Hospital Topics

Recurrence after surgical treatment of hidradenitis suppurativa

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Abstract

From six to 89 months after surgery 82 patients who had been treated by radical surgery (118 excisions) for intractable hidradenitis suppurativa were reviewed. Local recurrence rates varied greatly with the disease site, being low after axillary (3%) and perianal surgery (0%) and high after inguinoperineal (37%) and submammary (50%) excision. Recurrence results from inadequate excision or an unusually wide distribution of apocrine glands, but physical factors such as obesity, local pressure, and skin maceration played a part in a few patients. Recurrence due to inadequate surgery tended to be the most troublesome. At follow up 75 (91%) of the patients were pleased with the results of their operation. A quarter of the patients developed disease at a new anatomical site after operation.

Radical surgery gives good symptomatic control of severe hidradenitis suppurativa of the axilla, inguinoperineal, and perianal regions but is less satisfactory for submammary disease.

Introduction

Hidradenitis suppurativa may affect any area of the body surface where apocrine glandular tissue is found, but most often it affects the skin of the axillae and inguinoperineal regions. The incidence may be as high as one in 300.¹ The typical features of longstanding disease are chronic sinus formation, subcutaneous fibrosis, and a progressive disorganisation of normal skin architecture. Purulent discharge from the deep, painful, recurrent lesions causes consider-

able social morbidity and distress. Surgery is the only effective treatment for severe disease.

Local excision of hidradenitis is often followed by recurrence,² and many authors agree that wide excision of affected skin is to be preferred.²⁻⁷ The recurrence of disease in our own early cases, and in many patients referred after conservative surgery elsewhere, led us to adopt a routine of radical excision and healing by granulation. Adequate excision will usually result in a defect that precludes primary closure, and various techniques are described to obtain skin cover, such as applying split skin grafts⁵ or transposed⁸ or pedicle flaps.⁹ Our method of choice is to allow these wounds to heal by granulation with the aid of Silastic foam dressings.¹⁰ Certainty of wound healing, avoidance of a donor site, rapid mobilisation with minimal discomfort, and uncomplicated management of the wounds after discharge from hospital recommend its use.

Most of the period of healing can be spent at home and patients lead a reasonably normal life, often continuing at work. The results of a controlled study comparing delayed skin grafting with this method of wound care after axillary skin excision for hidradenitis showed that patients preferred the foam dressing technique.¹¹

Many reports that describe the surgical treatment of hidradenitis lack detailed follow up information,^{6 12-14} but when it is included the follow up is of short duration.¹⁵ We carried out a detailed review of patients who had undergone wide excision to assess the morbidity that results from surgery and the incidence of recurrent disease.

Patients and methods

Between January 1978 and June 1985, 95 patients with severe hidradenitis were treated by wide excisional surgery in this department. All patients had undergone prolonged conservative treatment before being referred for operation, which was offered only to those with advanced disease—that is, deep sinuses or discharge causing severe morbidity, or both. The decision to have surgery was left to the patient after the full implications of the operation had been explained and, when possible, a discussion with other patients on whom a similar procedure had been performed.

The operative techniques and the use of Silastic foam elastomer dressing in the postoperative management of patients who have undergone wide excision of inguinoperineal or axillary skin have been described elsewhere.¹⁶

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In brief, for axillary disease all hair bearing skin was removed and overt disease cleared by a margin of at least 1.5 cm of normal skin. This resulted in an average specimen (fixed) of 11 × 8 cm. For inguinal disease most of the hair bearing skin of the mons pubis and the skin in the flexure creases of the groins and the outer aspects of the labia majora or adjacent scrotal skin were removed, together with perineal skin as far as the anus posteriorly. Clinically evident disease was again cleared by at least 1.5 cm. Skin excision for hidradenitis affecting intermammary and inframammary sites was aimed at clearing active disease by a similar margin of 1.5 cm. Clearance of perianal disease necessitated excision laterally to a distance of 10-12 cm and medially to the junction of true, thick perianal skin with the thinner, rugose endoanal skin. In five patients near or complete circumanal skin removal was performed, and in 10 perianal skin was removed in continuity with that of the natal cleft or inguinal region. All wounds were packed with proflavine-paraffin emulsion gauze, and, when appropriate, split skin was obtained and stored for delayed application. The usual practice was to allow healing by granulation to completion. Split skin grafts were used in some patients, mainly as part of a clinical trial,¹¹ and rarely myocutaneous flaps.

All patients who had undergone wide excision were invited to attend for review at which a structured questionnaire was completed and a full clinical examination carried out. Particular attention was given to the incidence and site of recurrent hidradenitis, its proximity to the scar, and the finding of late morbidity after surgery. The opinion of the patients was sought regarding the cosmetic results of the operation and whether or not they were pleased with the end result. No patient was assessed by the surgeon who was responsible for their management.

Results

Of the total of 95 patients, 62 women and 20 men were reviewed (118 operations) (table). This included 11 who failed to attend the clinic and were subsequently interviewed and examined at their homes by one of us (MM). Of the 13 not reviewed, one died of an unrelated cause (malignant melanoma), four moved away from south Wales, and eight were not traced. The mean age of the patients and duration of hidradenitis at the time of operation was 32.5 years (range 14-56 years) and 8.8 years (range 1-44 years), respectively. The mean duration of follow up after surgery was 47 months (range 6-89 months). Healing times for the wounds that were allowed to heal by granulation were: axillae, median 11 weeks (range 7-30); inguinoperineal, median 16 weeks (range 8-30); and perianal, median 17.5 weeks (range 12-30).

Recurrent disease—Disease recurred locally at 21 sites in 19 patients, developing from three to 72 months (median 24 months) after operation in 15 patients after inguinoperineal surgery, in three after axillary excision, and in three after mammary excisions, giving recurrence rates of 37%, 3%, and 50%, respectively. There was no local recurrence after operation for perianal disease. Six of the 19 patients had required further surgery by the time of review to control symptoms related to the recurrence. Two distinct patterns of recurrent disease were found. One was confined to the immediate vicinity of the scar (10 patients), usually solitary and typically occurring in the groin creases or the posteroinferior margins after inguinoperineal surgery. The second, in which multiple lesions were present (nine patients), occurred either adjacent to previous excision sites or a few centimetres away. The former, typified by deep sinuses and appreciable morbidity, required further excision; the latter, characterised by widespread, often superficial lesions, were more trivial and resulted in little morbidity. At review 20 patients had developed the disease at an anatomical site that had been unaffected at the time of the initial surgery.

Morbidity—Complications arose before discharge from hospital in 14

Wide excisions for hidradenitis suppurativa (20 men, 62 women) and operations for axillary hidradenitis (12 men, 44 women)

	No of men	No of women
Wide excisions*		
Anatomical site:		
Axillae (see below)	12	44
Inguinal	12	29
Perianal	13	2
Intermammary or inframammary	1	5
Axillary hidradenitis†		
Procedure:		
Bilateral	10	29
Unilateral	2	15
Axillae excised	22	73

*Thirty one (38%) patients required surgery at more than one anatomical site.

†Seven men and 13 women had skin grafts after axillary excision.

patients (12% of operative procedures). Failure of the skin graft, defined as less than 50% take, was seen in nine patients (45% of applied grafts) despite the use of delayed application and immobilisation of the limb in an aeroplane splint. Uneventful healing by granulation using Silastic foam occurred in all cases after graft failure. One patient required debridement of the distal tip of a myocutaneous flap because of ischaemic necrosis. Leg vein thrombosis was noted in one patient with a history of deep vein thrombosis despite the administration of perioperative prophylactic heparin. Axillary vein thrombosis was diagnosed clinically in one patient whose arm swelled after the operation, which probably resulted from excessive abduction of the arm at operation. Other complications included postoperative anaemia (four patients) and transient oedema (two). Late wound morbidity required intervention in four patients: two with hypertrophic scars and one with wound tenderness. All were treated by local excisions. The fourth patient developed appreciable premenstrual skin erythema, fever, and pain around the scar, which did not resolve with antibiotic treatment but finally responded to ovarian irradiation. The pathogenesis of this complication is obscure.

Cosmetic results—Nearly all (91%) of the patients who were reviewed stated that they would be prepared to undergo a similar procedure again. Thirteen patients graded the cosmetic result of their surgery as being less than satisfactory or poor, including three whose skin graft had failed. Both patients in whom myocutaneous flap repair of groin wounds was performed found the flaps to be obtrusive and generally unsatisfactory. Four of the 13 patients described the postoperative appearance of their wounds (two axillary, two inguinal) as so seriously limiting their lifestyle that they regretted having had the operation. These wounds were all objectively graded as satisfactory at the review, but the patients' assessments were not known.

Discussion

Although the acute, intermittent lesions of early hidradenitis often respond to antibiotics, it is unlikely that such treatment alters the clinical course of the disease. Patients with chronic hidradenitis may occasionally derive symptomatic benefit from a long term course of antibiotics, but relapse is almost inevitable when treatment is withdrawn.

An underlying endocrine disorder^{17 18} that suggests excess androgen provides a rationale for the use of the antiandrogen cyproterone acetate. In a recent controlled trial comparing ethinylloestradiol 50 µg/cyproterone acetate 50 mg in a reverse sequential regimen with ethinylloestradiol 50 µg/norgestrel 500 µg both treatments were equally effective,¹⁹ but only seven of 18 patients who completed the trial were free of disease at 18 months' follow up. Patients with established sepsis secondary to extensive hidradenitis responded less well, reinforcing the need for early diagnosis and treatment if conservative measures are to offer any chance of success.

The terms "wide" and "radical" excision are poorly defined in published papers, and thus it is difficult to compare and evaluate the methods and results of different published series. Emphasis is often placed on the technique used to cover an excision defect rather than the extent of excision or the success or failure of the treatment. Follow up has been short¹⁵ or of unspecified^{20 21} length, and often absent.^{6 12-14} Recurrence rates that are quoted without a reference to the site at which surgery was performed may mislead,²¹ and considering reoperation as a criterion of treatment failure will underestimate the number of patients with a less than satisfactory outcome.² The need for prolonged follow up, even after radical surgery, is apparent from our results. At review half of the patients with recurrence had developed these lesions more than two years after surgery. Just under a quarter of patients had developed hidradenitis at a previously unaffected site.

The extent of skin excision may influence the recurrence rate more than the method of wound management. In a recent series reoperation for axillary recurrence was necessary in 54% of cases treated by local excision and suture, in 19% after flap repair, and in 13% after grafting.² This confirms our experience that attempts to obtain primary skin cover may lead to inadvertent compromise of the excision margin and an increased risk of recurrence.

Two series have been published with sufficient detail to allow comparison with our own experience. Knaysi *et al* reviewed 23 patients with generalised but superficial axillary disease treated by

removal of the hair bearing skin and split skin grafting.⁵ No recurrence was evident at median follow up of 24 months, but in nine axillae with more severe disease treated by similar excision and flap repair a 22% recurrence rate was noted.

In contrast, recurrence in the axilla was found in 3% of our patients, presumably reflecting our wider clearance of the area bearing hair. Anderson and Dockerty reviewed 38 patients after surgery for perianal hidradenitis.²² At a minimum follow up of eight years 45% had required further treatment for disease at the same site; only eight patients reviewed had been free of disease since operation. Though follow up was shorter in our series, we did not see recurrence after excision of perianal skin. This may reflect our more radical approach.

Apocrine glands of axillary skin are confined mainly to the area bearing hair and the surrounding two centimetres.²³ Woollard applied the term "anal organ" to the similarly concentrated mass of apocrine tissue situated in the circumanal region.²⁴ Adequate excision of skin from these sites is likely to reward the surgeon and the patient with a low recurrence rate. The results of our study confirm this. Apocrine glands are more diffuse in the groin, perineum, and inframammary regions, making complete removal impracticable. Recurrence after surgery at these sites will occur more often. Thirty nine per cent of patients who underwent inguinoperineal excision and half of those who had mammary disease developed lesions in proximity to the scar. Recurrent disease may therefore reflect too limited an excision or widespread, sometimes "ectopic," gland distribution. The former recurrence usually requires further surgery to complete the excision; the latter can be managed conservatively or by local removal of the recurrent lesion. Despite a high recurrence rate most patients are well satisfied after inguinoperineal excision because local areas of "ectopic" recurrence are trivial compared with the disease before surgery. This is not the case with submammary disease, in which recurrence has been widespread and approximates the original disease.

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Medical History

Anatomy and subversion: 150th anniversary of Georg Büchner's death

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Karl Georg Büchner died of typhus in Zürich on 19 February 1837 in his 24th year. Like the friends in whose home he had been cared for, and like Schönlein, one of the physicians who attended him, he was a refugee from the political oppression prevailing in the German states of the post-Metternich era. Death had followed several days of intermittent delirium during which the patient repeatedly talked of friends who were in prison in the state of Hessen-Darmstadt, from which he had fled. His funeral was attended by many of the leading citizens of Zürich, including its two mayors.

Clearly, he was recognised as a man to be honoured for his achievements and for his promise. Yet it is doubtful whether even

those who knew him best could have foreseen how highly posterity would come to value that achievement or indeed what its true nature was. His legacy was indeed remarkable—a literary output consisting of works (*Woyzeck*, *Danton's Death*, *Lenz*) which foreshadowed the preoccupations of Kafka and of Expressionism; a philosophy of science that rebutted the woolly concepts of Romantic natural history; and political utterances that anticipated Marx.

Family of physicians and surgeons

Büchner was born into a medical family in the Duchy of Hessen-Darmstadt in October 1813. On his father's side he came from a long line of physicians and barber surgeons. His father, Dr Ernst Büchner, had served as an army surgeon with the Garde Napoleon, an experience that had left him a devoted Francophile, devoted, however, not to the ideals of revolution but to Napoleonic strength and authoritarianism, a conservatism that was to lead to a serious rift with his son.

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