



Successful IVF Pregnancy Following Unilateral Tubal Clipping in a Patient with Hydrosalpinx, Endometrioma, and Male Factor Infertility: A Case Report

Bakul Kocchar¹; Vipin Chandra²; Shashank Sanagoudar^{3*}

¹Department of Reproductive Medicine, Indira IVF Hospital, Ludhiyana, India.

²Department of Clinical and Lab Operations, Indira IVF Hospital, Udaipur, India.

³Department of Reproductive Medicine, Indira IVF Hospital, Udaipur, India.

***Corresponding Author(s): Shashank Sanagoudar**

Department of Reproductive Medicine, Indira IVF Hospital, Udaipur, India.

Email: drsanagoudar@gmail.com

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Abstract

Background: Hydrosalpinx refers to a distally blocked, fluid-filled fallopian tube and represents the end stage of chronic tubal inflammation. It is known to adversely affect implantation and pregnancy rates following In Vitro Fertilization (IVF) due to the reflux of toxic tubal fluid into the uterine cavity. Surgical management, particularly salpingectomy or proximal tubal occlusion, is often recommended before IVF to improve reproductive outcomes. We present a case of successful IVF conception and ongoing singleton pregnancy in a patient with unilateral hydrosalpinx who underwent right-sided tubal clipping prior to embryo transfer.

Case presentation: A 33-year-old woman with a history of primary infertility presented to our infertility clinic for further management. Hysterosalpingography (HSG) revealed bilateral tubal blockage. Transvaginal Sonography (TVS) demonstrated a complete right-sided hydrosalpinx and a left ovarian endometrioma. Semen analysis of her husband showed asthenoteratozoospermia.

The couple was advised surgical management of the hydrosalpinx before proceeding with IVF. However, they were unwilling to undergo right salpingectomy and left-sided tubal clipping. Therefore, laparoscopic right proximal tubal clipping was performed along with hysteroscopic cavity enhancement on the day of Oocyte Pickup (OPU).

Following IVF, two blastocysts of grades 3AB and 2AB were obtained and transferred on 14 August 2022. Serum β -hCG measured on 29 August 2022 was positive, confirming conception. A transvaginal ultrasound performed on 11 September 2022 demonstrated a viable singleton intrauterine pregnancy at six weeks of gestation.

Conclusion: Hydrosalpinx has a well-established negative impact on IVF outcomes. Proximal tubal occlusion by laparoscopic tubal clipping may serve as an effective alternative in patients unwilling to undergo salpingectomy. This case highlights the potential for successful embryo implantation and ongoing singleton pregnancy following unilateral tubal clipping in a patient with hydrosalpinx undergoing IVF treatment.



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Introduction

Hydrosalpinx refers to pathological distension of the fallopian tube resulting from distal tubal occlusion and accumulation of serous fluid. It commonly develops as a consequence of chronic pelvic inflammatory disease, endometriosis, previous pelvic surgery, or genital tuberculosis. Hydrosalpinx is observed in approximately 10–30% of women undergoing IVF treatment and has been associated with significantly reduced implantation, clinical pregnancy, and live birth rates [1].

Several mechanisms have been proposed to explain the negative impact of hydrosalpinx on IVF outcomes. Reflux of hydrosalpingeal fluid into the uterine cavity may mechanically wash away embryos, exert embryotoxic effects, alter endometrial receptivity, and impair implantation. Consequently, current evidence supports surgical management of hydrosalpinx before IVF, with salpingectomy considered the standard treatment. However, proximal tubal occlusion has emerged as an alternative strategy in selected patients [2].

We present a case of successful IVF conception following unilateral proximal tubal clipping in a patient with hydrosalpinx, ovarian endometrioma, bilateral tubal blockage, and concomitant male factor infertility.

Case presentation

A 33-year-old woman with primary infertility of 1½ years duration attended the infertility clinic on 22 May 2022. She reported regular menstrual cycles with no significant menstrual abnormalities. General and systemic examination findings were unremarkable.

Baseline laboratory investigations were within normal limits. Ovarian reserve assessment showed an Anti-Müllerian Hormone (AMH) level of 4 ng/mL. Hysterosalpingography revealed bilateral tubal blockage.

The husband's semen analysis demonstrated asthenoteratozoospermia, for which antioxidant therapy was prescribed.

Transvaginal sonography demonstrated a right hydrosalpinx and a small left ovarian cyst suggestive of an endometrioma or haemorrhagic cyst. Based on the presence of bilateral tubal factor infertility and male factor infertility, IVF was planned.

The patient underwent controlled ovarian stimulation using a GnRH antagonist protocol. Since the presence of hydrosalpinx is associated with reduced IVF success, laparoscopic intervention was planned on the day of oocyte retrieval.

During laparoscopy, the following findings were noted:

- Right complete hydrosalpinx
- Normal right ovary
- Normal left tube and ovary
- Normal uterus

The patient had previously refused salpingectomy; therefore, right-sided proximal tubal clipping was performed. Hysteroscopic cavity enhancement was also carried out.

Following fertilization and embryo culture, two blastocysts of grades 3AB and 2AB were obtained.

For frozen embryo transfer preparation, endometrial priming was achieved using estradiol valerate 2 mg three times daily.

Double blastocyst transfer was performed.

Investigations

Transvaginal sonography (TVS)

- Uterus measured 5.7×3.1×4.7 cm
- Retroverted and retroflexed uterus
- Homogeneous myometrium and endometrium
- Right ovary contained three small follicles
- Left ovary contained three small follicles and a small cystic lesion with internal echoes suggestive of:
 - Endometrioma, or
 - Hemorrhagic cyst
- Right adnexa showed a tubular cystic structure adjacent to the ovary suggestive of hydrosalpinx
- Left adnexa appeared normal

Impression

- Right complete hydrosalpinx
- Small left ovarian endometrioma/hemorrhagic cyst

Differential Diagnosis

1. Ovarian cyst
2. Tubo-ovarian mass
3. Endometriotic cyst
4. Ovarian tumor
5. Peritoneal Inclusion Cyst (PIC)

Treatment

Considering the negative effect of hydrosalpinx on implantation and IVF outcome, surgical treatment was advised. The patient declined salpingectomy despite counseling regarding its benefits. Therefore, laparoscopic right-sided proximal tubal clipping was performed before embryo transfer.

Subsequently:

- Controlled ovarian stimulation was completed
- Oocyte retrieval was performed
- Two blastocysts (grades 3AB and 2AB) were obtained
- Endometrial preparation was achieved with estradiol valerate
- Double blastocyst transfer was performed on 14 August 2022

Outcome and follow-Up

Serum β-hCG performed on 29 August 2022 was positive, suggesting successful implantation.

Transvaginal ultrasound conducted on 11 September 2022 confirmed:

- Singleton intrauterine gestation
- Viable fetal pole
- Gestational age corresponding to six weeks

The remainder of the pregnancy was uneventful. The patient subsequently delivered a healthy live female infant by LSCS on 06 April 2023.

Discussion

Hydrosalpinx is widely recognized as one of the most important tubal pathologies negatively influencing IVF outcomes. Several mechanisms have been proposed to explain this detrimental effect [3]. Hydrosalpingeal fluid may mechanically flush embryos from the uterine cavity after transfer. In addition, it can adversely affect endometrial receptivity and exert direct embryotoxic effects. Therefore, hydrosalpinx may act at the level of both the embryo and the endometrium [4].

Accurate diagnosis and treatment of unilateral hydrosalpinx are important, particularly in patients undergoing assisted reproductive techniques. Current treatment modalities include:

- Laparoscopic salpingectomy
- Tubal clipping
- Proximal tubal occlusion
- Hysteroscopic tubal occlusion
- Ultrasound-guided transvaginal aspiration

Among these options, laparoscopic salpingectomy remains the gold-standard treatment before IVF, particularly in patients with severe tubal disease and sonographically visible hydrosalpinx. Previous studies have demonstrated that salpingectomy can significantly improve implantation, pregnancy, and live birth rates without adversely affecting ovarian response or ovarian reserve [5,6].

However, salpingectomy may not always be feasible. In cases with extensive pelvic adhesions, increased surgical risk, or patient refusal, proximal tubal occlusion by clipping provides an effective alternative. The procedure prevents reflux of hydrosalpingeal fluid into the uterine cavity while avoiding complete tubal removal.

In the present case, although salpingectomy was declined, unilateral tubal clipping successfully isolated the hydrosalpinx and allowed successful implantation, resulting in a term singleton live birth. This case highlights the value of individualized treatment planning and demonstrates that proximal tubal occlusion may be an effective strategy when salpingectomy cannot be performed.

Learning points

- Hydrosalpinx significantly reduces implantation, pregnancy, and live birth rates in IVF cycles.
- Surgical management prior to embryo transfer improves IVF outcomes.
- Laparoscopic salpingectomy remains the preferred treatment for sonographically detectable hydrosalpinx.
- Proximal tubal clipping is an effective alternative in patients unwilling or unsuitable for salpingectomy.
- Individualized treatment planning can result in successful pregnancy even in the presence of multiple infertility factors, including tubal disease, endometriosis, and male factor infertility.

References

1. Zeyneloglu HB, Arici A, Olive DL. Adverse effects of hydrosalpinx on pregnancy rates after in vitro fertilization-embryo transfer. *Fertil Steril.* 1998; 70: 492-499.
2. Barmat LI, Rauch E, Spandorfer S, Kowalik A, Sills ES, Schattman G, et al. The effect of hydrosalpinges on IVF-ET outcome. *J Assist Reprod Genet.* 1999; 16: 350-354.
3. D'Arpe S, Franceschetti S, Caccetta J, Pietrangeli D, Muzii L, Panici PB. Management of hydrosalpinx before IVF: A literature review. *J Obstet Gynaecol.* 2015; 35: 547-550.
4. Palagiano A, Cozzolino M, Ubaldi FM, Palagiano C, Coccia ME. Effects of hydrosalpinx on endometrial implantation failures: Evaluating salpingectomy in women undergoing in vitro fertilization. *Rev Bras Ginecol Obstet.* 2021; 43: 304-310.
5. Wang Y, Wang F, Zhang Q, Liu W, Luo Y, Fan L, et al. Effect of the timing of surgical treatment of hydrosalpinx on in vitro fertilization/intracytoplasmic single-sperm injection pregnancy outcomes in patients with tubal factor infertility. *Contracept Reprod Med.* 2026.
6. Ng KY, Cheong Y. Hydrosalpinx and fertility. In: *Fallopian Tube: Physiology and Clinical Aspects.* 2026: 259-274.