

# Laparoscopic salpingostomy for two types of hydrosalpinx: a step-by-step video tutorial

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**Objective:** This study aims to illustrate our laparoscopic salpingostomy approach for two types of hydrosalpinx, emphasizing various reproductive surgical techniques.

**Design:** A step-by-step demonstration of the technique is provided alongside narrated video footage.

**Setting:** University hospital.

**Patient(s):** Infertile patients with hydrosalpinx seeking natural conception.

**Intervention(s):** Laparoscopic salpingostomy for clubbed hydrosalpinx is demonstrated with video and includes the following steps: creating an opening into the tube at the terminal end for hydrosalpingeal fluid drainage; dissecting and removing peritubal and periovarian adhesions; excising redundant fimbrial tissues to restore fimbrial mobility; evert the mucosa using an intussusception method until endothelial folds are visible; confirming tubal patency with a dye test; heating the serosal surface of the tube to evert the edges; suturing the edges using 5-0 vicryl to the proximal serosa of the tube circumferentially with an inverting suture technique; thoroughly irrigating with Ringer's solution to remove blood clots and debris; and applying auto-crosslinked hyaluronan gel to the exposed raw surface. Salpingostomy for the cystic type differs, notably in carefully shaving the adhesive tubal end from the ovary until the tubo-ovarian ligament is completely exposed.

**Main Outcome Measure(s):** The primary aim of salpingostomy is to reduce the likelihood of distal tube re-obstruction. If hydrosalpinx recurs after salpingostomy, there remains a possibility of requiring additional surgery, such as salpingectomy, before in vitro fertilization.

**Result(s):** Extensive adhesions were meticulously dissected and removed from the peritoneal cavity. Fimbrial mobility was restored to establish a patent fallopian tube capable of ovum pickup. Electrocoagulation and suturing techniques were employed to evert the tube edges, effectively reducing the risk of re-obstruction. The utilization of an inverting suture technique aided in inwardly turning the cut edges, minimizing the risk of adhesion formation.

**Conclusion(s):** Laparoscopic salpingostomy, when performed by surgeons proficient in reproductive surgical techniques, provides a significant option for patients with hydrosalpinx seeking natural conception. The decision to preform salpingostomy or salpingectomy is usually made intraoperatively on the basis of the severity of tubal disease.

Clinical history is also an

important factor in decision to perform salpingostomy.

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El resumen está disponible en Español al final del artículo.

**Key Words:** Laparoscopic salpingostomy, hydrosalpinx, infertility



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## CRedit Authorship Contribution Statement

Jiangtao Lyu: Conceptualization, Project administration, Writing – review & editing. Dan Wei: Data curation, Formal analysis. Chengzhi Zhao: Formal analysis, Investigation, Writing – original draft.

## Declaration of Interests

J.L. has nothing to disclose. D.W. has nothing to disclose. C.Z. has nothing to disclose.

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Consent for publication: The patients included in this video gave consent for publication of the video and posting of the video online including social media, the journal website, scientific literature websites (such as PubMed, ScienceDirect, Scopus, etc.), and other applicable sites.

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**Salpingostomía laparoscópica para dos tipos de hidrosálpinx: videotutorial paso a paso**

**Objetivo:** Este estudio tiene como objetivo ilustrar nuestro abordaje de salpingostomía laparoscópica para dos tipos de hidrosálpinx, enfatizando diversas técnicas quirúrgicas reproductivas.

**Diseño:** Se ofrece una demostración paso a paso de la técnica junto con un video narrado.

**Lugar:** Hospital universitario.

**Paciente(s):** Pacientes infértiles con hidrosálpinx que buscan la concepción natural.

**Intervención(es):** Se demuestra con un video la salpingostomía laparoscópica para hidrosálpinx en palillo de tambor e incluye los siguientes pasos: crear una abertura en la trompa en el extremo terminal para el drenaje del líquido hidrosálpingeo; disecar y eliminar las adherencias peritubáricas y periováricas; extirpar los tejidos fimbriales redundantes para restaurar la movilidad fimbrial; evertir la mucosa utilizando un método de intususcepción hasta que los pliegues endoteliales sean visibles; confirmar la permeabilidad tubárica con una prueba de tinción; calentar la superficie serosa de la trompa para evertir los bordes; suturar los bordes con vicryl 5-0 a la serosa proximal de la trompa de manera circunferencial con una técnica de sutura invertida; irrigar minuciosamente con solución de Ringer para eliminar coágulos de sangre y residuos; y aplicar gel de ácido hialurónico auto-reticulado a la superficie cruda expuesta. La salpingostomía para el tipo quístico difiere, en particular en que se rasura cuidadosamente el extremo adhesivo de la trompa del ovario hasta que el ligamento tuboovárico quede completamente expuesto.

**Medida(s) de resultado principal(es):** El objetivo principal de la salpingostomía es reducir la probabilidad de reobstrucción de la trompa distal. Si el hidrosálpinx recurre después de la salpingostomía, existe la posibilidad de requerir cirugía adicional, como salpingectomía, antes de la fecundación *in vitro*.

**Resultado(s):** Las adherencias extensas se disecaron meticulosamente y se eliminaron de la cavidad peritoneal. Se restableció la movilidad fimbrial para establecer una trompa de Falopio permeable capaz de recoger óvulos. Se emplearon técnicas de electrocoagulación y sutura para evertir los bordes de la trompa, reduciendo de manera efectiva el riesgo de reobstrucción. La utilización de una técnica de sutura invertida ayudó a girar hacia adentro los bordes cortados, minimizando el riesgo de formación de adherencias.

**Conclusión(es):** La salpingostomía laparoscópica, cuando la realizan cirujanos expertos en técnicas quirúrgicas reproductivas, ofrece una opción significativa para pacientes con hidrosálpinx que buscan la concepción natural. La decisión de realizar una salpingostomía o salpingectomía suele tomarse intraoperatoriamente en función de la gravedad de la enfermedad tubárica. La historia clínica también es un factor importante en la decisión de realizar una salpingostomía.