

MINOR SURGERY IN PRIMARY CARE - WARTS AND ALL

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Background

In the 1960s, 10-20% of patients seen in dermatological departments were referred for the treatment of warts, 70-80% of whom could have had their warts managed at home or in their general practitioner's surgery [1].

During the last decade, liquid nitrogen treatment (cryotherapy) has become an increasingly popular method of removing cutaneous warts in the primary care setting; since the 1990 general practitioner contract, general practitioners on Family Health Service Authority minor surgery lists have received payment for performing cryotherapy.

A general practitioner may claim a sessional fee of £106.20 for five surgical procedures performed from the following six categories: injections; aspirations; incisions; excisions; curette, cautery and cryocautery; other [2]. Table 1 shows the number of claims for payment in each calendar year, 1992 to 1994, for each of the six categories by the 114 general practitioners on the minor surgery list in Bromley.

The table shows that there has been an increase in claims for minor surgery in all categories in the three years, but particularly in the categories "curette, cautery and cryocautery" and "other". The bulk of both categories is cryotherapy for the treatment of cutaneous warts. Cryotherapy was included in "other" where, for example, uncertainty

Summary Points

- ◆ Cutaneous warts are harmless and transient
- ◆ Treatment is unnecessary
- ◆ When warts cause disability or difficulty performing daily tasks, first-line treatment is the application of a wart paint at home
- ◆ Guidelines should be developed for the management of cutaneous warts in the community and shared with schools and those health care professionals who provide advice to schools
- ◆ Appropriate mechanisms for educating health care professionals on the management of cutaneous warts should be established
- ◆ Funding for the cryotherapy treatment of warts should be reduced

existed among practice staff completing claim forms about whether cryotherapy was the same as cryocautery.

In 1994, Bromley Health spent almost £90,000 on these two categories, of which about £60,000-£80,000 was spent on the treatment of warts for some 560-760 individuals. These estimates are based on two assumptions, firstly, that that an individual receives about 5 treatments (see Table 2) and secondly, following discussions with general practitioners, that the treatment of warts accounts for 66-90% of claims for "curette, cautery and cryocautery" and "other".

Newly merged commissioning authorities have the responsibility of identifying the health care needs of their resident population and purchasing appropriate, cost-effective health care with finite resources. What are the health care needs of people with cutaneous warts and what is the most appropriate, cost-effective treatment? In the context of the priority setting for health gain debate, £60,000-£80,000 would alternatively buy 15-20 hip replacements, 76-101 day case cataract operations or 12-16 coronary artery bypass graft operations (provider extra contractual referral (ECR) tariffs, 1994-5).

This paper attempts to determine the most appropriate management of cutaneous warts in the community in the context of its prevalence and natural history.

Natural history and prevalence: is this not exaggerated?

In the general population, cutaneous warts are harmless, transient tumours caused by about 8 types of human papilloma viruses (HPV) [3].

Warts are rare before the age of five years and are usually found in older children and young adults. A recent population study in British school children found the prevalence of warts to be 3.9-4.9% in children aged between 11-16 years [4].

A survey of 1,000 institutionalised children with learning difficulties whose warts were left untreated found that the prevalence of warts increased from 18% to 25% in two years [5]. As new warts were found to occur three times more frequently in infected than uninfected children, it has been concluded that treatment should not be withheld [6]. Although this survey is frequently quoted, it is arguable whether the findings in this group of children can be extrapolated to the general population, especially as the prevalence of warts was initially so high. Furthermore, insufficient emphasis has been made of the fact that 35% of original lesions were noted to have involuted within 6 months, 53% within 1 year and 67% within two years.

In the survey of British school children [4] where it is likely that a sizeable proportion were treated, the prevalence of warts was found to increase by 1% in five years but the clearance rate was 95% in that time (ie 95% of children noted to have warts when they were aged 11 years no longer had warts when they were 16 years).

As the virological diagnosis of warts depends on complex molecular biological techniques, knowledge about HPV transmission is based essentially on clinical observation. Skin warts can be acquired by direct contact, or indirect contact with contaminated objects. The incidence of plantar warts is not considered to be influenced by dry bare foot activities like gymnastics or dancing, but there is considered to be an increased risk of acquiring them when wet, bare skin is exposed to the virus in communal facilities (eg swimming) [7]. In a 10% random sample of over 8,000 swimmers at a public swimming bath, 6.9% of children under 16 years and less than 0.7% of those over 16 years had plantar warts [8]. This means that the proportion of swimmers under 16 years with plantar warts was not much greater in this study than the 3.9%-4.9% found in the survey of school children [4]. The proportion of those aged over 16 years with plantar warts was very small which indicates that the risk attached to swimming pools has been exaggerated.

Longterm immunosuppression, for example among renal transplant recipients, and patients with the rare disease Epidermodysplasia Verruciformis (EV) are at risk of their warts undergoing malignant change. However, such malignancies are in-situ or invasive squamous cell carcinomas which are slow growing and non-metastasising [3,9]. The HPV types found in these skin cancers are not the ones found in common skin warts. Malignant transformation of skin warts found in the general population has never been reported.

Treatment - why treat?

Why go to such lengths and expense to get rid of cutaneous warts when they are harmless and transitory? Their perceived unsightliness may be lessened if more emphasis was made of their ephemeral nature. Many, often fascinating, methods of eliminating warts have been described over the centuries and their contagious nature has compelled the medical profession to become involved.

There is no once-only treatment that will cure all warts and no treatment is 100% successful. Most treatments work by destroying the epidermis in which the virus is present and the commonest and most acceptable methods of achieving this are either the application of a wart paint or cryotherapy.

An effective wart treatment is one that can achieve a higher level of cure than would occur by spontaneous resolution in the same period of time. Realistically, treated warts can be eliminated in about 12 weeks. One study reported the control cure rate in 12 weeks to be 52% for hand warts and 62% for plantar warts [10].

Comparisons between trials are made difficult by variations in inclusion criteria and treatment modalities but overall, the success rate of liquid nitrogen is not much different to that of properly used wart paint [10,11,12]. The combination of regular cryotherapy and the application of wart paint slightly improves the response for hand warts. Mosaic warts, particularly on the feet, are very resistant to any form of treatment [10,11].

The commonest treatment methods are summarised in Table 2.

Can they be prevented?

Various measures to reduce the incidence of plantar warts have been advocated. For example, it has been recommended that before swimming, warts are "adequately" covered by a strapping which encircles the foot and/or a type of protective sock. The effectiveness of these methods to reduce the incidence of warts was demonstrated in a controlled group of physical education students who swam almost daily [7].

But preventive measures will not eradicate infection from swimming pools, even if compliance was 100%, as there will always be individuals who are unaware that they have plantar warts. Evidence that socks prevent the transmission of infection is circumstantial and little is known about the infectivity of subclinical warts. Foot inspections would have resource implications for busy swimming pools and would invariably miss early/new warts. They would also stigmatise those with warts, particularly children, and may discourage participation in what is indisputably an excellent form of exercise.

There is no national or local education authority policy on the management of plantar warts in school children so individual schools have developed their own policies. The historical emphasis on the contagious nature of plantar

Table 1: Number of claims for payment for the 6 categories of minor surgery from general practitioners on the minor surgery list in Bromley, 1992-1994

Year	Categories of Minor Surgery Procedures					
	Inj	Asp	Inc	Exc	Cur	Oth
1992	1839	170	259	1022	2565	330
1993	2049	166	270	1276	3389	412
1994	2005	182	268	1308	3333	881
% increase in claims from 1992-1994	9	7	3	28	30	167
Key:	inj = injections; asp = aspirations; inc = incisions; exc = excisions; cur = curette, cautery & cryocautery; oth = other					

Table 2: Types of wart treatments, their duration, cost and limitations

Type	Technique	Duration (minimum)	Cost	Limitations & Potential Side Effects
Wart paint (eg containing salicylic acid)	Nightly application of paint	12 weeks	Less than prescription charge (£4.74)	Patient has to be motivated and persistent
Cryotherapy	5 applications liquid nitrogen at 2-3 weekly intervals ¹²	10-15 weeks	£106.20 + cost liquid nitrogen	5 surgery visits required. Painful.
Surgery	Complete excision	Immediate	Within contract for dermatology	Rarely indicated. Requires experienced operator. Scarring inevitable.

warts has meant that schools have tended to strongly discourage or prevent afflicted children from swimming, or have allowed swimming on condition that warts are covered. Consequently, general practitioners have been approached for treatment, a process facilitated by the general practitioner contract for minor surgery.

Conclusions and recommendations

Although unsightly, warts are self-limiting and unless they cause disability or difficulty performing daily tasks, can be left alone. There is no evidence that warts are potentially harmful, except in immunocompromised patients whose warts need monitoring, or patients with EV, which is very rare.

There is no evidence that either treatment or prevention have made a difference to the prevalence of warts in the general population. Plastic socks could be advocated for individuals determined not to acquire warts.

Commissioners, with the consultant in communicable disease control, must work with general practitioners and dermatologists to develop and agree guidelines for the management of cutaneous warts in the community, bearing in mind that the majority can be left alone. The guidelines must include criteria for treatment and referral to the hospital. If treatment is considered necessary, first-line therapy is the application of a wart paint at home.

The guidelines must be shared with schools, the school health service and other health care workers, like chiropractors, who provide advice to schools. Appropriate mechanisms for educating health care staff will need to be established to ensure that the guidelines are successfully implemented, for example, seminars for general practitioners as part of continuing medical education.

Commissioners must grasp the nettle and decide how much health care resource should be spent on freezing warts. At current levels, the health benefits from cryotherapy do not justify the funding.

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