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TRICK OF THE TRADE

Comparison of conventional incision and drainage for pilonidal abscess versus novel endoscopic pilonidal abscess treatment (EPAT)

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Acute sacrococcygeal pilonidal abscess is a common surgical presentation with a reported incidence of up to 26/100,000 most commonly treated with incision and drainage and subsequent healing by secondary intention [1]. The reported recurrence rate after conventional I & D varies from 10.9 to 66.6% in cases of recurrent pilonidal abscesses [2]. Further morbidity can result from packing, which is painful and expensive. The cost of one such episode is approximately £159.84, with the average patient requiring 7.4 dressings over 21 days [3]. Endoscopic treatment for pilonidal disease in the elective setting is now recognised as safe and effective technique with better short- and long-term outcomes [4, 5]. Using the described principles of video-assisted surgery, we applied this to the treatment of acute pilonidal abscesses—endoscopic pilonidal abscess treatment (EPAT). The technique involves making a small 1-cm incision over the most fluctuant part of the abscess (Fig. 1a) and then using the fistuloscope (Karl Storz) to directly visualise the cavity, drain its contents, thorough irrigation and washout and subsequent fulguration of the abscess cavity (Fig. 1b) wall alongside any identified tracts. The post-operative wound (Fig. 1c) is small and therefore eliminates the need for formal packing. Patients are counselled and discharged with the advice to irrigate the wound with saline using a 10-ml syringe. We have compared the efficacy of EPAT with conventional incision and drainage of pilonidal abscesses.

An observational study was carried out using a prospectively maintained database for all patients undergoing EPAT between January 2015 and April 2016. All EPAT patients were followed up at 2 weeks in the clinic. Subsequent clinic follow-up for all patients was then decided based on the need for definitive management of any persistent sinuses. Patients in both groups were followed up between 3 and 6 months in the telephone clinic.

Forty patients were included in this study, twenty in each group. Median age in both groups was 24 years, with a balanced male-to-female ratio, ASA grade, BMI and median duration of symptoms (4 days) in both groups. Nine patients in the EPAT group (45%) and five patients in the I & D group (25%) received antibiotics prior to admission, range 2–7 and 1–9 days, respectively. Number of patients who had previously had surgical intervention for pilonidal abscess was 10 (50%) and 9 (45%), respectively. No patients in either group had previously been offered definitive treatment for their pilonidal disease. Table 1 summarises the peri-operative data and follow-up parameters in the two groups. All patients were discharged home within 24 h of operation. Median post-operative VAS pain scores in the EPAT and I & D groups were 1 (IQR 1–2) and 2 (IQR 1–3), respectively, p value 0.038. All patients in I & D group required district nurse review, whereas only 8 patients in the EPAT group required district nurse review. There was a significant difference in the median duration of complete wound healing (days) [EPAT; 16 (14–24), I & D; 28 (21–35), p value <0.0018] and return to work (weeks) [EPAT; 2.5 (2–4), I & D; 4 (2–7), p value <0.05]. The median length of time for which patients required packing was 14 days. There were no recurrent abscesses within 6 weeks in either group; however, there were three patients in the I & D group who required surgical intervention for recurrent pilonidal abscesses within 6 months and none in the EPAT group. Four patients of the EPAT cohort required definitive elective surgery; two

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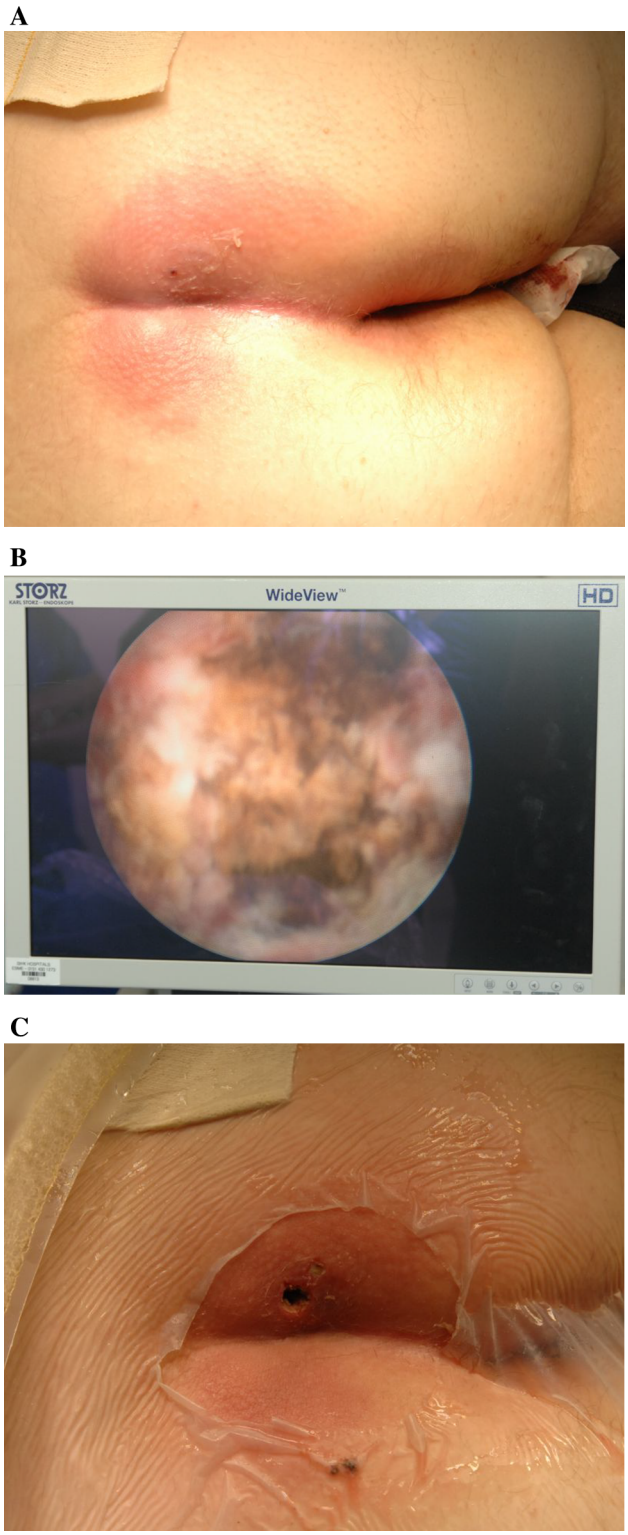

Fig. 1 Intra-operative findings

underwent excision of the sinus, and two required a lotus petal flap. Similarly four patients in the I & D cohort underwent definitive treatment for pilonidal disease in the form of endoscopic pilonidal sinus treatment (EPSiT) and lotus petal flap reconstruction.

Table 1 Peri-operative data and follow-up

Variables	I & D	EPAT	*p* value
Pre-operative inflammatory markers			
WBC ($\times 10^9$ per L) (IQR)	12 (11.1–16)	12.8 (10.6–15.2)	NS
CRP (mg/L) (IQR)	64 (29–102)	35.5 (17–76)	
Pre-operative antibiotics (*n*) (%)	5 (25%)	9 (45%)	NS
Median operative time (min) (IQR)	13.5 (11–15)	38.5 (29–47)	**<0.05**
Post-op stay			NS
Same day discharge (*n*) (%)	15 (75)	14 (70)	
1st post-op day discharge (*n*) (%)	5 (25)	6 (30)	
Median post-op VAS pain score (IQR)	2 (1–3)	1 (1–2)	**0.04**
Median follow-up (months) (IQR)	13 (12–14)	10.5 (6–12)	
Number of patients requiring district nurse review (*n*) (%)	20 (100%)	8 (40%)	**0.0000**
Median duration of wound healing (days) (IQR)	35 (24.5–42)	16 (14–24)	**0.0018**
Median time to return to work (weeks) (IQR)	4 (2–7)	2.5 (2–4)	**0.05**
Further abscess within 6 weeks (*n*) (%)	0 (0%)	0 (0%)	NS
Definitive surgery required (*n*) (%)	4 (20%)	4 (20%)	NS

Bold values are statistically significant

Compared to conventional incision and drainage of pilonidal abscesses, endoscopic approach is associated with reduced post-operative pain, duration of wound healing, need for district nurse review and return to work. EPAT is a novel and safe, minimally invasive approach which is associated with reduced post-operative morbidity without compromising the adequacy of abscess drainage. Larger, multi-centre, randomised studies should be undertaken to further evaluate the efficacy of this technique.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval The study was approved by the departmental, institutional review board.

Informed consent Informed consent was obtained from all individual participants included in the study.

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