

Incidence of Development of Perianal Fistula after Perianal Abscess Surgery

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Introduction

Anorectal abscesses and fistulas can be thought of as two sequential phases of the same anorectal infectious process: an abscess represents the acute phase of infection, while a fistula represents the chronic phase of suppuration and fistula formation. [1] The majority of anorectal suppurative disease results from infections of the anal glands (cryptoglandular infection) found in the inter-sphincteric plane [2]. Their ducts traverse the internal sphincter and empty into the anal crypts at the formation of an abscess that enlarges and spreads along one of several planes in the perianal and perirectal spaces. As an abscess enlarges, it spreads in several directions. The most common presentation is a painful, tender swelling at the anal verge [3]. Treatment is Incision and Drainage as soon as diagnosis is confirmed. Drainage of anorectal abscess results in cure for about 50% patients. Remaining 50% develop a persistent fistula in ano. The fistula originates in the infected crypt (internal opening) and tracks to the outside (usually site of prior drainage), following the previous abscess cavity (Sabiston) [4].

Objective

The purpose of this study is to find the number of cases of perianal abscess that underwent Incision and Drainage at Ysbyty Gwynedd Hospital, Bangor, North Wales, in the last 3 years, and the percentage that developed a perianal fistula [5, 6].

Method

This was done as a retrospective study, taking data from November 2018 till November 2021. Both emergency and elective surgeries for perianal abscess were considered, which came out to be 150 surgeries in total. Data was collected from electronically stored operation notes and cross checked with patient records, maintaining confidentiality throughout [7,8]. Patients who underwent any surgical procedure (Examination under anesthesia, Incision and Drainage, etc) for perianal abscess were included. Any patient that was treated conservatively, ischio-rectal abscess, necrotizing fasciitis, and gluteal/genital abscess or patients who only presented with a fistula were not included in this study. Electronic records were checked to follow up for development of any new fistula [9].

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Results

In total 150 cases of perianal abscess were done in the mentioned timeframe. In comparison, 37 cases of only perianal fistula were also done. Among the abscess cases, 85 were Male and 65 were Female. Almost all cases presented as emergency condition and were operated as such, except 3 cases where an abscess was found incidentally while performing EUA/Flexible Sigmoidoscopy [10-12]. The results are summarized in (Table 1 and Figure 1).

Out of the 150 cases of perianal abscess, there were 23 patients who presented multiple times with similar problems. The rest 127 patients did not come back with any perianal abscess/fistula [13]. Of the 23 patients who required further surgeries after their perianal abscess surgery, 9 were Male and 14 were Female. Regarding age groups, age group 20 to 30 years had 9 patients; 30 to 40 years had 6 Patients, 40 to 50 years had 3patients,

Table 1: Total number of Perianal Abscess and Perianal Fistula Surgery.

Mode of surgery	Perianal Abscess=150		Perianal Fistula=37	
	Male	Female	Male	Female
Emergency	82	65	19	18
Elective	3	0	0	0
Total	85	65	19	18

>50years had 2 patients (Figure 2). Out of the 23, 6 patients had already developed a fistula at their first presentation, while 14 developed a fistula later on [14,15]. 9 people did not develop any fistula despite some needing multiple I&D/EUAs. These Results have been summarized in (Table 2 and Figure 3). Out of the

relapsing 23 patients, 16 had no significant comorbidities. 5 had Inflammatory Bowel Disease in the form of Crohn’s Disease, and 2 had Diabetes Mellitus. The level of immunosuppression and the degree/extent of disease control are beyond the scope of this research [16-18].

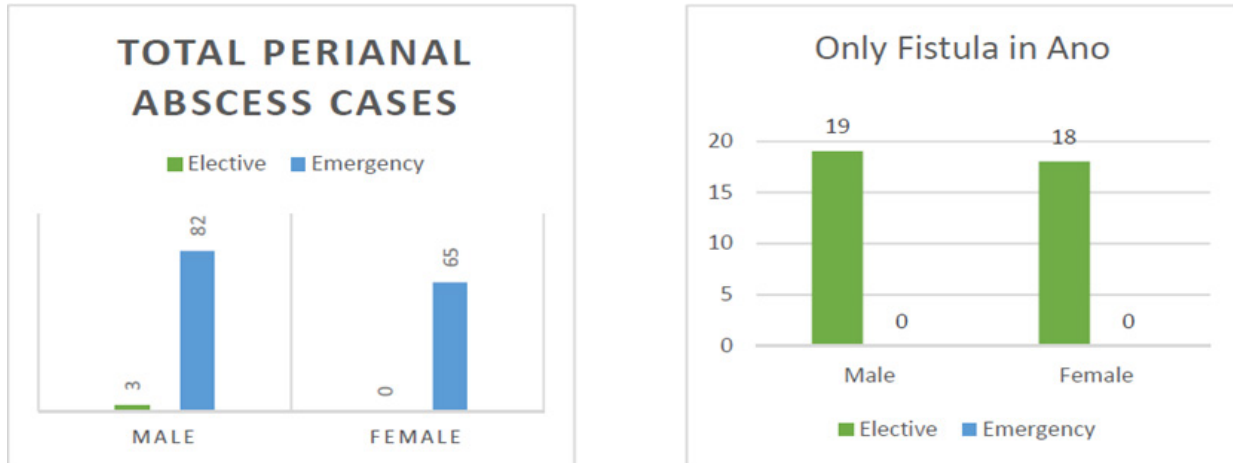


Figure 1: 150 cases of perianal abscess.

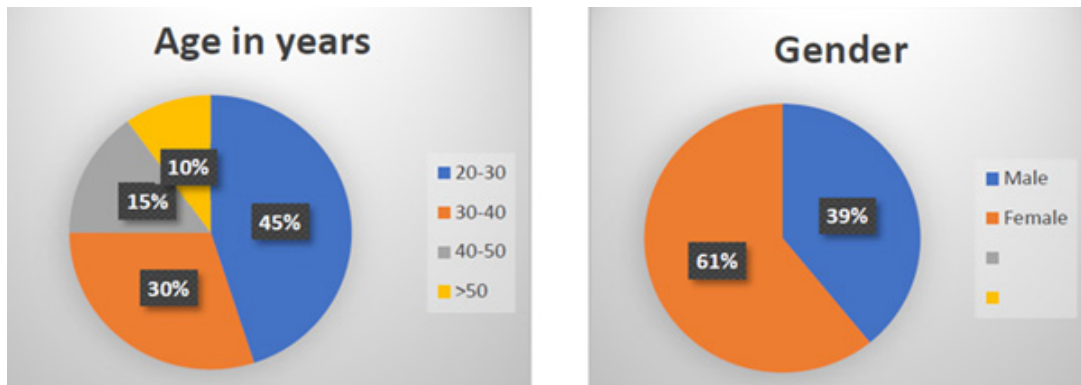


Figure 2: Out of the 23, 6 patients had already developed a fistula at their first presentation, while 14 developed a Fistula later on. 9 people did not develop any fistula despite some needing multiple I&D/EUAs.

Table 2: Out of 23 cases with repeat presentations.

Gender	No fistula	Developed Fistula			
		1st surgery	2nd Surgery	3rd Surgery	4th Surgery
Male	4	2	2		1
Female	5	4	3	2	
Total	9	14			

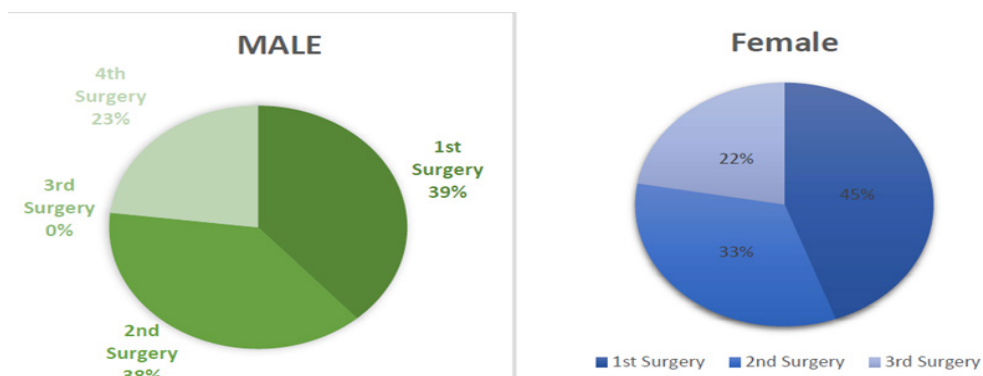


Figure 3: The level of immunosuppression and the degree/extent of disease control are beyond the scope of this research.

Conclusion

From this study we found out that among 150 Patients who presented with perianal abscess, 14 (9.3%) developed fistula or had already developed a fistula [19-21]. This resembles previous studies done worldwide where they found that incidence of an anal fistula developing from an anal abscess ranges from 15 to 38 percent [22,23]. Further detailed studies need to be done to identify and prevent the risk factors that might instigate formation of fistulas after drainage of perianal abscesses [24].

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