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## The Immediate Response To Injection Therapy For First-Degree Haemorrhoids And Review Of Literature

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### Abstract:

*Over an 8-month period, 100 consecutive patients undergoing sclerotherapy for first-degree haemorrhoids were issued with a questionnaire to assess responses to this treatment. Success was defined as complete cessation of bleeding at defaecation. The effect on bleeding was assessed at the end of 24 hours (99 responders) and 4 weeks later (98 responders): of 61 patients (62%) with no bleeding at 24 hours, only 40 (41%) remained symptom-free at 28 days postinjection. Twelve patients were treatment failures (either unchanged or increased bleeding post-injection). More than half the patients (n=59) experienced pain related to the injection, which was severe in 9 cases. Although only 3 patients expressed complete dissatisfaction with the treatment they received, and overall 88% were either cured of bleeding or improved, the results suggest that critical judgment should be exercised before recommending the treatment to patients with minimal occasional bleeding due to first degree haemorrhoids.*

### I. Introduction:

The treatment of internal haemorrhoids by a submucosal injection of 5% phenol in almond oil was introduced into the United Kingdom by Morley<sup>1</sup> in 1928. In spite of its widespread and continuous use for more than 50 years, it is difficult to find good accounts of the results of this treatment. Although there are reports by Milligan<sup>2</sup>, Greca<sup>3</sup> and Cheng<sup>4</sup>, the selection of patients and the follow up are very questionable in these papers and the numbers of patients studied by Cheng are too small for analysis. Recently a paper by Leicester et al.<sup>5</sup> reported a high incidence of pain following injection treatment, and it is known that occasionally very serious complications<sup>6</sup> can occur (e.g. prostatic abscess following a misplaced injection). Recently, effective alternative non-surgical methods of

treatment have been developed; for example, second-degree haemorrhoids can be alleviated by elastic-banding<sup>7</sup> and both second- and third degree haemorrhoids have been treated by anal dilation<sup>8</sup> and cryotherapy<sup>9</sup>. Injection treatment is now used mainly for early haemorrhoids, in which the presenting symptom is bleeding on defaecation ('first-degree haemorrhoids'). This paper reports the immediate results obtained by injection treatment in 100 consecutive patients with first degree haemorrhoids.

### II. Material and methods

Over an 8-month period, 100 consecutive patients with first-degree haemorrhoids were treated in the out-patient department of Navjivan Hospital. In every patient the diagnosis was confirmed by complete examination of anus and rectum by sigmoidoscopy as well as by digital examination and proctoscopy. Patients whose haemorrhoids

prolapsed ('second and third degree') were excluded. Since bleeding was the complaint that made the patients seek medical attention, this symptom was taken as the marker on which the success or failure of treatment was assessed. All patients were issued with a questionnaire at their first treatment and were brought back for reassessment 4 weeks later. The questionnaire was completed at this second visit. Patients completed the forms anonymously and without supervision by medical staff, and they were collected as the patients left the clinic. In order to obtain accurate replies, the questions were framed as 'Yes' or 'No' type responses. All patients completed the questionnaires, but in rare cases failed to answer particular questions, or gave answers that were inappropriate, which accounts for the lack of 100% responses in some instances. In every case the base of each identified haemorrhoid was treated with a single submucosal injection of 3 ml of 5% phenol in almond oil, and in almost all patients three such injections were needed, each given in the classical 4 o'clock, 7 o'clock and 11 o'clock positions. The injection treatment was completed in every patient. Since we were assessing the use of injections as the primary arm of therapy, no extra treatment by diet or medications was prescribed. We believe that this reflects current practice in most general surgical clinics. Because management was frequently changed (e.g. to banding) if the result of the initial injection treatment was unsatisfactory, responses were assessed on the basis of the first injection treatment.

**Table 1. Bleeding**

PERIOD	Cured NO. %	Improved NO. %	No change NO. %	Worse NO. %
First 24 hours (99 replies)	61 (62)	15 (15)	13 (13)	10 (10)
28 days (98 replies)	40 (41)	46* (47)	10 (10)	2 (2)

Complete success 40

Treatment failed	12
Major improvement	35
Bleeding increased	02
Bleeding unchanged	10
Slight improvement	11

\*11 of these patients continued to have significant bleeding which was occasionally severe in 2

**Table 2. Pain**

Pain	No.	Type replies)	(59	Period (57 replies)*
YES	59	MILD	33	Seconds 23
		MODERATE	17	<5 minutes 16
		SEVERE	7	<24 hours 15
NO	41	VERY SEVERE	2	>24 hours 3

\*in one patient the pain began the day after the injection treatment, and in one patient no reply was given.

### III. Results

#### Bleeding (Table 1)

For the first 24 hours after the injection, 77% of the patients either had no bleeding (n=61) or were substantially improved (n= 15). However, these initial good results decreased markedly during the next 4 weeks, by which time only 40 patients (41%) remained cured: of 46 patients whose bleeding was improved, 11 patients continued to notice blood on their underclothes, which was profuse enough to soak through on some occasions in 2 patients. Of the patients whose bleeding was either not helped or was made worse by the injection treatment, 10% (n= 10) reported that they noticed increased blood loss during the first 24 hours after the injection, but this figure fell to only 2% (n=2) by the end of the month. Nevertheless 12 patients (13%) must be considered to have been absolute treatment failures, with unchanged or increased blood loss at the end of 4 weeks. At the end of the first 28 days after the injection treatment, more than half the patients continued to have some bleeding (n=58), which was severe in a few.

**Pain (Table 2)**

More than half the patients experienced some pain from the injections (n=59). In the majority the pain was tolerable ('mild' or 'moderate') and lasted for a very brief period ('seconds' or 'less than 5 minutes'). However, in 9 patients the pain was described as 'severe' or 'very severe', and sometimes even when it was of low intensity could last for lengthy periods (hours or days). Of the 9 patients who suffered severe (or worse) pain, in 3 it lasted either a few seconds (n=1) or less than 5 minutes (n=2); however, in 4 patients the pain lasted either more than 6 (n= 1) or more than 12 (n=3) hours and in one other patient it lasted more than 24 hours. In one further patient the pain began the day after the injection and lasted for 3 weeks.

**IV. Subjective assessment (Table 3)**

All patients were asked to state whether they had found the treatment worthwhile; they could choose from four categories when making their assessment (Table 3). Fifty-five patients found the method 'very satisfactory' and said they would recommend this treatment to friends with similar complaints. The 33 who found it 'satisfactory but not pleasant' would have accepted further treatment by the injection method if it was advised. The total of 88 patients who were generally pleased with the treatment is very similar to the 86 patients whose bleeding had been stopped or improved as a result of the injections. Seven patients were in category three ('adequate' and 'preferable to inpatient treatment') but were clearly disappointed overall. A further 3 patients were in category four ('definitely unsatisfactory - would not accept further injection treatment'): of these, 2 had experienced increased bleeding following the injections (and one of them had also suffered severe pain); one patient had presented with pruritus as a major symptom in addition to slight bleeding, and was angry that her itching had not been improved by the treatment.

**Table 3. Patients' assessment of treatment**

Criteria	No.
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Success	
Very satisfied would recommend it	55
Satisfied; some drawbacks, e.g. painful	33
Failure	
Adequate; preferable to alternatives	7
Definitely dissatisfied; refuse further treatment	3

**V. Discussion**

Injection treatment for haemorrhoids is extensively used in the United Kingdom, but is less popular on the Continent or in the USA. Published material on the results of treatment rely on a few reports, all of which suffer defects by modern standards<sup>2,4,10</sup>: some have very small numbers with a high default rate<sup>3,4</sup> and the large survey by Kilbourne<sup>10</sup> has been strongly criticized as unreliable by Goligher<sup>11</sup>. New treatments have been developed for prolapsing haemorrhoids<sup>5,7-9</sup> but many specialists regard injection treatment as most suitable for first-degree haemorrhoids, which present with bleeding but do not prolapse. Milligan<sup>2</sup> has claimed nearly 100% success for injection treatment in such cases, but most present day specialists would regard this as too optimistic. Because most patients with haemorrhoids present initially to the general practitioner, it is important that he is able to give guidance on what can be expected from the various treatments that are advocated. This is also true for the hospital specialist, who needs to obtain informed consent to the treatment he is recommending. This study was designed to provide accurate information as to the success of injection therapy for the management of first-degree haemorrhoids. Since the reaction of patients is strongly conditioned by their initial experiences with treatment, this study was designed to clarify the immediate results of sclerotherapy in the control of bleeding from first-degree haemorrhoids. An assessment of the patients' subjective response to the treatment was also obtained. Because a recent report drew attention to pain from the injection as a serious

drawback to the method<sup>5</sup>, data were also collected on this point.

The results show that bleeding was cured or substantially improved in 75 of the 100 patients; there was slight improvement in a further 11 patients, but the method was a failure in 12 patients, 2 of whom had increased bleeding. Even some of the patients who noticed slightly less bleeding after the injection still suffered from blood soaking their underwear on occasions (n=2). Pain was experienced by the majority (n=59) of the patients, although 41 had no pain at all. In 9 patients the pain was either severe or very severe, and while most patients only noticed pain for a few seconds or minutes, in 18 patients pain was noticed for hours (n= 15) or days (n=3). It was surprising, considering these facts, that pain was not recorded by the patients as a prime reason for dissatisfaction with the treatment, which they seemed to assess solely by its effect on their bleeding. When patients gave their own subjective assessment of the injection treatment, the vast majority fell into the successful groups (categories 1 plus 2, n=88). Only 3 patients were completely dissatisfied, and the prime reason was unchanged (n=1) or increased bleeding (n=2). It was thought important to record that the other dissatisfied patient was disappointed that pruritus persisted after the injection treatment, and we believe that patients should be made aware that the injection treatment is designed exclusively to stop bleeding, and is not effective for other anal symptoms. We believe this survey showed that injection treatment can be an effective simple remedy for first-degree haemorrhoids in many patients. However, the treatment can be painful even when the method is administered by experienced specialists. Caution must be exercised before counseling patients to have injection treatment: in those who suffer only the occasional minimal loss of blood, and who have been reassured that other more serious conditions have been excluded by proper examination, injection treatment may not be justified. A patient with minimal symptoms who had been lightly advised to undergo injection treatment without proper counseling might resort to litigation if serious after effects ensued, such as a prostatic abscess<sup>6</sup>. All such patients should be made aware that the treatment may be ineffective,

that pain can be experienced, and that complications can occur.

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