Clinical Review of Hidradenitis Suppurativa:*
Management of Cases with Severe Perianal Involvement

CHARLES C. CHING, M.D., LEROY H. STAHLGREN, M.D.

From the Philadelphia General Hospital, Philadelphia, Pennsylvania

Hidradenitis suppurativa is an uncommon disease which ranges in severity from an acute localized skin lesion to a chronic extensive infection involving deep subcutaneous tissue. Multiple areas may be involved simultaneously. The pathogenesis and clinical features have been described by Anderson and Dockerty,1 and Conway and associates.4 Localized forms, whether acute or chronic, respond to conservative surgical measures such as incision and drainage,7, 11 debridement,3 and curettage. Irradiation and administration of androgenic drugs5 have been used with some degree of success in the management of early lesions. Advanced cases require wide surgical excision and reconstructive procedures.4, 6, 11 Extensive perianal involvement is complicated by the added problem of fecal contamination.

Clinical Data

Twenty-nine patients with hidradenitis suppurativa were treated at the Philadelphia General Hospital during the period from 1951 to 1963. There were 19 men and ten women. Twenty-two patients were Negroes and seven were Caucasian. The initial skin lesion appeared during the second decade of life in eight patients, in the third and fourth decades in six patients each, and in the fifth and sixth decades in seven patients each. The oldest patient at the time of onset of the disease was 62 years of age.

Location of Lesions: Eleven patients exhibited multiple areas of involvement and 18 had only one lesion. The axilla was involved in 20 patients, the perianal region in 14, the groin in 11, and the face and breast in one patient each.

Stage of Disease on Admission: The infection was acute in 14 patients and chronic in 15. In the chronic cases, eight were limited to a single area and in seven, multiple areas were involved.

Treatment: Thirteen patients with localized lesions were treated by conservative surgical procedures. Good results were obtained in 12 and there was no improvement in one. Twelve patients underwent radical surgical procedures. Wide excision and primary closure was performed in three. In three patients, the diseased area was excised widely and allowed to fill in and heal without sutures. Skin grafting was performed on six patients. Good results were obtained in all 12 patients. Three patients refused operation, and in one the operation was not completed. In six patients with extensive perianal disease, a temporary diverting colostomy was performed to prevent fecal soiling. After the colostomy had begun to function properly, the perianal lesions were excised widely and skin grafting was carried out secondarily. Five of these patients were observed throughout the entire course of treatment, and when they were discharged the wounds were completely healed. One patient was lost to follow up (Table 1). Illustrative case reports follow:

Case 1: A 19-year-old Negro man was admitted to the Philadelphia General Hospital on September 1, 1960, because of a one-year history of chronic abscesses and fistulas of the skin and subcutaneous tissues of both inguinal areas and the
left axilla. His treatment consisted of administration of antibiotic agents—systemically and as local applications—soaks, and incision and drainage. When these measures failed, the involved skin and subcutaneous tissue were excised widely. After an interval of 10 days, split-thickness skin grafts were applied. Two months after admission, the wound was completely healed and the patient was discharged.

He was hospitalized again in January 1963 and was treated successfully for facial acne and hidradenitis involving the perianal area. In March 1963 he was re-admitted for treatment of the perianal hidradenitis. Conservative measures, including incision and drainage, were employed and the wound improved temporarily. Diseased foci persisted in the perianal region and new areas of infection appeared. The patient was re-admitted in November 1963, when the lesions involved both buttocks and extended into the perineum. There were elevated, indurated cords and nodules with sinus tracts discharging a thin, bloody, purulent exudate. Transverse colostomy was performed to divert the fecal stream, and two weeks later the perianal area was excised down to the fascia. Microscopic examination revealed a striking inflammatory infiltrate in which lymphocytes and plasma cells predominated. Eosinophils were also present. The inflammatory reaction was noted principally around the sweat glands.

Postoperatively, the patient was given sitz baths. When the wound had "granulated in" satisfactorily, split-thickness skin grafts were applied. A second series of skin grafts were required to complete the resurfacing. The colostomy was closed after the grafts had healed.

Comment: The clinical course of this patient reveals the progressive nature of hidradenitis suppurativa culminating in extensive perianal involvement.

Case 2: A 41-year-old Negro man was admitted to the Philadelphia General Hospital in April 1963 because of a five-year history of chronic abscesses and fistulas of the buttocks, right breast, axillae, and groin. The axillary lesions had been treated effectively by his private physician. Our treatment consisted of incision and drainage of the lesions of the buttocks, and excision of the lesions of the right breast and groin. Split-thickness skin grafts were applied (Fig. 1, 2).

The patient was discharged when the wound healed, but he was re-admitted on September 24, 1963, because of progression of the lesions of the buttock and perianal area. On admission he had fever and malaise, and he had lost his appetite. A diverting colostomy was performed soon after admission, and two weeks later the lesions were excised. Pathologic study of the excised tissue confirmed the diagnosis of hidradenitis suppurativa. Split-thickness skin grafts were applied 12 days later, when satisfactory granulation tissue had appeared. Additional grafts were applied two weeks later to complete resurfacing (Fig. 3). Finally the colostomy was closed.
TABLE 1. Results of Treatment of Hidradenitis Suppurativa

<table>
<thead>
<tr>
<th>Treatment</th>
<th>No. Patients</th>
<th>Satisfactory</th>
<th>Unsatisfactory</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservative</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Incision and drainage</td>
<td>8</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary closure</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary healing</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin grafting</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment incomplete</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colostomy only</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgery refused by patient</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>29</td>
<td>24</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Comment: Involvement of the buttocks and perianal area may cause severe disability and systemic symptoms and require extensive surgical treatment.

Discussion

Hidradenitis suppurativa is an inflammatory disease affecting the skin and subcutaneous tissue in areas where apocrine sweat glands are found—chiefly the axilla, areola of the breast, inguinal regions, and the perineal area. The scalp, shoulders, extremities, abdomen and face are involved less frequently. The apocrine glands begin functioning at puberty, and it is about that time that hidradenitis usually appears. There is a high incidence of pustular acne in patients with hidradenitis.2

It has not been determined whether the apocrine glands are the primary or secondary site of infection. Shelley and Cahn10 have demonstrated that hidradenitis can be produced experimentally by obstructing the apocrine glands and adding secondary infection.

Cultures reveal nonspecific bacterial flora commonly found on the skin. Trauma to apposed skin surfaces, excessive local moisture, uncleanliness, and the use of deodorant, depilatory, and anhidrotic agents may aggravate the disease.

Clinical Features: In acute hidradenitis the lesions are few in number and appear as deep-seated nodules with a tendency to coalesce and form cords. The lesions can be differentiated from furuncles by the appearance of local heat, erythema, and pain, which involve the tissues more deeply and tend to coalesce.

In the chronic stage, multiple abscesses, intercommunicating sinus tracts, and irregular hypertrophied scars form. The scars, ulceration and infection extend within the subcutaneous tissues to the fascia. The exudate varies from serous to purulent, and has a foul odor. Systemic symptoms appear in the most severe cases. The local lesion may resolve slowly or may progress through a series of recurrences and remissions. Hidradenitis suppurativa is chiefly a disease of young male adults.

Treatment: Localized hidradenitis will occasionally respond to conservative measures in conjunction with minor surgical procedures. Some chronic lesions require wide surgical excision and reconstructive procedures. The excision includes the involved skin and subcutaneous tissue, down to fascia. After excision of small lesions, the wound may be closed primarily. If the wound edges cannot be approximated, closure may be achieved by rotation of a skin flap or by Z-plasty. Larger areas can be resurfaced with split-thickness skin grafts. Skin grafting is carried out immediately if the wound is clean. If local infection is
severe, grafting can be deferred until the infection has been cleared.

Added difficulties are encountered in the management of extensive lesions of the perianal area and buttocks due to fecal contamination. As practiced in our patients with severe perianal involvement, a temporary diverting colostomy has been performed as the first stage. After satisfactory establishment of colostomy function, the involved tissue is excised radically. Reconstruction is delayed to provide for treatment of fistulous tracts which might have been overlooked, and to permit healthy granulation tissue to appear. Split-thickness skin grafts are applied in sufficient numbers to resurface the entire wound. The colostomy is closed after all areas of the wound have healed satisfactorily.

Summary

Hidradenitis suppurativa is an uncommon disease that affects chiefly young male adults. It is characterized by an infection which begins in the skin and apocrine sweat glands and extends into the subcutaneous tissues. It may extend over wide areas and involve multiple sites.

Milder forms of the disease respond to conservative surgical measures. Extensive lesions require wide surgical excision and reconstruction of the resultant defect.

Owing to fecal contamination, perianal involvement presents an added difficulty which can be obviated by establishing a diverting colostomy prior to beginning surgical treatment.

References