

## Transrectal ultrasound-guided endoscopic drainage and vacuum therapy of pelvic abscesses: an alternative to (computed tomography-guided) percutaneous drainage

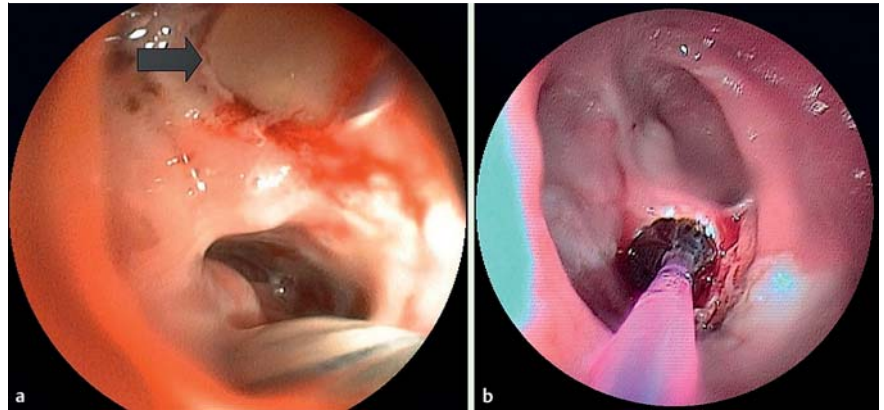


**Fig. 1** Abdominal computed tomography (CT) scan in a 43-year-old man with abdominal pain but no fever showing a pelvic abscess measuring 4×4.5×6 cm (see measuring mark) due to complicated diverticulitis (Hansen and Stock IIb). The sigmoid colon, filled with contrast media, can be seen posterior to the abscess.

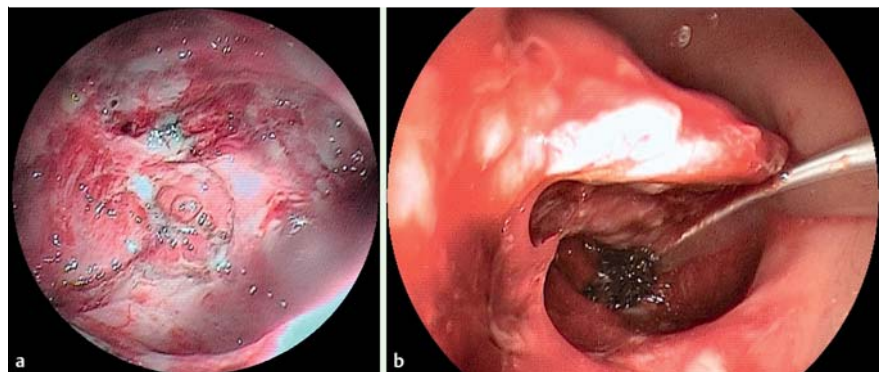


**Fig. 2** Endosonographic view of the pelvic abscess for exact localization.

A 43-year-old, otherwise healthy man had increasing abdominal pain in the lower abdomen without a fever. His leukocyte count was  $20.0 \times 10^9/L$  (normal range:  $4-9 \times 10^9/L$ ) and the C-reactive protein level was 155.5 mg/L (normal <5 mg/L). Abdominal computed tomography (CT) con-



**Fig. 3** a Pus (arrow) released into the sigmoid colon following puncture of the abscess. b The puncture site was dilated using a balloon.



**Fig. 4** a Endoscopic view of the flushed abscess cavity. b Insertion of a vacuum therapy sponge into the abscess cavity.

firmed the suspected diagnosis of diverticulitis and revealed a large pelvic abscess (● Fig. 1). The intended CT-guided drainage [1] carried a high risk of injury to the iliac vessels in a translumbar approach and of damaging the sciatic nerve for access through the obturator foramen. The overlying small bowel forbade a ventral approach. The patient underwent transrectal endosonography (● Fig. 2) for localization of the abscess. Using an endoscopic cystoenterostomy device (Cystotome, Cook Medical, Winston-Salem, North Carolina, USA), originally developed for transgastric puncturing of pancreatic pseudocysts, the abscess was punctured under ultrasonographic guidance. After the puncture site was emptied of pus and dilated with a standard balloon (● Fig. 3),

the abscess cavity was flushed and a vacuum therapy sponge (Endo-SPONGE, B. Braun, Melsungen, Germany) was inserted into it (● Fig. 4). The patient received antibiotics and parenteral feed for the first week. No ostomy was placed. The vacuum therapy sponge was changed endoscopically on every third day until day 17, when the patient was discharged. Laparoscopic sigmoid resection was performed 1 month later without complications.

The abscess should be punctured as far orally as possible because the sigmoid resection must include the fistula created by the puncture. Otherwise, the resection line will unnecessarily be pushed further aborally. Transrectal one-time abscess puncture [2], and temporary transrectal

drain placement are feasible options [3]. However, in case of complicated diverticulitis, transrectal ultrasound-guided endoscopic drainage followed by vacuum sponge therapy similar to that for an anastomotic leak in the same region [4,5] is a safe alternative in the hands of an experienced endoscopist and might spare the patient an ostomy.

Endoscopy\_UCTN\_Code\_TTT\_1AS\_2AZ

**Competing interests:** None

**J. Knuth<sup>1</sup>, B. Krakamp<sup>2</sup>, M. M. Heiss<sup>1</sup>, D. R. Bulian<sup>1</sup>**

<sup>1</sup> Department of Abdominal, Vascular and Transplant Surgery, Merheim Medical Center, Witten/Herdecke University, Cologne

<sup>2</sup> Department of Internal Medicine I, Merheim Medical Center, Witten/Herdecke University, Cologne

## References

- 1 Schechter S, Eisenstat TE, Oliver GC et al. Computerized tomographic scan-guided drainage of intra-abdominal abscesses. Pre-operative and postoperative modalities in colon and rectal surgery. *Dis Colon Rectum* 1994; 37: 984–988
- 2 Lorentzen T, Nolsøe C, Skjoldbye B. Ultrasound-guided drainage of deep pelvic abscesses: experience with 33 cases. *Ultrasound Med Biol* 2011; 37: 723–728
- 3 Hovsepian DM. Transrectal and transvaginal abscess drainage. *J Vasc Interv Radiol* 1997; 8: 501–515
- 4 Mees ST, Palmes D, Mennigen R et al. Endo-vacuum assisted closure treatment for rectal anastomotic insufficiency. *Dis Colon Rectum* 2008; 51: 404–410
- 5 Nagell CF, Holte K. Treatment of anastomotic leakage after rectal resection with transrectal vacuum-assisted drainage (VAC). A method for rapid control of pelvic sepsis and healing. *Int J Colorectal Dis* 2006; 21: 657–660

## Bibliography

**DOI** <http://dx.doi.org/10.1055/s-0032-1326123>  
Endoscopy 2013; 45: E3–E4  
© Georg Thieme Verlag KG  
Stuttgart · New York  
ISSN 0013-726X

## Corresponding author

**J. Knuth**

Department of Abdominal,  
Vascular and Transplant Surgery  
Merheim Medical Center  
Witten/Herdecke University  
Cologne  
Fax: +49-(0)221-89078561  
[jurgen.knuth@gmx.net](mailto:jurgen.knuth@gmx.net)