

The treatment of perianal and anal condylomata acuminata: a new operative technique¹

James P S Thomson MS FRCS

St Mark's Hospital, City Road, London EC1V 2PS

Roger H Grace FRCS

Royal Hospital, Cleveland Road, Walverhampton

Introduction

The condition known as anogenital condylomata acuminata (warts) has been recognized for many centuries (Oriol 1971). However, the methods used in its treatment have been relatively unsatisfactory for two main reasons. First, most of the methods of treatment are traumatic, not only to the individual lesions, but also to any surrounding normal tissue. This can lead to severe scarring and patients treated for perianal and anal canal warts have developed anal stenosis (Grace 1974). Second, there is a definite incidence of recurrent wart formation after treatment, but the exact frequency is unknown.

The method of treatment employed depends on the severity and the extent of the lesions. Thus if there are only a few scattered perianal condylomata, the application of 25% podophyllin in tincture of benzoin compound, or trichloroacetic acid, may be successful in eradicating the problem.

When there are extensive lesions in the perianal area and/or lesions within the anal canal, inpatient treatment is required and it is usual for the lesions to be removed using a diathermy electrode. This will also result in a burn around the edge and in the base of each individual wound, the severity of the burn depending on the current used and the duration of its application. It is thus apparent that before healing can occur, the amount of burnt tissue has to separate; healing is therefore delayed. Furthermore, two adjacent wounds separated by a small skin bridge may be converted into a confluent wound should the skin bridge be totally damaged by burning each side of it (Figure 1). The scarring produced may result in a deformed perianal region and, as previously stated, on occasions anal stenosis. Cryosurgery, which has been introduced more recently, also has a similar destructive effect on the surrounding normal tissue (Ghosh 1977).

It is the purpose of this paper to describe a new operative approach which results in the preservation of the maximum amount of normal tissue (Figure 1). This facilitates healing and reduces scarring to the minimum. In order to achieve this, a solution of 1 in 300 000 adrenaline in physiological saline is injected beneath the condylomata subcutaneously or into the submucosa. This has the effect of separating the individual lesions one from another, which permits the preservation of healthy skin and mucosa. Each lesion is then removed with sharp-pointed scissors. Diathermy is only used to control the very occasional persistent bleeding point. The outcome of this treatment is described and an attempt has been made to determine the recurrence rate after successful completion of the treatment.

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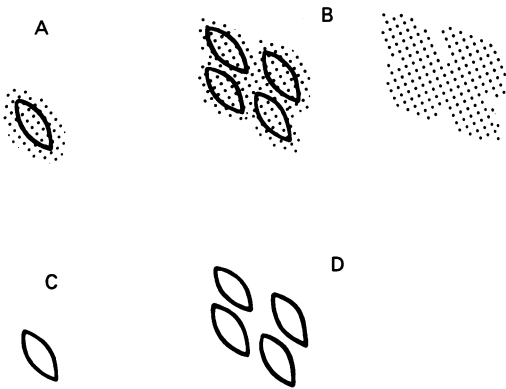


Figure 1. Diagrams illustrating: A, the destruction of surrounding normal tissue when diathermy is used to excise a wart; B, how small skin bridges may be destroyed, resulting in a confluent wound; C and D, the preservation of normal tissue when 'scissor excision' is used to excise condylomata acuminata

Operative technique

(1) *Preoperative assessment and preparation* (Figure 2). The diagnosis of perianal condylomata acuminata is usually obvious, but it is important to determine accurately the extent of the disease. Thus, the presence of lesions within the anal canal or lower rectum and on the external genitalia must be sought. Unless all the lesions are removed, recurrence is more liable to occur. As it is desirable to have the lower bowel free from faeces, an enema should be administered the evening before operation.

(2) *Anaesthesia*. The operation is most conveniently performed under a general anaesthetic. However, a caudal block with lignocaine hydrochloride will provide adequate anaesthesia and the added advantage of relaxation of the anal musculature.

(3) *Position of the patient*. The lithotomy position is ideal, but if the surgeon prefers it, the jack-knife position can be used.

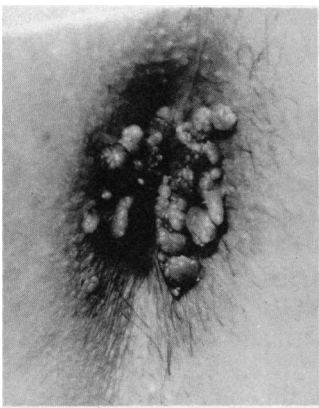


Figure 2. Perianal condylomata acuminata. Examination of the anal canal revealed the presence of similar lesions above and below the dentate line



Figure 3. Injection of 1 : 300 000 adrenaline/saline solution

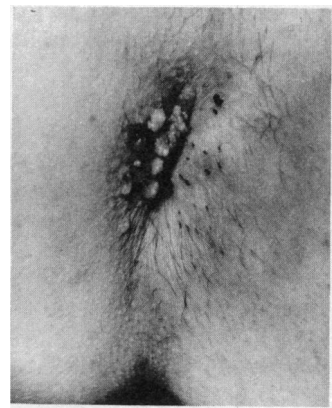


Figure 4. The lesions to the left of the anus have been removed

(4) *Injection of the adrenaline-saline solution* (Figure 3). The solution of 1 in 300 000 adrenaline in physiological saline is injected subcutaneously using a serum needle. Approximately 50–75 ml of solution are injected into each perianal area. It is important to remember while administering the injection that the needle of the syringe should be kept moving slightly in order to avoid an intravenous injection.

(5) *Excision of perianal lesions* (Figure 4). Following the injection the condylomata tend to separate. With a pair of fine-toothed forceps and fine-pointed scissors they are individually removed, preserving as much normal skin as possible in between. There is usually surprisingly little bleeding, but the diathermy may be needed to control a persistent bleeding point. It should be noted that it is not always possible to remove all the lesions on one occasion because they are so dense. In this event a further treatment, after an interval of one month, is required.

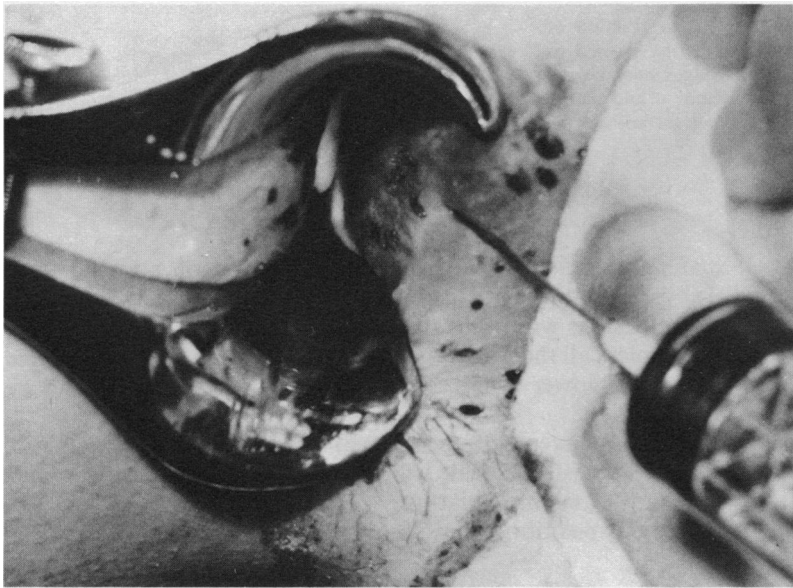


Figure 5. A bivalve proctoscope has been inserted into the anal canal and the mucosa being lifted from the internal sphincter by the injection of adrenaline/saline solution

(6) *Excision of lesions from within the anal canal* (Figure 5). This is best done after the removal of the perianal lesions and necessitates the use of an operating proctoscope. The solution of adrenaline in physiological saline is injected under the mucosa lifting the lesions off the internal sphincter. The warts are removed in the same manner as described previously. Sometimes a confluent wound is created above the dentate line. In this event the wound may be closed by approximating the mucosa of the lower rectum to that of the dentate line, using a chromic catgut suture. At the conclusion of the operation two gauze dressings soaked in dilute hypochlorite solution (e.g. 1 in 8 Eusol) are inserted into the anal canal and a pressure dressing applied with the aid of a T bandage.

(7) *Postoperative care*. There is usually minimal discomfort after this procedure, although some form of analgesia may be required. A normal diet should be started as soon as possible after the operation and the passage of a bulky stool ensured by the taking of a bulk laxative. Only if extensive warts have been removed from within the anal canal is an anal dilator required. If this is necessary, then it should be passed twice a day for five minutes with the aid of a lubricating local anaesthetic jelly.

Results

During the two-year period, October 1974 to September 1976, this technique was used to treat 75 patients with perianal and anal condylomata acuminata; 64 patients were male and 11 were female. Of the 75 patients, 7 were aged up to 19 years; 50 were 20–29 years; 11 were 30–39 years; and 7 were over 40 years. The distribution of the lesions is indicated in Table 1; whilst all the patients had perianal warts, over three-quarters also had lesions within the anal canal. 30 patients had had some other form of treatment previously, which had proved unsuccessful.

In four-fifths of the patients it was possible to clear all the lesions at the first operation. However, in the remaining 15 patients, one or more additional operative procedures was required to achieve this (Table 2). The number of doses of intramuscular analgesic agents e.g. papaveretum, given after the first treatment in the 75 patients, is shown in Table 3. All the patients were started on a normal diet as soon as they felt able after the operation and they were also given a bulk laxative, such as Isogel or Normacol. All patients succeeded in having their bowels moved by the third postoperative day (Table 4).

Table 1. Distribution of lesions

Location of lesion	Patients	
	No.	%
Perianal	75	100
Anal canal	58●	77
Rectum	7	9
Genitalia	24	32

● 38 above and 50 below dentate line

Table 2. Number of operations required to clear all lesions

No. of operations	Patients	
	No.	%
1	60	80
2	12	16
3	1	1
4	2	3

Table 3. Intramuscular analgesic injections after first treatment

No. of injections	No. of patients
—	36
1	31
2	6
3	2

Table 4. Day of first bowel movement

Days after operation	No. of patients
1	11
2	49
3	15

Postoperative complications occurred in only 4 patients, all after the first treatment. 3 patients had bleeding from the wounds: in 2 of these the bleeding was rapidly brought under control by using a gauze dressing soaked in topical adrenaline; in the third patient the cause was a coagulation defect which the patient had failed to disclose for fear that the operative procedure would not be performed! The complication in the fourth patient was a perianal haematoma, which resolved spontaneously. It should be added that there were no complications in twenty subsequent treatments which were performed. Thus, the total incidence of complications after this operation was just over 4%.

After complete removal of all the lesions, 40 patients had no further wart formation. Of the remaining 35 patients, 6 were lost to follow up; 11 had minimal recurrence, i.e. less than five small perianal recurrent lesions readily controlled with an application of podophyllin; 16 had moderate recurrence necessitating further operative removal; and 2 patients had severe

recurrence which could not be controlled by operative means. All the patients who were followed up (69) were seen at least three months after the operation and 31 patients were seen at intervals for one year. In the majority of patients recurrent wart formation was detected by the end of the second postoperative month (Figure 6).

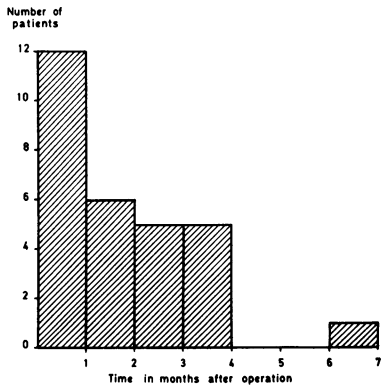


Figure 6. The time of detection of recurrent wart formation in 29 patients

Discussion

Condylomata acuminata result from a virus infection of the epidermis (Oriol & Almeida 1970). Evidence is now accumulating that this virus is capable of stimulating the immune mechanism to produce circulating antibodies (Ogilvie 1970). Untreated anogenital condylomata acuminata are most likely to persist for a prolonged period, giving rise to distressing symptoms of perianal discomfort and irritation and occasional bleeding together with the presence of the lumps. A few patients may be fortunate and have spontaneous regression, but there are now reports of patients with condylomata in which malignant change occurs (Siegel 1962, Oriol & Whimster 1971). Thus, in the majority of patients symptoms demand some form of treatment. Most of the treatments available are traumatic, not only to the lesion, but also to surrounding normal tissue. The various methods employed include the application of podophyllin or trichloroacetic acid, the use of electrocautery or diathermy excision and, more recently, cryotherapy has been used (Ghosh 1977). All these methods are associated with some discomfort and if used extensively may result in prolonged discomfort while the wounds are healing, and scarring, which on occasions has led to anal stenosis. Patients with lesions scattered in the perianal region only can be satisfactorily treated on an outpatient basis, but patients with extensive perianal disease and lesions within the anal canal require inpatient treatment for complete removal of all the warts. The technique of operative excision described in this paper, and called scissor excision, has proved to be a relatively simple technique to perform, although in patients with extensive lesions it may be time consuming. It is associated with few complications and relatively little discomfort. The scarring is minimal and most patients, when examined some six months after treatment, have relatively normal-looking perianal skin and no narrowing of the anal canal.

The accepted problem with all forms of treatment is recurrent wart formation. However, there is very little documentation of the exact incidence. Abcarian *et al.* (1976) quote a recurrence rate of 75%. The recurrence rate in this series (58% of the patients having no recurrence and a further 16% insignificant recurrence) therefore compares very favourably with their results. The precise reason for recurrent wart formation is unknown, but it seems logical that a failure to remove all the lesions will be associated with recurrent wart formation. This is especially so for lesions within the anal canal, which are frequently not diagnosed. A

further reason may be that some of the lesions are microscopic and therefore are not seen at the time of initial treatment, only becoming apparent some few weeks later. Finally, reinfection is a possibility, but judging from the time lapse of recurrences reported here, it would seem that this is not a major factor and that the main problem is failure to eradicate all the virus at the time of treatment. Therefore, it would appear that the more precise and careful the technique is for removing the lesions, the greater is the chance of preventing recurrent growth.

The role of the immune mechanisms in recurrent wart formation is undetermined. However, Abcarian *et al.* (1976), using surgical excision combined with immunotherapy, have reduced their recurrence rate to only 10%. It would seem, therefore, that the answer to the treatment of condylomata acuminata may lie in a combination of treatments – operative excision and some adjuvant therapy. Another method of adjuvant therapy at present being evaluated is the use of the chemotherapeutic agent 5-fluorouracil, which has been shown to be of value in treating common warts (Hursthouse 1975). Idoxuradine (Morrison 1975) probably ought to be studied as well, but the immunotherapeutic approach of Abcarian and his colleagues seems at present to be the most promising.

Summary

Seventy-five patients have been treated for condylomata acuminata by means of a new operative approach which results in the preservation of the maximum amount of normal tissue. The technique has proved to be simple to perform, it has minimal complications and causes the patient little in the way of discomfort. Three out of 4 patients treated have no significant recurrent wart formation.

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