

The Surgical Treatment of Hidradenitis Suppurativa*

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HIDRADENITIS suppurativa is an acute inflammatory disease process of the apocrine sweat glands of the skin with a strong propensity for chronicity, local recurrence, and distal spread. The etiology of this disorder is obscure. Several factors have been suggested, one of the more prominent being mechanical or chemical irritation. Hidradenitis suppurativa arises in patients who must wear metallic or leather prostheses or casts near areas containing apocrine glands. The disease also follows the use of the chemical agents such as cosmetics and deodorants. This use of prosthesis, casts and deodorants is much more widespread than the disease so that there must be other factors in the etiology. Also, these factors of local irritation may be important as an initiating cause but certainly do not explain the chronicity of the disease.

The portal closure theory has been proposed by some writers and discounted by others. The normal apocrine gland has an extremely long, narrow and tortuous duct—much longer and more tortuous than the ducts of other sweat glands. It is reasonable to consider, therefore, that these ducts are easily occluded by chemical applications to the skin or cellular detritus.

Concurrent distal infection such as, pilonidal abscesses, otitis media and abscessed teeth may play a role, but this again does not explain the chronicity of hidradenitis suppurativa.

Endocrine disorders have been reported in significant numbers of cases in some series. This has not been my experience. The only endocrine disorder encountered was diabetes mellitus and this was in only 10% of the cases in this series. Endocrine disorders may play a more important role than this paper would suggest, however, for acne is frequently associated with this disease. All the males gave a history of acne or had clinical acne of the face and trunk at the time we saw them for hidradenitis suppurativa.

Infection seems to play a role in hidradenitis

suppurativa. In the acute cases the organism is usually hemolytic *Staphylococcus aureus*, coagulase positive, which is sensitive to the usual antibiotics. In the chronic case about one half will culture hemolytic *Staphylococcus aureus* and the remainder culture proteus or non-hemolytic *Streptococcus* and *Aerobacter*. The bacteriology in the chronic case is more varied than in the acute case and seems to reflect secondary invasion.

In the chronic cases, the *in vivo* clinical response did not correlate well with the *in vitro* sensitivity reported, as most of these patients had been treated with a variety of antibiotics with minimal response.

The role of microorganisms is uncertain. Many think hemolytic *Staphylococcus aureus* is the etiologic agent but other authors state the cause is unknown. It is believed to be an infection. Apparently the infection takes place only if other pathogenic factors are also present.

CLINICAL COURSE

Hidradenitis suppurativa is a chronic, indolent, inflammatory disease characterized by abscesses and sinus formation in those areas where apocrine sweat glands are found. We see it then in the axilla, the nape of the neck, the mammary folds, the gluteal region, perineum and groin. It is a disease of adult life. The patients are ordinarily in their 3rd and 4th decades. The youngest in my series was 17, the oldest 63. It has been reported as being more common in females than in males but the reverse has been my own experience. The disease starts slowly with burning, itching, hyperhidrosis eventuating in frank inflammatory processes with nodule and abscess formation. Resolution and scarring may occur or there may be remissions with eventual *deep* abscess and sinus formation.

TREATMENT

Medical therapy with antibiotics, local heat, incision and drainage where indicated, autogenous vaccines, radiation therapy, have all been

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successful and continue to be, especially in the acute case. However, these modes result in many treatment failures, recurrences and exacerbations in the chronic case.

I will not comment on these types of therapy for I have had essentially no personal experience with them. By the time the patients are referred to me, they have had many of these therapeutic trials, one patient in the series having been continuously treated for 17 years.

Surgery for chronic hidradenitis suppurativa will not effect a cure in every instance but certainly offers the best chance for clinical improvement in a vast majority of cases. This disease is so much like a neoplastic process in that unless completely eradicated it recurs, tends to affect distant sites almost like metastasis, and wreaks psychologic, physical and financial havoc on the patient and his family. The patient that I see with wide-spread disease has typically had it for years, has been treated for years and can expect months of hospitalization and further months of convalescence once we begin the surgical treatment on his disease.

For the patient with early or limited chronic disease, the treatment is rather straightforward. It consists simply of excision of the affected area with primary closure. This is particularly effective for lesions in the axilla, mammary folds and groin. Since we are dealing with inflamed and grossly infected tissue, we routinely drain these excisions for 48 hours and postoperative wound infection is the exception rather than the rule. The postoperative use of antibiotics seems not to affect the development of wound infection.

For the more extensive lesions which do not permit primary closure, several options are available. The choice depends upon the area involved. In the axilla, excision and primary closure is the most frequent procedure. If primary closure is not possible because of the amount of tissue removed, the axilla must be covered to prevent scar contracture. If the area removed has not extended to the fascia, split thickness skin grafts yield satisfactory results. If the dissection has extended to the point where axillary vessels are exposed, this must be covered with substantial tissue—skin and subcutaneous tissue with its own blood supply. In such cases rotation of a flap, usually from the chest wall, is required. Again, in such procedures,

post-operative infection is unusual. For the nape of the neck and the buttocks we have found that the better cosmetic result is obtained from allowing healing by second intention rather than split thickness grafts. This results in a relatively thin line of scar tissue rather than the geometric pattern resulting from skin grafts. Surprisingly, many patients are quite concerned about the cosmetic appearance of their buttocks. Large areas will granulate in a period of several months and the patients begin to lead a productive life long before healing is complete. For the perineum, pubis and intercrural regions, split thickness grafts yield shortest healing times and satisfactory cosmetic results. These can be applied immediately if the tissue looks healthy and oozing and is not excessive at the time of excision. Otherwise, a delay of four to six days will allow for a healthy bed of granulation tissue to form which doesn't bleed if the dressings are soaked off and split grafts can be applied at that time.

The after-care of both primarily closed and rotation flap closed areas is simple wound care. After-care of grafted areas and granulating wounds makes use of the whirlpool in the Hubbard tank for a week to 10 days after dressings are removed. This stimulates granulation and also gently prevents crusting on graft edges. As soon as the patient is confident he can handle these areas with Sitz baths or compresses as the case may be, he is discharged.

These surgical procedures seem quite routine, but as each patient has an irregular area involved, reconstruction taxes surgical ingenuity. These procedures done in inflamed, infected tissue are formidable. By way of comparison, I routinely complete a radical mastectomy in less than two hours, yet an axillary dissection with flap rotation closure takes me a minimum of three and usually four hours, and two pints of blood per axilla. I mentioned that the patients are discharged on Sitz baths at home, but the reason for the long hospitalization I alluded to before is that patients with extensive chronic hidradenitis suppurativa in multiple areas require staged procedures over a period of six to eight weeks.

COMPLICATIONS

The complications of this surgery are those of any extensive procedures and include wound in-

fection, pneumonia (although rare in this generally young age group we are working with, is still seen because of the prolonged post-operative bed rest necessitated in patients who have grafts on the perineum and legs), pulmonary embolus, septicemias, etc.

The late sequelae involve mainly keloid formation (which is fortunately rare) and scar contractures. These occur mainly in the axilla and on occasion require release of the contracture or even Z-plasty. In the perineum, scar contractures occur quite regularly but present little functional disability.

The main complication is extended hospitalization and convalescence and its effect on the patients earning ability and the expenses incurred. It is because surgical therapy of the early, well

localized lesion is so simple and the therapy of the wide-spread disease is so complex and time consuming, that we urge early surgical treatment of chronic hidradenitis suppurativa.

SUMMARY

Chronic hidradenitis suppurativa is a chronic widespread disease of the apocrine glands of the skin which affects several areas of the body and has a strong propensity for recurrence, if not completely eradicated. The surgical therapy of this disease consists of: 1) simple incision and drainage, 2) primary excision and primary closure, 3) excision and immediate skin grafting, 4) excision and delayed skin grafting, 5) excision and flap rotation closure, and 6) excision and healing by second intention or granulation.

(Dummet from page 321)

and there are implied feelings that the institution must somehow inject and infuse into the student, all the needed information, skills and attitudes of health professional personnel! Such pronouncements indicate a complete lack of knowledge as to what health professional education is all about.

Just as the student has a right to expect equal opportunity, empathy, special consideration, necessary assistance, and fair treatment in professional school, the faculty has an equal right to expect industry, hard work, attention to duty, faithfulness to commitments and obligations, respect, cooperation and dedication from all students,—disadvantaged notwithstanding. If in spite of these mutual efforts, students are found to be unfit for careers in dentistry, then in the interests of the health of communities, such students should and must be withdrawn from the particular profession-

al educational program. Not to be condoned are protests and demonstrations to retain students who have failed to meet prescribed standards despite being accorded the opportunity, a fair chance and every assistance.

There is nothing sacred about retention of disadvantaged students, merely because they are disadvantaged. *All* students must understand the serious responsibilities of the health professions, and recognize that they will be held accountable for the animate existence of individuals through the restoration and preservation of their physical, mental and social health.

This lofty calling demands the best performances and high degrees of excellence on the part of members of the health professions. We have the obligation never to lose sight of these goals.

(Smith from page 364)

3. Concept of obligated health services.

4. Preferential admittance to medical and dental schools be given to qualified indigenous students who plan to remain in specified communities to practice medicine or dentistry.

5. Expansion, improvement and implementation of health careers counselling concepts in public and parochial schools so as to motivate, encourage and

recruit more students into the vocations of medicine and dentistry.

We must invoke more realistic and energetic action programs so as to overcome the health problems of the present and the future.

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