

CASE REPORT

A successful in-vitro fertilization and embryo transfer treatment in a woman with previous vaginoplasty for congenital absence of vagina

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A mock embryo transfer under ultrasound guidance helped to plan an embryo transfer in a woman with previous vaginoplasty.

Key words: embryo transfer/IVF/technique/ultrasound-guided/vaginoplasty

Introduction

Vaginal agenesis in association with functional uterus occurs infrequently (Bates and Wiser, 1985). In such women, the vagina is reconstructed and the uterus is conserved to preserve reproductive function. Following vaginoplasty, the chance of conception and the potential to carry a pregnancy are extremely rare. Assisted conception techniques, if needed, are often written off as impossible, due to the difficulties involved in performing embryo transfer. If gamete or embryo stage tubal transfer is not possible because of tubal abnormalities or blockage, embryo transfer to the uterus via the cervix may be the only option. We report the successful treatment of such a case.

Case report

A 36 year old woman with 4 years primary infertility was referred for in-vitro fertilization (IVF) surrogacy. She was born with a major form of cloacal malformation. Her genitourinary tract anomalies included an absent vagina, cervical atresia, left ectopic ureter and vesical atresia. She had a normal uterine cavity. An attempted vaginoplasty had resulted in recto-vaginal fistula necessitating revision surgery which resulted in vaginal stenosis with a fibrous ring. She also had a left nephroureterectomy and urinary diversion by ileal conduit. A right salpingo-oophorectomy was performed for a tubo-ovarian abscess when she was 15 years of age. A previous attempt at examination under anaesthesia had shown an extremely stenosed vagina with a fibrous ring anteriorly but no identifiable cervical tissue. Injection of contrast medium under fluoroscopic control into the fibrous ring had shown a normal uterine cavity but did not demonstrate that her remaining tube was patent. She was referred for IVF treatment elsewhere but was advised

to try surrogacy because of the difficulties involved in the embryo transfer procedure.

On examination, she had normal secondary sexual characteristics. A vaginal examination was difficult due to narrowing in the upper vagina. At a mock embryo transfer procedure, a possible entrance to the cervical canal was identified at the 6 o'clock position.

A Friedman catheter was passed under ultrasound guidance and it was confirmed that the tip of the catheter was inside the fundus. An ultrasound scan confirmed the presence of a left ovary in the pouch of Douglas. The patient was keen to carry her own baby and proceeded to undergo ovulation induction for IVF treatment. She conceived following her second IVF/embryo transfer treatment and she delivered a healthy female baby by Caesarean section at 32 weeks gestation.

Discussion

To our knowledge, this is the first report of a successful IVF/embryo transfer treatment in a woman with previous vaginoplasty for congenital absence of the vagina. Conservation of the uterus in women with vaginal agenesis, cervical atresia and functional uterus is debated in view of severe morbidity and mortality (Maciulla *et al.*, 1987). There have been a few reports of successful pregnancies in women with previous vaginoplasty but the numbers are small (Hampton *et al.*, 1990). This case illustrates the importance of careful assessment including pelvic ultrasonography and mock embryo transfer before a decision regarding the feasibility of treatment is made.

References

- Bates, G W and Wiser, W.L (1985) A technique for uterine conservation in adolescents with vaginal agenesis and a functional uterus *Obstet Gynaecol.*, **66**, 290–294
- Hampton, H.L., Meeks, G.R., Bates, G W. *et al.* (1990) Pregnancy after successful vaginoplasty and cervical stenting for partial atresia of cervix *Obstet Gynaecol.*, **76**, 900–901
- Maciulla, G.J., Heine, M.W and Christian, C.D (1987) Functional endometrial tissue with vaginal agenesis *J Reprod Med.*, **21**, 373–376

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