

Case Report

Birth after Hysteroscopic Intrauterine Insemination at Labial Adhesion

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Object of the publication is to report a case of an intrauterine insemination guided by vaginoscopy, resulted in pregnancy and delivery of a patient with chronic vaginitis causing labial adhesions and disability of cohabitation. Examinations and interventions happened in Department of Obstetrics and Gynecology, University of Debrecen, Clinical Center. Patient is a 34-year-old woman with vaginal obstruction. Ovarian stimulation, ovulation induction and intrauterine insemination using hysteroscopic vaginoscopy were performed. As an outcome she had successful pregnancy and live birth.

As a conclusion, we present for a woman with in ability of cohabitation because of labial adhesions an opportunity instead of being referred to IVF center immediately.

Keywords: Vaginoscopy; Infertility; Labial adhesions; *In vitro* fertilization**Introduction**

Vaginal discharges, as a symptom of vulvovaginitis is one of the most common complaint presenting complain at gynecological office [1]. Fungal, bacterial vaginosis, trichomoniasis regularly self-treated. Adequate treatment is needed in severe or recurrent cases [2]. Evaluation of the backgrounds and correct management is important to avoid consequences [3]. Beside the well-known symptoms of persistent vaginitis, as a long term complication, labial adhesions can be formed [4]. Labial adhesion is thought to be caused by inflammation, lack of sexual activity and estrogen deficiency. It is not uncommon in children and post-menopausal women, but is extremely rare in reproductive age.

Many other factor causing vaginal stricture are known, such as radiotherapy, perineal rupture resulting stenosis of vagina or can be found as a postoperative complication [5,6].

Conservative and surgical management are reported in literature depending on the severity of the adhesions [7].

IUI is widely used for effective treatment of unexplained or mild male infertility. However, although the standard steps are widely accepted, there are a lot of controversies regarding the use of natural or stimulated cycle, luteal support [8,9].

Intrauterine insemination and vaginoscopy are well-known and used procedures. In this case, we combined these accepted methods, so after consultation with Ethical Committee of University of Debrecen (DEOEC RKEB/IKEB Prot. No. 4555-2016), approval is not necessary.

Case Report

A 34 year-old woman was referred to the Infertility Unit with cohabitation inability due to labial adhesion. In her history several episodes of vaginal infections has been documented since childhood. Due to severe vaginal discharge, at the age of 7 natamycin,

hydrocortisone, neomycin and oxytetracycline, hydrocortisone-acetate therapy was indicated. Five years later a vaginal smear was taken, "few leucocyte and cocci-form bacteria" were shown. Age of menarche is 13 years. She had a blood test with normal hormonal results at the age of 16 (FSH: 4.4 mIU/ml, LH: 6.2 mIU/ml, LTH: 4.0 ng/ml, T: 660 pg/ml). During next years, frequently recurrent discharge was treated by fluconazole. She was hospitalized at the age of 20 due to the severe recurrent vaginal infection. To exclude hypoestrogenism blood test were taken with normal results (FSH: 5.6 mIU/ml, LH: 9.1 mIU/ml, Prolactin: 16.2 ng/ml, 17-B-Estr: 44.5 pg/ml, s-TSH: 1.5, Testosterone: 1.1, WBC: 5.4 G/L, RBC: 4.92 T/L, Hgb: 157 g/l, Thr: 273). Iodine-water and borax-glycerin was used as therapy. She got pregnant spontaneously at the age of 22, but had an induced legal abortion. Fenton operation was performed due to partial vulvar obliteration by synechia at the age of 27. Biopsy was not taken. During next years the recurrent vaginal discharge was treated with natamycin, hydrocortisone, neomycin. Recurrent stenosis of the introitus resulted dyspareunia at the age of 32, for which another operation became necessary. Synechiolysis were performed. However, at the age of 33 adhesions of the upper half of the introitus narrowed it significantly accepting one finger and kraurosis was diagnosed without histologic verification.

This patient desired pregnancy at the age of 34. Despite the definite disability of cohabitation, she refused the IVF treatment. Instead the possibility of intrauterine insemination was discussed at the time. Although the anatomically narrow vagina and the emotional fear of any vaginal manipulation meant significant drawbacks from any speculum examination (Figure 1), a decision of vaginoscopically guided IUI has been made. Andrology was normal (semen sperm concentration 69 M/mL, motility 70%) and swim-up prep was used for IUI.

Ovarian stimulation with clomiphene-citrate 2 x 50 mg on Day 3-7 and recombinant gonadotropin 37.5 U on Day 5-9 was administered. Based on folliculometry on Day 10, 250 ug choriogonadotropin



Figure 1:

alpha was used for ovulation induction. Intrauterine insemination was performed on Day 12. Office hysteroscope with a 5.5 outer diameter sheath, having an inbuilt working-channel (EMD Endoscopy Technologies) was used for intravaginal orientation. Saline was used as distension medium. During vaginoscopy, the cervical ostium was identified. Through the working-channel a 1.7 mm diameter plastic catheter (Cavafix, B-Braun) was inserted via cervical channel to the uterine cavity and sperm was injected. Procedure was performed in an office setting without anesthesia. During luteal phase, progesterone support was administered.

Commencing a positive urine pregnancy test on day 36, ultrasonography identified a 12 mm diameter intrauterine gestational sac. Cesarean Section was performed at the 38th week of gestation with no complications, gaining 3700 g healthy male newborn.

Discussion

Several factors are published that can lead to vaginal stricture including radiotherapy, perineal rupture. In severe cases of recurrent vulvovaginitis labial adhesions can be found as a long-

term complication. Conservative, topical hormonal therapy, vaginal dilatation and surgical methods are an existing for adhesiolysis restoring normal vaginal function [7,10]. Labial adhesions result in hampered cohabitation. To avoid costs and strain of IVF treatment IUI could be the answer for patients whose infertility work-up resulted as normal for both partners.

Vaginoscopically guided IUI offers an effective treatment in rare cases of infertility, where vaginal obstruction due to chronic stricture or malformation inhibits the natural intercourse. According to our best knowledge, this type of intervention has not been reported yet in the literature.

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