Hospital Topics

Intersphincteric Abscess

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Summary

In 33 patients with an intersphincteric abscess continuous anal pain was the commonest symptom and a lump in the wall of the anal canal the commonest sign.

The importance of this condition as a cause of persistent undiagnosed anal pain is stressed.

Introduction

Anal pain is a symptom which may cause a patient inordinate distress. In general it is possible to establish the diagnosis by examination, when the presence of such conditions as perianal haematoma, thrombosed haemorrhoid, fissure-in-ano, fistula, and perianal abscess will become apparent. It is occasionally impossible to find such a cause, however, and then several conditions have to be borne in mind—one of which is intersphincteric abscess. This is an abscess situated between the internal and external anal sphincters and confined to the wall of the anal canal (fig. 1). It therefore results in few signs at the anal margin or in the perianal region. The condition is not well documented in the litera-

FIG. 1—Position of an intersphincteric abscess, and its opening into the anal canal.

ture although the description by Whitney¹ of "cryptitis" resembles it very closely.

We report a series of 33 patients who received inpatient treatment for an intersphincteric abscess during the period 1965-70 at St. Mark's Hospital, describe its symptoms, signs, and treatment, and discuss its possible aetiology.

Clinical Features

AGE AND SEX

The age distribution of the 33 patients is shown in table I. Twenty-nine of the patients (88%) were men and four (12%) were women.

TABLE I—Age Distribution of the 33 Patients Under Study

Age in years .. No. of patients ..	20— 3	30— 9	40— 10	50— 5	60— 5	≥70 1
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SYMPTOMS

Pain was the presenting symptom in 30 of the patients (91%). In most of them the anal pain was continuous throughout the day and night and was throbbing in character. In some, defaecation aggravated this symptom while in others the pain did not start until after defaecation. In general the pain was of longer duration than that in patients with fissure and in two it was so severe as to cause faecal impaction.

Bleeding.—There was a history of minor anal bleeding in nine patients (27%). This occurred when the abscess was associated with an opening into the anal canal or a fissure (see below).

Discharge.—Six of the patients (18%) complained of this symptom, which is due to small amounts of pus discharging into the anal canal.

SIGNS

There were no abnormal signs on inspection of the anal margin and the perianal region. There was, however, sometimes tenderness on palpation at the anal margin. The main abnormal signs were found when the anal canal was examined digitally and with a proctoscope. It was possible to make a diagnosis of intersphincteric abscess in only 17 of the patients (52%) before the administration of a general anaesthetic as the pain prevented an adequate examination.

The physical signs which characterized this condition were (table II) the presence of a small lump in the wall of the anal canal, which was sometimes felt bidigitally with the index

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TABLE II—Incidence of Physical Signs in the 33 Patients Under Study

Sign	Frequency
Lump in wall of anal canal	18 (54.5%)
Opening into anal canal	15 (45.5%)
Opening into anal canal with fissure	8 (24%)

Eight patients had a fissure in addition to the opening into the anal canal.

finger in the anal canal and the thumb externally, and an opening into the anal canal which was associated with induration on palpation or with a fissure. It was, however, never associated with an external opening (this is by definition—in the presence of an external opening it would be called a fistula). The sites of the abscesses around the circumference of the anal canal were variable, as shown in fig. 2.

FIG. 2—Sites of abscesses around circumference of anal canal.

PREVIOUS HISTORY

Of the 33 patients 25 (76%) had no previous history of anal disorder. Of the remaining eight patients five had previous disorders—four with haemorrhoids treated by ligature and excision and one with a fissure treated by dorsal sphincterotomy, who developed an abscess at the same site. These had been successfully treated and the patients had two or more symptom-free years before developing the symptoms of an intersphincteric abscess. The other three patients were receiving treatment at the time the abscess developed—two had received injections for haemorrhoids and the other had a chronic fissure of some seven years' duration.

TREATMENT

As all the abscesses were found between the sphincters, treatment consisted of laying open the abscess with division of the fibres of the internal sphincter up to and including the base of the anal valves. The wound so created was dressed twice daily to ensure that it healed soundly from its base. Twenty-six of the patients (79%) required inpatient treatment for under 14 days.

Results

In 27 patients (82%) the wound healed soundly and they became symptom free. Of the remaining six patients, four required a second operation as "pocketing" occurred during healing which resulted in a further abscess. The second operation was followed by sound healing. The other two patients were lost to follow-up.

Discussion

The description by Whitney¹ of a condition which he called "cryptitis" closely resembles the above account. Goligher,² however, expressed doubt about the existence of such a condition. This is probably due to terminological difficulty because Whitney used the term crypt (with a small "c") to refer to the anal glands and their ducts and the term Crypt (with a capital "C") to refer to the anal crypts of Morgagni. Although it has not been possible to prove that any of the abscesses reported here were related to an anal gland this must remain a possibility, and the terms "cryptitis" and "intersphincteric abscess" are probably synonymous.

Infection of an anal gland as a stage in the development of a fistula-in-ano was first suggested by Chiari.³ More recently evidence has been provided to confirm this suggestion.^{4,7} The infection may subsequently spread in a number of directions giving rise to the various types of fistula and abscess in the anal region. If this is the usual outcome of anal gland infection it is possible that on occasions the infection does not spread and remains confined to the wall of the anal canal as an intersphincteric abscess.

The suggestion that an intersphincteric abscess has a similar aetiology to fistula-in-ano is supported by noting the similarity in the site of the abscesses around the circumference of the anal canal reported in this paper and the position of the internal openings of fistulae-in-ano reported by others^{7,8} (table III). Further support is obtained by comparing the age groups and sex incidence in these two conditions: 58% of the patients reported here were between 30 and 49 years of age and in the series of fistulae reported by Lilius⁷ 57% presented between these ages. There was a male preponderance in both series: 88% and 62% respectively.

TABLE III—Comparison of Sites of Intersphincteric Abscesses with Sites of Internal Openings in Two Series of Fistulae-in-ano. Figures are Percentages

Position of Opening into Anal Canal	Intersphincteric Abscess. Present Series	Fistula	
		Buie ⁸	Lilius ⁷
Anterior	24	31	36
Posterior	61	56	58
Lateral	15	12	6

Eight of the patients reported here had a fissure associated with the intersphincteric abscess, the two being joined by an opening in the base of the fissure. Whitney¹ reported that some of his patients with cryptitis had an associated anal fissure. He suggested that this developed by the intersphincteric abscess breaking back in to the anal canal, not into the base of a crypt of Morgagni but into the region of the pecten. Another explanation, however, might be that the fissure is the primary disorder and the spread of organisms across it might result in infection of the intersphincteric space. Alternatively the fissure might seal the duct of an anal gland resulting in a mucous retention cyst which becomes secondarily infected.

Intersphincteric abscess is an uncommon situation and should be remembered in patients who have persistent undiagnosed anal pain. It may be necessary to examine the

patient under anaesthesia before the diagnosis is established.

Although eight patients (24%) in the series gave a history of previous anal disorder and treatment it was only in three patients (9%) that this occurred less than two years before the symptoms of intersphincteric abscess developed. In addition 76% of the patients had no previous anal symptoms. Hence if previous anal disorder is an aetiological factor in the development of intersphincteric abscess, it is rare. The initial symptoms, however, might be those of a fissure which had healed.

The treatment by laying open the abscess is effective provided that the subsequent treatment is designed to prevent "pocketing". It is important to remember that a fissure associated with an intersphincteric abscess will not respond to treatment by a lateral sphincterotomy. It is recommended, therefore, that before an anal fissure is treated operatively

it is palpated bidigitally for induration and its base very gently examined for the presence of an opening.

We are grateful to the surgical staff of St. Mark's Hospital for allowing us access to the records of patients under their care.

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A New Look at Infectious Diseases

Smallpox

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But is a new look at smallpox really necessary? Smallpox is a dying disease; it still persists in Ethiopia, Sudan, India, Pakistan, and Nepal, but it is likely to disappear in these countries too as the world eradication campaign continues to stop its spread by throwing vaccination rings round infected patients and villages. Routine infant vaccination is no longer advised in Britain, because the risk of severe or fatal illness after vaccinia is much greater than the risk of contracting smallpox. So need one bother in Britain and other developed countries with the fine points of diagnosis of a disease one is likely never to see again? Perhaps not, but it so happens that, as I write, I have under my care a nurse who visited an English girl admitted undiagnosed, but with a modified smallpox rash, to a large general hospital in the south of England. The diagnosis was established in time for my patient to be vaccinated and isolated before she could develop smallpox and spread the disease to her own patients. This was fortunate, but the story is a not uncommon one—the first case missed because the rash is modified and also, because it is a rare disease, no one thinks of smallpox. Infection can then spread readily in hospital by direct contact or on currents of air, as was illustrated in the outbreaks in Meschede¹ and Monschau² in Germany and in Vitoria in Brazil.³

One can hardly miss a case of ordinary, classical smallpox. There is a profuse rash, pustular when fully developed, and denser on the face and extremities than on the trunk (fig. 1). In its early stages it is very like measles but the resemblance soon disappears. One must at least *think* of smallpox. The difficulty occurs with the extremely mild and the extremely severe types of smallpox, for these can be very unlike the

FIG. 1—Smallpox; classical type of spots and distribution (reproduced by permission of Churchill Livingstone).

classical case, and unless the doctor is specially skilled because of his experience, or on his guard because smallpox is present in the area, he is quite likely not to think of smallpox as a possible diagnosis.

Modified Smallpox

Smallpox may be a mild disease even in an unvaccinated person, but by modified smallpox one usually means smallpox occurring in a vaccinated person whose immunity is high enough to prevent the classical features of smallpox from appearing, but not high enough to suppress all evidence of the disease. Vaccination gives protection against three characteristics of the disease—the degree of toxæmia, the number of spots, and the character