

ORIGINAL ARTICLE

Hysteroscopic tubal electrocoagulation in cases with communicating hydrosalpinx and planning for IVF - A pilot study

Mona M. Aboulghar¹, Osama Azmy², Adel Nada¹, Ossama Shawky¹, Heba Mostafa²

1. Cairo University, Department of obstetrics & Gynecology

2. Reproductive Health Research Department National research center, Dokki, Egypt

ABSTRACT

Objective: To evaluate the hysteroscopic tubal electrocoagulation for the purpose of tubal occlusion of communicating hydrosalpinx in patients scheduled for IVF.

Subjects and intervention: Hysteroscopic rollerball and needle electrode coagulation of the cornual end of the tubes was performed in 10 patients with unilateral or bilateral communicating hydrosalpinx, prior to IVF. The rollerball electro coagulation technique was performed in 4 patients. The needle electrode technique was used on 10 tubes (in 6 patients).

Results: Ten patients underwent the procedure successfully. The mean duration for both techniques used was 5 minutes. Postoperative complications included pain and vaginal spotting that lasted up to 3 days. In the group of the "rollerball electro coagulation technique", the occlusion of 6 tubes was tried, one was successfully closed, 3 tubes were partially opened owing to the fact that a decrease of the hydrosalpinx mass was succeeded, and 2 tubes were totally opened. The needle electrode technique had a 90% success rate of occlusion (only one tube found opened). In total 6 patients have undergone an IVF trial following the procedure, 2 of whom underwent the rollerball electrocoagulation and had negative BHCG, and 4 of the patients of the needle electrode technique group (two had positive BHCG, one chemical pregnancy and a clinical ongoing pregnancy).

Conclusions: The hysteroscopic needle electrode occlusion of communicating hydrosalpinx seems to be a simple, effective and economic method, and it could be an alternative in patients with extensive pelvic adhesions, scheduled for tubal occlusion.

Key words: *Hydrosalpinx, hysteroscopy, electrocoagulation, in vitro fertilization.*

INTRODUCTION

The prevalence of hydrosalpinx in IVF (in vitro fertilization) patients ranges from 10-13% when diagnosed by ultrasound^{1,2} and could reach up to 30%

if diagnosed by HSG (hysterosalpingogram), laparoscopy or open surgery.^{3,4,5} Hydrosalpinx is a bad prognostic factor according to published results of IVF.^{2,6,7} It is believed that the fluid acts as a mechanical barrier to implantation of embryos. Also, cytokines, prostaglandins and toxins are present in the fluid and contribute to the impact of hydrosalpinx to IVF success rates.⁷

It has been proved that salpingectomy increases peri-implantation endometrial Hoxa-10 expression in women with hydrosalpinx, a gene that is necessary for a successful implantation.⁸ Studies have advocated salpingectomy prior to IVF^{9,10} or proximal tubal occlusion¹¹ and this is currently performed laparoscopically in most cases. However, a large proportion of infertile tubal factor patients have severe pelvic adhesions that require open surgery and in some situations make the procedure impossible.¹²

Hysteroscopic tubal occlusion by electro coagulation has been used as a method of sterilization.^{13,14} This is a Pilot study that aims to the evaluation of the hysteroscopic electro coagulation as a new approach for proximal tubal occlusion in patients with communicating hydrosalpinx scheduled for IVF.

MATERIALS AND METHODS

The study tracked 10 patients from the outpatient clinic at the National Research Center and at the Kasr El Eini Teaching Hospital affiliated to Cairo University. A written approval was obtained from the Bioethical Committee of the National Research Center and an informed consent statement was signed by the patients prior to inclusion in the study.

INCLUSION CRITERIA

- Age 20-40 years
- Primary or secondary infertility
- Diagnosis of communicating hydrosalpinx; diagnosed by HSG, TV U/S showing distended tubes and intrauterine fluid, or patient complaining of prolonged brownish vaginal discharge
- Necessity of an IVF procedure.

Patients with non communicating hydrosalpinx, uterine anomalies or with a serious medical condition, contraindicated for pregnancy, were excluded.

Corresponding Author: Mona Aboulghar,
10, Geziret el arab Mohandeseen, Cairo 11431, Egypt
Tel: +202 37491299, Fax: +202 33383049
E-mail: monaaboulghar71@gmail.com