

Carcinoma of the penis developing in lichen sclerosus et atrophicus

J. S. BINGHAM

From the Department of Genitourinary Medicine, Middlesex Hospital, London

SUMMARY Malignant change developing in lichen sclerosus et atrophicus is rare in men. A case is described in a 39-year-old man.

Introduction

Lichen sclerosus et atrophicus (LSA) is an uncommon disease of unknown aetiology in which small, white areas on the skin may be associated with an atrophic condition of the vulva, perianal skin, and penis. It was first described by Hallopeau in 1887, and Darier reported the histological changes in 1892.

It occurs more commonly in women than in men, and its reported incidence in a general hospital varies from 1/300 to 1/1000 depending on the liaison between the dermatology and gynaecology departments (Wallace, 1971).

Montgomery (1941) found that the mean age for the onset of LSA in women was 50 years and in men 40 years. The mean age of 11 men seen at the Department of Genitourinary Medicine, Middlesex Hospital, since 1966, was 29.4 years. Indeed Wallace (1971) found that 30 out of 44 cases in men occurred between the ages of 15 and 45 years. Of his 44 patients only two developed carcinoma of the penis, one aged 48 and the other 58; this gives the impression that this is a rare development and that it tends to occur in men in an older age group. The aim of this report is to describe malignant change in a younger man with LSA of the penis.

Material and methods

CASE REPORT

The patient, a 39-year-old Caucasian married garage proprietor, presented with a four-month history of a 'sore' on the glans penis which caused discomfort and was aggravated by sexual inter-

course. He had no past history of sexually transmitted disease, but he had been circumcised for acquired phimosis six years before attending this department. The prepuce had not been sent for histological examination.

On examination the coronal sulcus of the penis was largely obliterated, particularly on the left, and there was adhesion between the glans and the prepuce. There was a small area of telangiectasia on the glans penis to the right of the urethral meatus and an area of pale skin to the left of the orifice. There was a small, tender, non-indurated ulcer on the left lateral side of the glans penis near the coronal sulcus. The inguinal lymph nodes were not palpable. The appearances were those of LSA with ulceration.

INVESTIGATIONS

Darkground examination of scrapings from the base of the ulcer did not demonstrate *Treponema pallidum*. A virus culture from the same site showed no evidence of herpesvirus hominis. A bacteriological swab grew *Staphylococcus aureus*.

TREATMENT AND MANAGEMENT

Neomycin ointment was applied topically, and the ulcer healed after one month. Fluocinolone cream was applied subsequently, but ulceration reappeared. Attendance thereafter was irregular, and the patient continued to apply the corticosteroid cream but would not agree to examination of a biopsy specimen of the lesion (which did not enlarge) until the associated pain became more severe. When this procedure was carried out 10 months after the patient's initial attendance, histological examination of the biopsy specimen showed 'a superficially invasive, keratinising, squamous cell carcinoma'. The inguinal lymphatics were still not palpable.

Address for reprints: J. S. Bingham, Department of Genitourinary Medicine, James Pringle House, Middlesex Hospital, London, W1

Received for publication 11 April 1978

FURTHER INVESTIGATIONS AND SUBSEQUENT MANAGEMENT

Chest x-ray examination showed no abnormality. A lymphangiogram showed no evidence of either inguinal or pelvic lymph node involvement. Haemoglobin was 15.7g/100ml (15.7 g/dl); white cell count was $9.2 \times 10^3/\text{mm}^3$ ($9.2 \times 10^9/\text{l}$); and the other blood indices were within normal limits. Serum cholesterol, bilirubin, alkaline phosphatase, aspartate transaminase, total protein, albumin, calcium, sodium, potassium, chloride, phosphate, and urea levels were all normal.

The patient was treated with electron therapy by means of a linear accelerator; a total of 4200 rads was administered over three weeks, and he is well 17 months after treatment.

Discussion

The patient had some of the characteristic features of LSA, namely, the classical clinical appearance and a history of acquired phimosis. Lesions can also occur on the shaft of the penis but did not do so in this case. LSA never appears on the scrotum (Wallace, 1971), which is interesting as the derivation of the scrotum is similar to that of the vulva.

This case is reported because carcinoma developed at the early age of 39 in a man in whom LSA had probably been present for at least seven years, that is, since the circumcision for acquired phimosis. Histological examination was not carried out, and it has been suggested that the diagnosis can be overlooked if this is not undertaken (Fairgrieve, 1959).

Carcinoma of the penis developing in LSA has been described by several authors (Stühmer, 1928; Frühwald, 1935; Grütz, 1937). In women carcinoma of the vulva usually develops in a leucoplakic area, but while leucoplakia coexists in about 50% of cases in women (Wallace and Whimpster, 1951) it is rarely seen in men and was not present in this case. Hart *et al.* (1975) studied 107 patients with LSA of the vulva and found coexisting, invasive carcinoma in only five cases. Careful histological examination showed no evidence that the carcinoma actually arose from areas of LSA. In this case, although there was no histological confirmation of

LSA in the biopsy specimen, as the lesion was not widely excised, the carcinoma did appear macroscopically to be in the centre of an area of LSA.

The ulcerated area was treated initially with fluocinolone cream, but it has been recommended (Rook *et al.*, 1972) that stronger fluorinated corticosteroids should not be used, particularly if fissures or superficial ulcers are present.

It was decided not to amputate the penis as a method of treatment on account of the young age of the patient. The possibility of using cobalt needle insertion was also discounted because of the small size of the penis.

Survival-rate figures vary, but de Kernion *et al.* (1973) found, in carcinoma arising *de novo*, a three-year survival rate of 96% with stage 1 lesions (the stage in this case), and von Alth *et al.* (1973) found a five-year survival rate of 84% at the same stage.

I would like to thank Dr R. D. Catterall, Dr R. H. Meara, and Dr A. Jelffe for their assistance in the management of this case.

References

- Darier, J. (1892). Lichen planscléreux. *Bulletin de la Société française de dermatologie et de syphiligraphie* 3, 365-369.
- de Kernion, J. B., Tynberg, P., Persky, L., and Fegen, J. P. (1973). Carcinoma of the penis. *Cancer*, 32(ii), 1256-1262.
- Fairgrieve, J. and Parker, R. A. (1959). Acquired phimosis in the elderly caused by lichen sclerosus et atrophicus. *British Journal of Urology*, 31, 74-77.
- Frühwald, (1935). Penis carcinom nach balanitis xerotica obliterans (Stühmer). *Zentralblatt für Haut-und Geschlechtskrankheiten*, 50, 98.
- Grütz, O. (1937). Beiträge Klinik der balanitis xerotica obliterans (Stühmer). *Dermatologische Wochenschrift*, 105, 1206-1212.
- Hallopeau, H. (1887). Leçons clinique sur les maladies cutanées et syphilitiques. *Union Medicale*, 43, 742-747.
- Hart, W. R., Norris, H. J., and Helwig, E. B. (1975). Relation of lichen sclerosus and atrophicus of the vulva to development of carcinoma. *Obstetrics and Gynecology*, 45, 369-377.
- Montgomery, H., and Hill, W. R. (1940). Lichen sclerosus et atrophicus. *Archives of Dermatology and Syphilology*, 42, 755-779.
- Rook, A., Wilkinson, D. S., and Ebling, F. J. G. (1972). *Textbook of Dermatology*, second edition. Blackwell Scientific Publications: Oxford.
- Stühmer, A. (1928). Balanitis xerotica obliterans (post operationem) und ihre beziehungen zur 'Kraurosis glandis et praeputii penis'. *Archiv für Dermatologie und Syphilis*, 156, 613-623.
- von Alth, G., and Brenning, K. (1973). Die radium therapie des peniskrebses. *Wiener klinische Wochenschrift*, 85, 296-300.
- Wallace, H. J., and Whimpster, I. W. (1951). Vulval atrophy and leukoplakia. *British Journal of Dermatology*, 63, 241-257.
- Wallace, H. J. (1971). Lichen sclerosus et atrophicus. *Transactions of the St. John's Hospital Dermatological Society*, 57, 9-30.