Sclerotherapy of Endometrioma
How I do it

Refaat Salman
Abdulrahman Al-Qahtani
Vascular and interventional radiologists
King Abdulaziz Medical City and King Abdullah Specialized Children Hospital, Riyadh, Saudi Arabia
Disclosure

Speaker name:
Refaat Salman

I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☒ I do not have any potential conflict of interest
Acknowledgment

Dr. Abdulrahman Al-Qahtani
Consultant vascular and interventional Radiologist
King Abdulaziz Medical City, Ministry of National Guard Health Affairs
Riyadh, Saudi Arabia
Endometriosis

• The anomalous presence of endometrial glands and stroma outside the uterus.
Introduction

- Endometriosis is found in ectopic locations including the ovaries, peritoneum, and intestine.
- Affects 6 to 10% of women of reproductive age
- Symptoms include pelvic pain, dysmenorrhea, sciatic pain, dyspareunia, dysfunctional bleeding
- *Ovarian endometriosis* is found in up to 68% of infertile women.
Impact of unilateral versus bilateral ovarian endometriotic cystectomy on ovarian reserve: a systematic review and meta-analysis

Johnny S. Younis 1,2,*, Nora Shapso 1, Richard Fleming 3, Izhar Ben-Shlomo 1,2,†, and Ido Izhaki 1,2,‡
Ovarian reserve (AMH) after Surgery

- Unilateral cystectomy – 38.4% reduction
- Bilateral cystectomy – 53.9% reduction
Catheter-directed Sclerotherapy for Ovarian Endometrioma: Short-term Outcomes

Kichang Han, MD • Seok Kyo Seo, MD • Man-Deuk Kim, MD • Gyoung Min Kim, MD • Joon Ho Kwon, MD • Hee Joon Kim, MD • Jong Yun Won, MD • Do Yun Lee, MD

From the Department of Radiology (K.H., M.D.K., G.M.K., J.H.K., H.J.K., J.Y.W., D.Y.L.) and Division of Gynecologic Endocrinology, Department of Obstetrics and Gynecology (S.S.K.), Severance Hospital, Research Institute of Radiological Science, Yonsei University College of Medicine, 50-1 Yonsei-ro Seodaemun-gu, Seoul 03722, Korea. Received March 12, 2018; revision requested April 30; revision received June 12; accepted July 5. Address correspondence to M.D.K. (e-mail: mdkim@yuhs.ac).

M.D.K. supported by a faculty research grant from Yonsei University College of Medicine (6-2018-0101).

Conflicts of interest are listed at the end of this article.

See also the editorial by Powell in this issue.

Radiology 2018; 289:854–859 • https://doi.org/10.1148/radiol.2018180606 • Content codes: IR OB
**Purpose:** To evaluate the effectiveness of catheter-directed sclerotherapy (CDS) with 95% ethanol in patients with primary or recurrent ovarian endometriomas.

**Materials and Methods:** In this prospective study, 14 participants (mean age, 32 years; range, 20–44 years) who underwent CDS for ovarian endometrioma from March 2015 to December 2017 were evaluated. Diagnosis was based on symptoms and imaging studies. To assess the impact of CDS on ovarian reserve, serum anti-Müllerian hormone (AMH) was measured before CDS and 6 months after CDS. Serum cancer antigen 125 (CA-125) levels were also measured at the same time points. Follow-up US was performed 1, 3, and 6 months after CDS and biannually thereafter to monitor potential cyst size change and recurrence. Comparison of AMH, CA-125, and cyst size before and after CDS was performed by using the paired t test or Wilcoxon signed-rank test.

**Results:** Mean endometrioma size decreased from 5.8 cm ± 2.2 to 1.1 cm ± 1 (P < .001). During a mean follow-up of 12.7 months (range, 6.1–23.0 months), there were no recurrences of endometrioma. Pain was relieved in all participants, with a decrease in serum CA-125 level (P = .001). There was no difference in serum AMH level before and 6 months after CDS, indicating well-preserved ovarian function (4.29 ng/mL ± 2.47 vs 4.36 ng/mL ± 1.94, respectively; P > .875). There were no procedure-related complications.

**Conclusion:** Catheter-based sclerotherapy with 95% ethanol can lead to better short-term clinical outcomes and well-preserved ovarian function for patients with endometriomas.
Catheter-directed Sclerotherapy (CDS)

✓ Easier aspiration of thick and sticky content.
✓ Easier irrigation
✓ Lower risk of spillage of content or ethanol.
Catheter-directed Sclerotherapy (CDS)

✓ Multiloculated or septated endometriomas:
  Mechanical breakdown of septa through the guidewire.
✓ Positional change to allow even contact between the endometriotic wall and ethanol
✓ Longer indwelling time
Advantages of Sclerotherapy

✓ Number of Antral follicles increased

✓ Free space created (Dominant Follicles)

✓ Increased blood supply of ovary

✓ Follicles - not contaminated with endometrioma
Technique

✓ Access: Transabdominal or transvaginal under US guidance.
✓ Puncture with 21G / 18 G needle
✓ 0.035-inch guidewire
✓ 8 Fr catheter
• Chocolate-colored cyst aspiration.
• Contrast injection into the cyst under fluoroscopic guidance to determine any spillage.
• Aspiration of contrast and injection of 95% Ethanol at a volume of 25 to 80% of the aspirated volume.
• Positional change at every 5 minutes (supine, prone, and decubitus) with the catheter clamped.
• After 20 minutes aspiration of Ethanol and catheter removal.
Postprocedual Medication

Dienogest 2mg (Progestin): Visanne ® for 6mo to 4yrs

Or Gonadotropin Releasing Hormone (GnRH) agonist
24 y/o
C.C: lower abd. pain, AMH: 5.87 ng/mL
F/U US at 1 year

1. Size: 6.9cm -> undetectable

2. Serum AMH: 5.25 ng/ml -> 4.98 ng/ml

3. Pain score: 6 -> 0
F/36  10cm size of endometrioma
• 33 y secondary infertility, Pain
• After one month: Pain score: 0

• After 6 months: Significant elevation of AMH level from 1.41 pmol/L to 11.62 pmol/L
• 31-year-old with chronic pelvic pain
27 Y, dysmenorrhea
One month follow up

- Pain score = 0
- Discharged from Gyne clinic
Conclusion

• CDS seems to be a promising treatment modality for ovarian endometrioma.

• Ovarian reserve was well-preserved in patients who underwent CDS for endometriomas, which may contribute to future fertility.
THANK YOU