods to assess the tubal patency is hystero-salpingography, sono-salpingography, diagnostic laparoscopy and dye test etc. Diagnostic laparoscopy is the best as we directly visualize the patency of tubes and other pelvis structure like uterus and ovaries. This requires more sophisticated instruments and expert team whereas D& C and hydrotubation is an easy simple procedure. We advocate HSG, diagnostic laparoscopy and dye test in those cases where we get inconclusive results with D& C and Hydrotubation.

Onyinye Onyeka from Nigeria [6], reported a successful pregnancy following hydrotubation only procedure for bilateral tubal blockage. She conceived after 3rd hydrotubation.

Rui Wang, Andrew Watson et al [7] did a cochrane data base meta-analysis. Fifteen trials involving 3864 patients were included in the systemic review. Randomised controlled trials comparing tubal flushing with oil soluble contrast media (OSCM) and water soluble contrast media (WSCM) with each other or with no treatment, in women with subfertility were done. Authors concluded that compared to no treatment, treatment with OSCM may increase the chance of live birth and clinical pregnancy.

A G Adesiyun et al [8] studied role of hydrotubation in the management of female infertility in low resource settings. He did therapeutic hydrotubation in 257 patients with tubal and unexplained infertility over 7.5 years. The age range was 21 to 44 years with mean of 34.5 years. 109 pregnancy were recorded in the study and overall conception rate was 42.4%. He concluded, with good case selection, hydrotubation may be beneficial in poor resource counties especially in patients with incomplete tubal occlusion (bilateral peritubal adhesions and in cases of unexplained infertility).

D L Olive et al, conducted studies over 123 infertility patients with laparoscopically documented endometriosis over a period of 1-25 months and overall pregnancy rate was 24.4%. Post laparoscopic hydrotubation was evaluated for its therapeutic effect and he inferred a potential increase in cure rate couldn't be evaluated at this time [9].

Recently role of endometrial scratching has been established in IVF treatment by some gynecologists. It involves superficial wounding of lining of the womb, in order to improve receptivity of the uterus in embryo.

Sachin A Narvekar et al [10] concluded that endometrial injury in non-transfer cycle improves the live birth rate, clinical pregnancy and implantation rates in the subsequent IVF-ET cycles in patients with previous unsuccessful IVF cycles. The implantation rate was significantly higher in the intervention group as compared to controls (13.07% versus 7.1 % P=0.04).

In 2005, the number of cycles of assisted reproductive techniques in the USA, Australia, New Zealand and Europe were more than 600,000, however only 30% of these were successful. Embryo implantation is thought to be most important factor influencing pregnancy. Endometrial scratching/injury was offered to women who failed to become pregnant after several failed IVF rounds, despite transfer of good quality of embryos and without clear reason of lack of their success. Some studies suggested that endometrial studies suggested that endometrial scratching may double the chance of getting pregnant too. It was done with a flexible catheter 3mm wide, inserted through the cervix [11].

Veronika Gunther et al [12] did a meta-analysis and review in 2012 comprising 2062 women from 4 randomised and 3 non randomized controlled studies. One to six IVF attempts had been made prior to study. The evaluation revealed a 70% higher rate of clinical pregnancies in the intervention group.

Neelam potdar et al, in a meta-analysis with 2062 participants showed that that local endometrial injury induced in the cycle preceding ovarian stimulation is 70% more likely to result in clinical pregnancy [13].

In my opinion, Dilatation and Curettage is the same, as endometrial scratching, done since long. There is no clear cut references regarding its use in infertility but during 80's, it was quite popular in the different medical colleges of Bihar and later on practiced by us with very good results. This procedure is simple, safe, effective and widely acceptable among the people that patient was called back by her mother for this procedure in a small district town of Bihar when other traditional methods failed. Potential adverse effects are- mild bleeding, abdominal cramps for a short time. Pelvic infection or uterine perforations are rare complication if

not done carefully. Combining D&C with hydrotubation has diagnostic as well as therapeutic value specially in cases of unexplained infertility.

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