—Original Article—

# Transrectal drainage of pelvic collections: Experience of a single center

**Jean-Philippe Ratone, Julie Bertrand, Sébastien Godat[1], Jean-Paul Bernard, Laurent Heyries**
Hôpital de la Conception, Gastroenterology Unit, Marseille, France, [1]Centre Hospitalo-Universitaire Du Vaudois, Endoscopic Unit, Lausanne, Switzerland

## ABSTRACT

**Background and Objective:** Pelvic abscesses are a well-known complication of intestinal diseases or abdominal surgery. We report our case series concerning transrectal drainage by endoscopic ultrasound (EUS). **Methods:** Between January 2010 and august 2014, seven patients received transrectal drainage by endoscopic ultrasound (EUS) were selected and analyzed. **Results:** Two pigtails was positioned under fluoroscopic and EUS control. The success rate was 100% and complication rate was 0%. The median time of hospitalization was 10 days [range 4-25]. **Conclusions:** The technique appears to be safe and feasible in all etiologies. In our experience, we can considerate transrectal drainage by EUS like a first-line technique in experienced hands.

**Key words:** Pelvic abscesses, transrectal drainage, therapeutic EUS

## INTRODUCTION

Pelvic abscess is a well-known complication of intestinal diseases or abdominal surgery. Radiological drainage and surgery are usual treatments for these complications.[1-3] Therapeutic transrectal or transcolonic drainages with endosonography ((endoscopic ultrasound) EUS) are now considered as a mini-invasive option for the treatment of pelvic abscesses.[4] The aim of our case series is to confirm that EUS transrectal drainage is effective, safe, and induces a short duration of hospitalization.

## MATERIALS AND METHODS

We did a single-center retrospective analysis of seven patients with pelvic abscess treated by EUS transrectal drainage between January 2010 and August 2014. There were four men and three women, with a median age of 50 years (range 22-68). All patients underwent abdominopelvic computed tomography (CT) before drainage. Colon preparation was achieved by administration of polyethyleneglycol or rectal enemas. A concomitant intravenous antibiotic treatment was always administered be for EUS and for a minimum of 7 days after drainage. A new evaluation by CT was performed between 1 and 2 months after drainage. Pigtails were removed only if CT evaluation showed flattening of the abscess. The method of drainage was done with a linear interventional echoendoscope (PENTAX®) (EG 3870UTK PENTAX-HITACHI™, Hambourg, Germany). EUS-Doppler evaluation was first performed to exclude the presence of intercalated blood vessels before puncture with a 19-Gauge access needle (Cook) (19 G, EchoTip Access Needle, Cook™ Ireland Ltd., Limerick, Ireland). The puncture tract was then enlarged with a 10 French diathermic cystostomy over a tetrafluoroethylene (TFE)-coated 0.035-inch guidewire (Cook Endoscopy®, Winston-Salem, NC, USA). A second guidewire was then put into the cavity,

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**Address for correspondence**
Dr. Jean-Philippe Ratone, Hôpital de la Conception Gastroenterology Unit, 147 Bd Baille, 13005, Marseille, France.
E-mail: jpratone@gmail.com
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and two 7 French double pigtail plastic stents were positioned (4 or 7 cm length).

## RESULTS

EUS drainages were done for a majority of abscesses post surgery ($n$ = 5/7). The treatment was feasible and effective in 100% of cases [Figures 1-7], without supplementary radiological or surgical intervention [Table 1]. The median time of hospitalization was 10 days (range 4-25 days). The main difficulty related to this technique is the positioning of the double pigtail plastic stents, induced by pus outflow that can reduce the endoscopic visibility. Spontaneous migration of one stent happened postoperatory for some patients. However, the drainage still efficient in these cases without any adverse events. Two of our patients were embarrassed by the length of the double pigtail plastic stents which protruded in the anal canal.

## DISCUSSION

Since 2003, EUS pelvic abscesses drainage is performed; given the proximity between the rectal lumen and the abscess,[4-8] with a mini-invasive technique compare to radiological or surgical drainage. Moreover, percutaneous drainage may be difficult to realize and uncomfortable, especially if the collection is in deep location which needs a posterior drainage.[2,3,8] Our case series show identical results compared to the current literature. Our technique is safe, without adverse events observed; and is actually well standardized, in analogy with 10 years of practice for EUS drainage of pancreatic pseudocysts. The use of the fluoroscopy and cystostomy facilitates the procedure and can be easily used by experienced operators. The length of double pigtail plastic stents should be as short as possible, especially if drainage is done in the lower rectum, because it may cause discomfort if it touches the anal canal. We can also conceive that the length of hospital stay could be

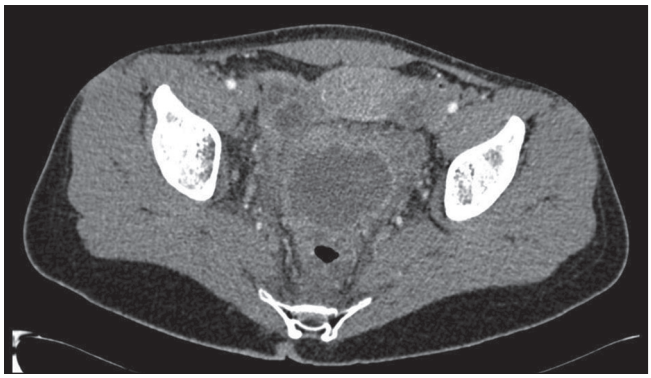

**Figure 1.** Pelvic abscess before drainages

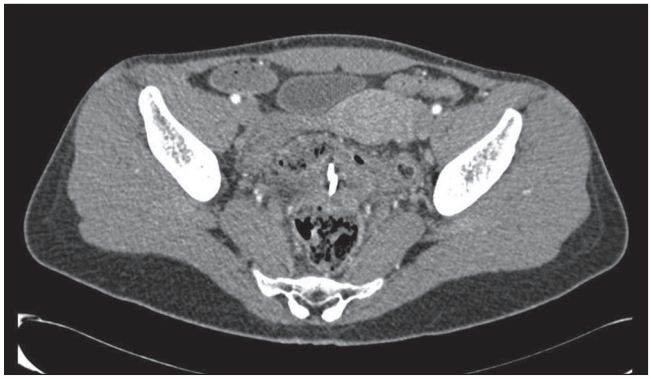

**Figure 2.** Pelvic abscess after drainage

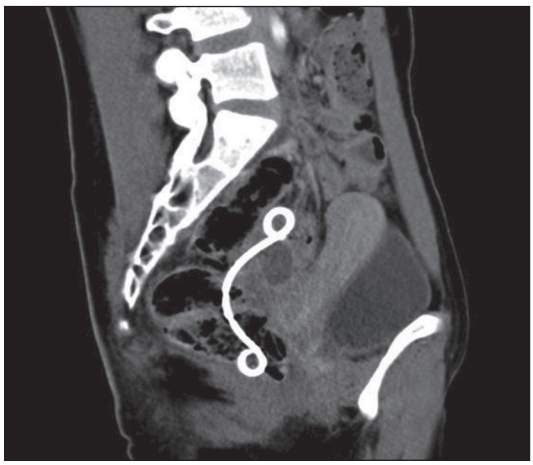

**Figure 3.** Sagittal view of pigtail stent in pelvic abscess

**Table 1. Etiology and outcomes**

| No patient | Etiology | Abscess location | Abscess size (cm) | Duration hospitalization (days) | Outcome | Median follow-up (month) |
|---|---|---|---|---|---|---|
| 1 | Post Crohn surgery | Douglas | 9×5 | 10 | Success | 42 |
| 2 | Post appendectomy | Douglas | 6×4 | 4 | Success | 3 |
| 3 | Infected hematoma | Retrorectal | 5×4 | 20 | Success | 8 |
| 4 | Post colectomy | Douglas | 10×7 | 10 | Success | 4 |
| 5 | Spontaneous | Douglas | 6×5 | 10 | Success | 1 |
| 6 | Post biliary surgery | Douglas | 6×4 | 25 | Success | 3 |
| 7 | Post appendectomy | Douglas | 8×5 | 4 | Success | 3 |

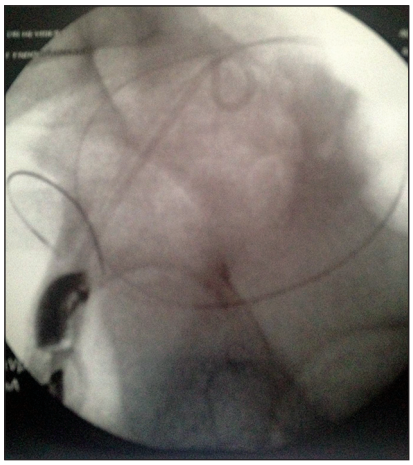

**Figure 4.** Fluoroscopic view of first pigtail insertion

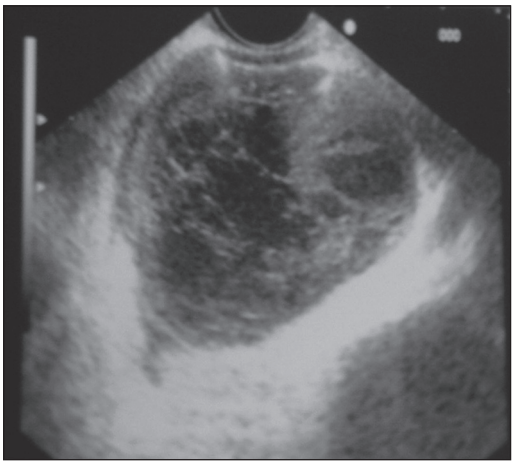

**Figure 5.** Endoscopic ultrasound (EUS) view of Douglas abscess

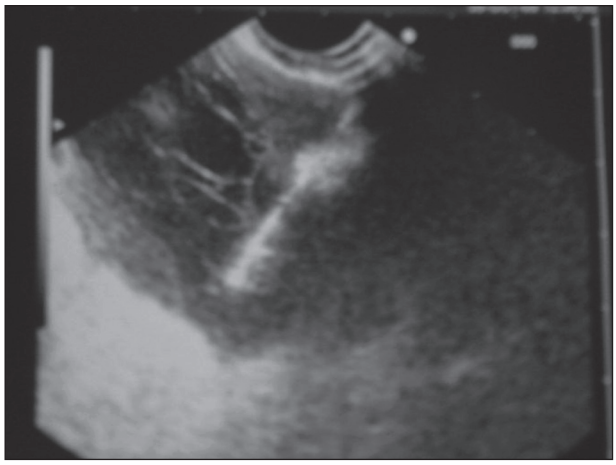

**Figure 6.** EUS view of abscess puncture

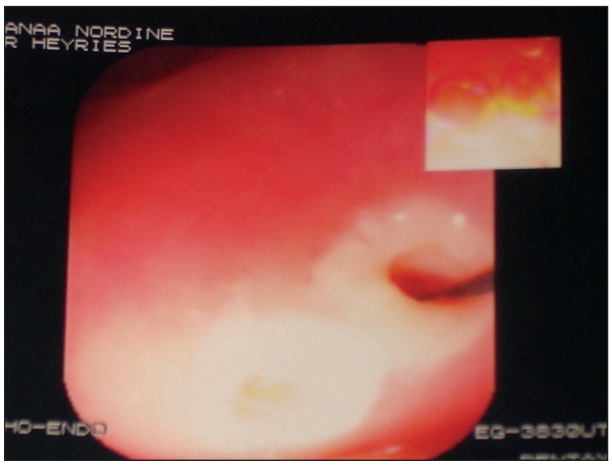


**Figure 7.** Endoscopic view with first guidewire insertion

further reduced if the antibiotic treatment is continued orally in selected patients.

## CONCLUSION

EUS transrectal drainage is a safe and an efficient method for therapeutical treatment of pelvic abscess. In our experience, we recommend EUS transrectal drainage for pelvic abscess as the first-line technique for experienced hands.

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