CRYOHAEMORRHOIDECTOMY A REVIEW OF 300 CASES

Maj RS RAI^{*}, Wg Cdr K RUP KUMAR⁺

(Military Hospital Secunderabad)

ABSTRACT

Three hundred patients, comprising of 210 men and 90 women, with internal haemorrhoids (grade I and II) were subjected to cryosurgery. There was good destruction of piles in 270 (90%) patients while in 30 (10%) patients residual pile mass was present requiring further treatment. The result was compared with 100 patients of grade II haemorrhoids who underwent formal haemorrhoidectomy during the same period. It was observed that rate of complications was lower in those who underwent cryosurgery.

MJAFI 1997; 53 : 24-26

KEYWORDS: Cryosurgery; Haemorrhoids.

Introduction

Internal piles have traditionally been regarded as essentially varicosities of the venous plexus in the wall of the anal canal and the lower-most centimetre or so of the rectum [1]. The incidence of piles apparently increases with age and it seems likely that at least 50 per cent of people over the age of 50 years have some degree of haemorrhoid formation. In a study of 2000 consecutive proctologic examination, the incidence of internal haemorrhoid was 72 per cent [2]. There are two cardinal symptoms of internal haemorrhoids i.e. bleeding and prolapse and it is on account of these symptoms that most patients report to the doctor.

Several forms of treatment are now available ranging from expectant or medical treatment to operative treatment. In the last few years cryodestruction has been used by many surgeons for the treatment of haemorrhoids. One of the great advantages of this method is that it is painless, rendering it especially suitable for application to out-patients. This article compares the management of 300 patients with internal haemorrhoids (grade I and II) treated by cryosurgery with 100 patients of grade II haemorrhoids who underwent formal haemorrhoidectomy during the same period.

Material and Methods

Patients with haemorrhoids who attended the surgical out-patient clinic between March 93 and October 94 formed the source of subjects for this study. The allotment of patients to cryosurgery was based on the following system of grading [1].

Grade I : Pile mass projects slightly into the anal canal.

Grade II : Piles form large swellings that protrude into the anal canal and descend downward when the patient strains and retract spontaneously.

Grade III : Piles remain prolapsed until reduced digitally.

Grade IV : Piles remain prolapsed as a permanent projection of anal mucosa.

Only grade I and II patients were selected for cryosurgery. Patients who underwent cryosurgery were instructed to take a laxative in the night and clear the bowel in the morning. During the procedure no sedation or analgesia was used. The entire procedure was explained to the patients. The patient was placed in the left lateral position. After proctoscopy and defining the pile mass, the pile mass was allowed to prolapse in the proctoscope. A cryoprobe based on nitrous oxide gas was applied directly on the mass for a uniform period of 1 minute in all patients. Postoperatively all patients were sent back home and advised to take tablet

^{*}Graded Specialist (Surgery); ⁺Classified Specialist (Surgery), Military Hospital, Secunderabad - 500015

metronidazole 400 mg, tablet ibuprofen 200 mg, each tablet thrice daily for 5 days and Sitz bath twice daily for 15 days. Another 100 patients with grade II piles underwent formal haemorrhoidectomy during the same period. All patients were followed-up for a period of 3 months to 18 months after cryosurgery.

Results

A total of 950 patients with piles were seen between March 93 and October 94. There were 400 patients of grade I and II haemorrhoids, out of which 300 patients, comprising of 210 men and 90 women, underwent cryosurgery and 100 patients underwent formal haemorrhoidectomy. Patients who underwent cryosurgery were in the age group of 21 years to 80 year with median age being 48 years. Most patients were in the age group of 41 to 50 years. A male preponderance was seen in all age groups as seen in Table 1.

TABLE 1
Age and sex distribution in 300 cryohaemorrhoidectomy patients

Age (Years)	Sex		Total
	Male	Female	
21-30	12	36	48
31-40	30	20	50
41-50	106	30	136
51-60	40	4	44
61-70	14	—	14
71-80	8	—	8
Total	210	90	300

The commonest symptom, bleeding per anum, was present in 270 (90%) patients. Other symptoms included prolapse in 30 (10%), pain during defaecation in 90 (30%), mucoid discharge per anum in 30 (10%) and anal irritation in 18 (6%) patients. On proctologic examination 180 (60%) patients had pile mass at 3, 7 and 11 o'clock position, 60 (20%) patients at 3 and 7 o'clock positions and remaining 60 (20%) patients only at a single position.

The average period of follow-up was 1 year. It was observed during follow-up that there was good destruction of piles in 270 (90%) patients. In the remaining 30 (10%) patients residual pile mass

and symptoms persisted and further treatment was necessary. Re-cryodestruction in 18 (6%) and excision of residual pile mass in remaining 12 (4%) patients was done in 6th month of follow-up. The result was compared with 100 patients of grade II haemorrhoids who underwent formal haemorrhoidectomy during the same period. The rate of complications is given in Table 2.

TABLE 2
Complications : cryohaemorrhoidectomy vs haemorrhoidectomy

Complication	Cryohaemorrhoidectomy No of patients(%)	Haemorrhoidectomy No of patients (%)
Retention of urine	—	20 (20)
Bleeding	12 (4)	5 (5)
Pain	45 (15)	30 (30)
Discharge per anum	30 (10)	3 (3)
Residual mass	30 (10)	5 (5)
Anal stenosis	—	1 (1)

Discussion

Recent advances in cryogenic techniques have made it possible to freeze living human tissue in many parts of the body. Tissue, once frozen solid, undergoes necrosis partly due to thrombosis of the microcirculation [3]. Autolysis and sloughing subsequently occurs within 3 to 5 weeks. Tissue destroyed by freezing differs in several respects from tissue destroyed by other means such as diathermy or chemical necrosis. The area destroyed by freezing is sharply demarcated from the surrounding normal tissue and the boundary layer of damaged cells may be only or two cells thick. Thrombosis of microvessels occur in frozen tissue and reactionary and secondary haemorrhage is rare. With standardized techniques the area of cryodestruction is reproducible. Freezing produces permanent local anaesthesia in the frozen tissue. The inflammatory response of the body to frozen tissue is minimal and healing occurs with minimal scarring.

Cryodestruction of haemorrhoid tissue is an alternative method and our experience with this technique is the same as that of Lewis [4]. The procedure is painless, general anaesthesia is unnecessary, the area of tissue destruction is well

demarcated and complications such as bleeding, sepsis and urinary incontinence are few. The only problem with this procedure is that there is profuse, offensive discharge for up to a week after freezing which requires frequent change of dressings. The classical operation of excision and ligation, however, often requires dressing for a similar period. Our patients found the discharge acceptable once they had been explained the possibility of its occurrence.

Some authors such as Lewis [5], Llyod-Williams et al [6] and O'Connor [7] have reported very favourably on the use of cryosurgery for haemorrhoids particularly in regard to the avoidance of discomfort and rapid return to work, often on the day after treatment. Other enthusiastic reports are also known [8-11], though it is admitted that fair amount of pain may sometimes be experienced after cryosurgery, and occasional severe secondary haemorrhage can occur and complete healing of the resulting raw area may take up to 6 weeks. In this study it was observed that cryodestruction of internal haemorrhoids is a simple and effective procedure with minimal complications and is especially suitable for those patients who are medically unfit for general anaesthesia. The rapidity of this procedure combined with painless operative and post-operative course enables the

patients to leave the hospital the same day.

REFERENCES

1. Goligher J. Haemorrhoids or piles. In: Goligher J, Duthie H, Nixon H, editors. *Surgery of the anus, rectum and colon*. 5th ed. London: Bailliere Tindal, 1992; 48-149.
2. Fry RD, Kodner IJ, Raub SM. Colon and rectum. In: Davis JH, Foster RS, Gamelli RL, editors. *Essentials of clinical surgery*. St Louis: Mosby, 1991; 319-34.
3. Fraser J, Gill W. Observation on ultrafrozen tissue. *Br J Surg* 1967; 54: 770-2.
4. Lewis MI, de la Cruz T, Gazzaniga DA, Ball TL. Cryosurgical haemorrhoidectomy : a preliminary report. *Dis Colon Rectum* 1969; 12: 37-40.
5. Lewis MI. Diverse methods of managing haemorrhoids: cryohaemorrhoidectomy. *Dis Colon Rectum* 1973; 16: 175-8.
6. Llyod-Williams K, Haq IU, Elem B. Cryodestruction of haemorrhoids. *BMJ* 1973; 1: 666-8.
7. O'Connor JJ. Cryohaemorrhoidectomy : indications and complications. *Dis Colon Rectum* 1976; 19: 41-4.
8. Detrano SJ. Role of cryosurgery in management of anorectal diseases. *Dis Colon Rectum* 1975; 18: 284-7.
9. Myers B, Donovan W. Cryohaemorrhoidectomy: an experimental and clinical appraisal. *Am J Surg* 1975; 41: 799-802.
10. Oh C. Role of cryosurgery in management of anorectal diseases : cryohaemorrhoidectomy evaluated. *Dis Colon Rectum* 1975; 18: 289-93.
11. Savin S. Haemorrhoidectomy how I do it : result of cryorectal operations. *Dis Colon Rectum* 1977; 20: 189-92.