


Laparoscopic Tubo-Ovarian Abscess Surgery: Tips & Tricks

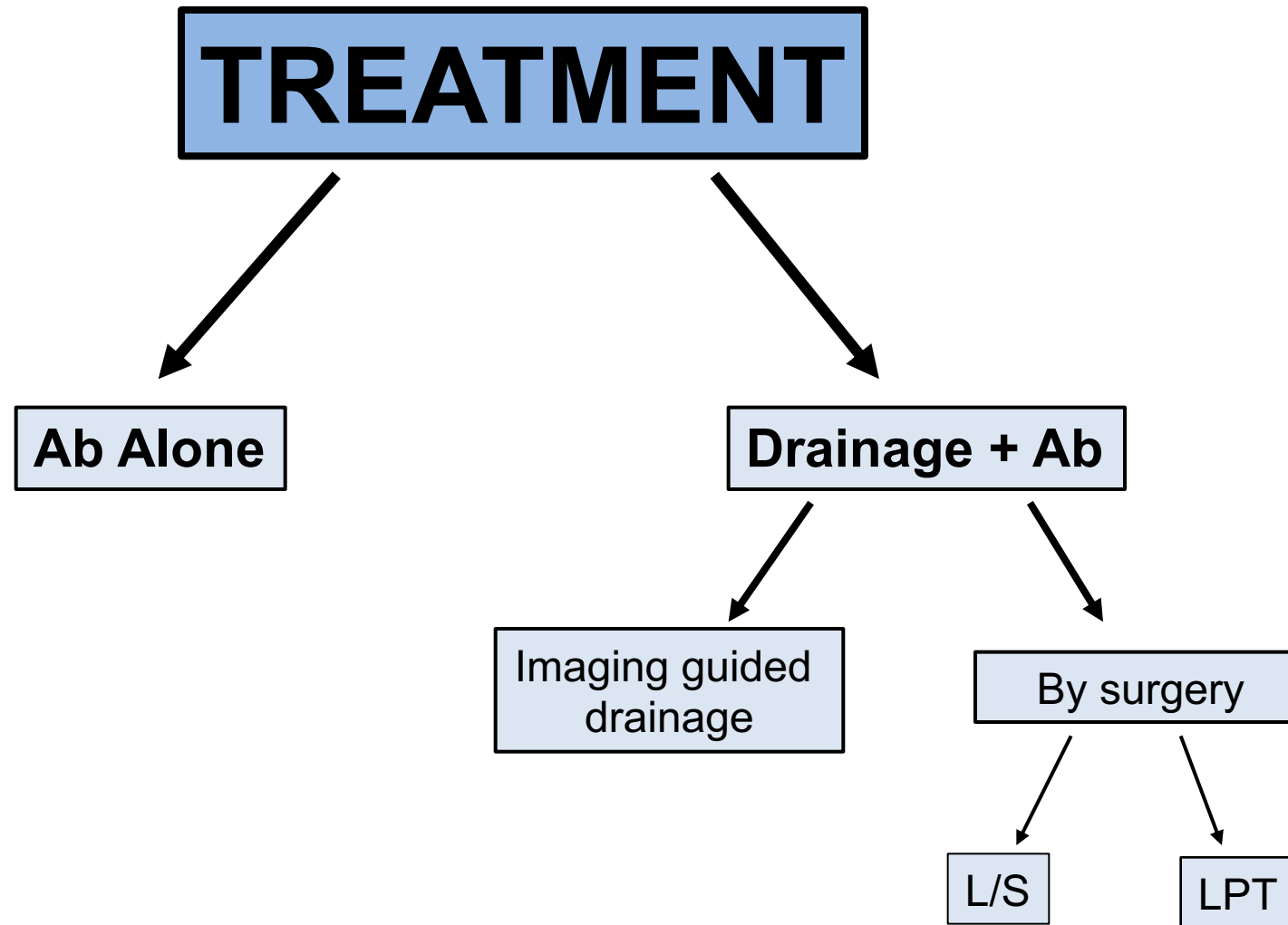
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Introduction

- Tubo-ovarian abscesses (TOA) are generally reported as **complicating 10-15% of pelvic inflammatory disease (PID)**.
- **15-34% of** women diagnosed PID, presented **with TOA**.
- TOAs are most common in the **third and fourth decades** of life. Nearly **70%** of TOAs are **unilateral**.
- Aggressive medical and/or surgical therapy is required, and  rupture of an abscess may result in sepsis (mortality rate → 5-10%)
- **Previously**, treatment for TOA consisted of **LPT and/or antibiotics** (Ab).



Ab Alone

Antibiotic (Ab) alone (1)

- The use of broad-spectrum I.V. Ab alone is successful in **34-87.5%** of women with TOA.
- Success rate of Abs alone is especially **low in large TOAs.** **(large ???)**
- There is a **high recurrence rate** for TOA following treatment **with Abs alone (30%).**

*Granberg S, et al. Best Prac & Res. Clin Obs Gynecol 2008
Reed SD, et al. Am J Obstet Gynecol 1991*

- Ab alone is effective in approximately **70% of patients**.

- Suggest Ab therapy alone;
 - a) Hemodynamically stable with **no sign of a ruptured TOA**
 - b) Continued clinical improvement
 - c) **Abscess < 7cm in diameter**
 - d) Premenopausal
 - e) Adequate response to intravenous Ab

Beigi RH. UpToDate Feb 2022

Regimens	Dose (adult)
First choice* [1-4]	
Cefoxitin plus	2 g IV every 6 hours
Doxycycline	100 mg orally or IV every 12 hours
OR	
Cefotetan plus	2 g IV every 12 hours
Doxycycline	100 mg orally or IV every 12 hours
OR	
Clindamycin plus	900 mg IV every 8 hours
Gentamicin [¶]	2 mg/kg loading dose then 1.5 mg/kg every 8 hours IV or IM
OR	
Ampicillin plus	2 g IV every 6 hours
Clindamycin plus	900 mg IV every 8 hours
Gentamicin (3-antibiotic regimen) [¶]	2 mg/kg loading dose then 1.5 mg/kg every 8 hours IV or IM
OR	
Ampicillin-sulbactam plus	3 g IV every 6 hours ^Δ
Doxycycline	100 mg orally or IV every 12 hours
Second choice [◇]	
Levofloxacin plus	500 mg IV once daily
Metronidazole	500 mg IV every 8 hours



Sexually Transmitted Diseases

Summary of

2015

CDC Treatment Guidelines



**Centers for Disease
Control and Prevention**
National Center for HIV/AIDS,
Viral Hepatitis, STD, and
TB Prevention



Birinci tercih	
Cefoxitin and Doxycycline	2 g IV every 6 hours 100 mg orally or IV every 12 hours
Cefotetan and Doxycycline	2 g IV every 12 hours 100 mg orally or IV every 12 hours
Clindamycin and Gentamicin	900 mg IV every 8 hours 2 mg/kg loading dose then 1.5 mg/kg every 8 hours IV or IM
Ampicillin and Clindamycin and Gentamicin (3-antibiotic regimen)	2 g IV every 6 hours 900 mg IV every 8 hours 2 mg/kg loading dose then 1.5 mg/kg every 8 hours IV or IM
Ampicillin-sulbactam and Doxycycline	3 g IV every 6 hours Δ 100 mg orally or IV every 12 hours





Box 1. Possible antibiotic regimens for a tubo-ovarian abscess

IV ofloxacin 400 mg twice-daily plus intravenous (IV) metronidazole 500 mg three times a day

IV clindamycin 900 mg three times a day plus IV gentamicin

IV ceftiofloxacin 2 g three times a day plus IV/PO doxycycline 100 mg twice-daily

IV ciprofloxacin 200 mg twice-daily plus IV/PO doxycycline 100 mg twice-daily plus IV metronidazole 500 mg three times a day



Clindamycin 900 mg 3x1 (IV) + Gentamicin 3x1 (IV)

or

Oflaxacin 400 mg 2x1 + Metronidazole 500 mg 3x1 (IV)


Antibiotic therapy for pelvic inflammatory disease (Review)

Savaris RF, Fuhrich DG, Maissiat J, Duarte RV, Ross J

- 39 RCT, n=6894

Authors' conclusions: We are uncertain whether one treatment was safer or more effective than any other for the cure of mild-moderate or severe PID.

Retrospective study on the efficacy and prognostic factors of conservative versus drainage of tubo-ovarian abscesses

Tiffany Tuck Chin Wong¹  · Hester Chang Qi Lau¹ · Thiam Chye Tan¹

2020

- Retrospective
- n= 102 (TOA)
- **85.3% → Ab alone**
- **20.7% → Failed Ab**

Age > 40 y
Diameter > 7 cm
Fever (+)

are at a higher risk of medical treatment failure

Experience of tubo-ovarian abscess in western Turkey



Kemal Güngördük ^{a,*}, Esra Guzel ^a, Osman Asicioğlu ^b, Gokhan Yildirim ^c, Guler Ataser ^a, Cemal Ark ^c,
Sıdıka S. Gulova ^b, Cihangir Uzuncakmak ^a

- Retrospective
- n= 296 (TOA)
- **25.7% → Failed Ab**

2014

Diameter > 6.5 cm

CRP > 21.0 mg/dl

are at a higher risk of medical treatment failure

Gungorduk K et al. Int J Gynecol Obstet 2014

Experience of Tubo-Ovarian Abscess: A Retrospective Clinical Analysis of 318 Patients in a Single Tertiary Center in Middle Turkey

2017

- Retrospective
- n= 318 (TOA)
- **29.25% → Failed Ab**

Diameter > 6.5 cm

CRP > 24.5 mg/dl

are at a higher risk of medical treatment failure

Inal ZO et al. Surg Infect 2017



Poor prognostic factors associated with a lack of response
to medical treatment



- **Diameter > 5cm**
- **Age > 40y**
- **High WBC**
- **Smoking**

Larger TOAs, resulting from chronic untreated PID, may lead to a scarred anaerobic environment resistant to Ab penetration

Surgical intervention was reported to be necessary minimally in about 25% of all patients with TOA

Conditions that not allow the imaging-guided drainage;

- 1) Size and extension of the TOA
- 2) Ruptured TOA
- 3) Multilocular TOA
- 4) The adhesions related to bowels
- 5) The high density of the TOA

WHY L/S

???

L/S Surgery –TOA

L/S may offer the advantages of the minimally invasive surgical approach.

**Accurate
Diagnosis**

**Drainage of
Purulent
Material**

**Rapid
Recovery**

**Improved
Preservation
of Fertility**

**Magnification
with Minimal
Complications**

Others

Outcomes of Minimally Invasive Management of Tubo-ovarian Abscess: A Systematic Review

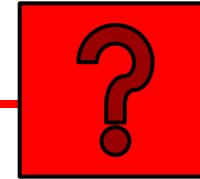
Oluwatosin Goje, MD, MSCR, Metabel Markwei, ScM, Swapna Kollikonda, MD, Monica Chavan, BS, BA, and David E. Soper, MD



March, 2021

- Review Article
- n= 975 (10 study)
- Success rates
- IGD+Ab → 90-100%
- L/S+Ab → 89-96%
- Ab alone → 65-83%

Our Experience (1)



- 2016 January-2019 January
- Retrospective
- n= 109 Surgical approach

- TVUSG Guided Drainage+ Abs → 12/109 (11.0%)
- TVUSG G. Drain.+L/S surgery +Abs → 1/109 (0.92%)
- L/S Surgery + Abs → 90/109 (82.6%)
- LPT → 6/109 (5.51%)

MIS Approach → 94.5%

Our Experience (2)

(n=109)	Patients' Characteristics (mean \pm SD)
Age (year)	41.3 \pm 7.51
Gravida	2.8 \pm 1.78
Parity	2.11 \pm 1.18
Nulliparous (n, %)	8 (7.3%)
Menopause (n, %)	8 (7.3%)
Diameter of TOA (cm)	8.2 \pm 2.71
Bilaterality (n, %)	55/109 (50.5%)



Our Experience (3)

(n=91)	L/S Surgery
Conversion to LPT	10/91 (10.9%)
Intraop. Complication	3/91 (3.3%) (bladder perf, intestinal injury [n=2])
Postop. Complication	7/91 (7.7%) (6 paralytic ileus, pulmonary embolism [n=1])

Recurrent PID

L/S Surgery +Abs

3/91 (3.3%) [po 4. month, po 6. month, po 2th year]

Ideal approach for L/S TOA Surgery

PREOPERATIVE EVALUATION

- 1) Patients should be evaluated in detail at preoperatively.
- 2) Patient and her relatives should be informed about the importance of disease and complications of the surgery.

Ideal approach for L/S TOA Surgery

INTRAOPERATIVE EVALUATION

- 1) Abdominal status should be evaluated with physical examination and USG for adhesions.
- 2) Palmer point or open technique should be used at first entry in any suspicious of umbilical region adhesions.
- 3) Trocar placement is crucial and should be designed according to the patient's condition.

Ideal approach for L/S TOA Surgery


INTRAOPERATIVE EVALUATION

- 4) Surgeons should be very careful about the injury and blunt dissection should be used with the guide of anatomic marks.
- 5) Uterine manipulator should always be used if Douglas pouch is obliterated.
- 6) Drainage and organ preserving surgery should be performed if the patient desires fertility.

Ideal approach for L/S TOA Surgery

INTRAOPERATIVE EVALUATION

- 4) Ablative surgery should be performed if the patient completed her fertility (lysis of adhesions, drainage of the abscess, excision of infected and necrotic tissues, bilateral salpinxectomy, and irrigation of the peritoneal cavity).
- 5) Cystoscopy and water-air test should be performed in case of any suspicious of the ureteral or bowel injury.



STANDARD SURGICAL INSTRUMENTS FOR THE
TECHNIQUE

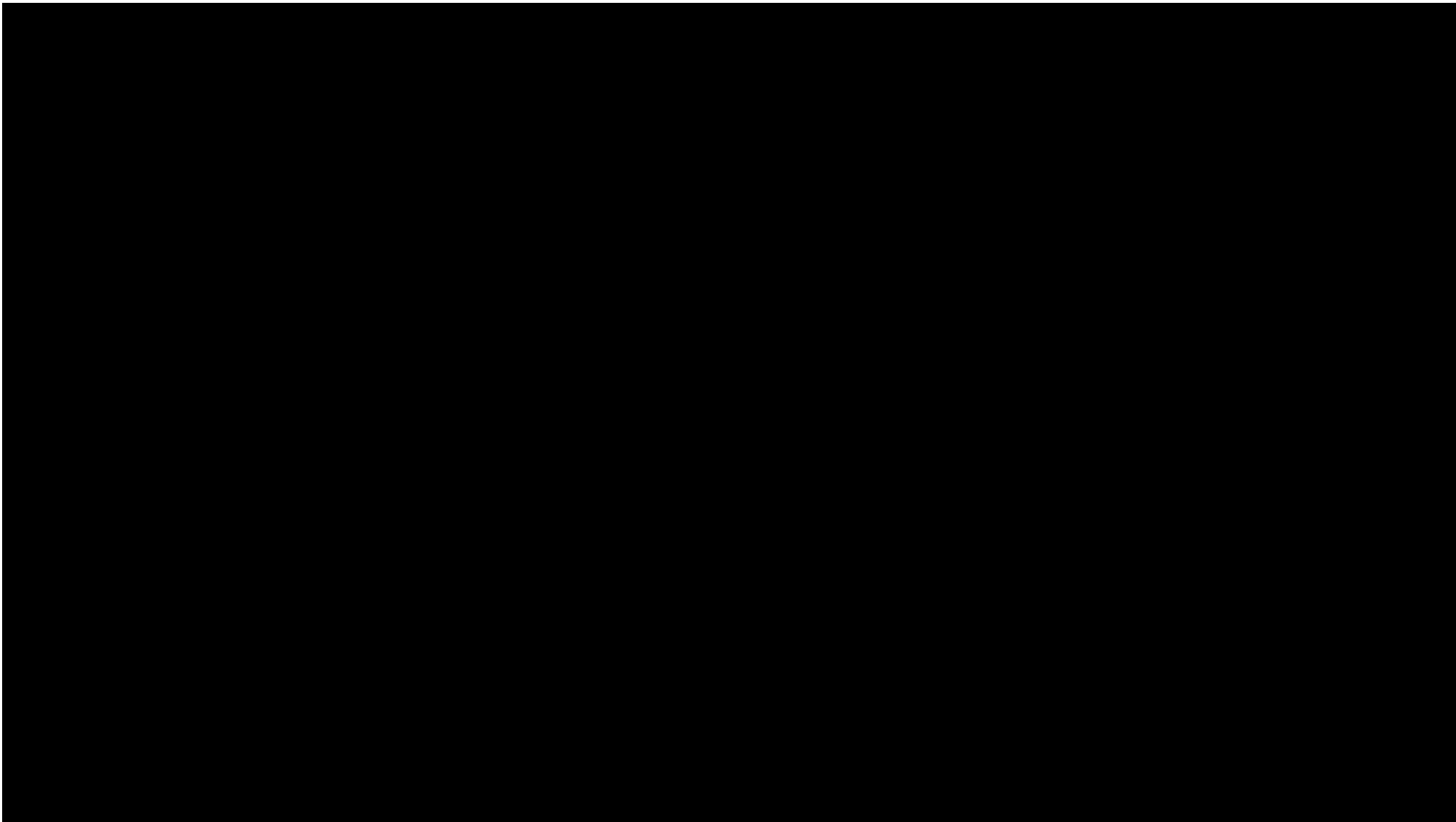
Laparoscopic Management of Pelvic Abscess

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Conclusion (1)

- Ab alone is effective in approximately 70% of patients with 30% recurrence rate.
- Imaging-guided drainage with Ab is 90-95% effective in eligible patients.
- Laparoscopy should be performed as the initial approach when surgery is necessary, since it is minimally invasive procedure.

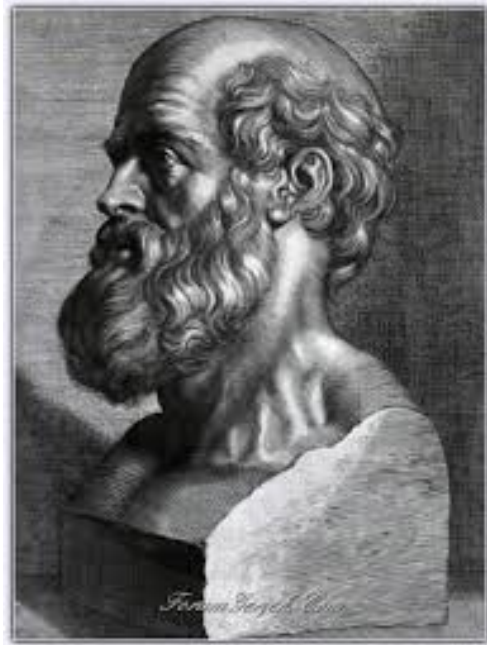
Conclusion (2)

- The advantages of L/S allow for an accurate diagnosis, effective treatment under magnification with minimal complications, possibly faster response rates with shorter hospitalization and decreased infertility.
- MIS + Ab is a feasible, safe, and efficient technique for treating adnexal abscess.

Conclusion (3)

➤ **Experience is the key element to being successful at TOA management...!!!**

Primum non nocere..!



-Corpus Hippocraticum-



1881 - ∞

TESEKKÜRLER.....

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