Surgical treatment of hidradenitis suppurativa: 15 cases

N. Lamfichekh (1), A.-S. Dupond (2), N. Destrumelle (3), C. Runser (1), P. Humbert (2), G. Mantion (3)

(1) Service de Chirurgie Générale et Digestive, CHG "André Boulloche", Montbéliard.
(2) Service de Dermatologie, CHU "St Jacques", Besançon.
(3) Service de Chirurgie Générale et Digestive, CHU "Jean Minjoz", Besançon.

SUMMARY

Introduction

Verneuil's disease (hidradenitis suppurativa) is a chronic inflammatory, suppurating and fistulizing disease of apocrine sweat gland-bearing skin. The aim of this study was to describe the surgical treatment, conducted in 15 patients suffering from this disease.

Patients and methods

We retrospectively analyzed 15 observations (9 men, 6 women, mean age 38.6). The mean delay between beginning of the symptoms and diagnosis was 55.5 months. Surgery was conducted at the stage of abscesses, fistulization and keloids in all patients. The first surgical step was wide and deep excision of affected skin and subcutaneous fat. The second step was secondary intention healing, or ideal suture, Z plasty or dorsalis major flap.

Results

Only four patients had complications: two axillary strictures, one anal margin stenosis and one hypertrophic scarring. Three relapses occurred, treated by excision under local anesthesia.
Verneuil's disease, or hidradenitis suppurativa, is a chronic suppurative disorder with fistulae and sclerosis developing in apocrine gland-bearing areas [1, 2, 3]. It may affect one or several areas including the perianal region, groin, pubis, scrotum, buttocks, inner thighs, and areola. In this retrospective study we report our experience in the surgical treatment of 15 patients.

**Patients and methods**
Fifteen cases of Verneuil's disease treated surgically between 1985 and 1998 were analyzed. Nine of the patients were men and 6 were women, with a mean age of 38.6 years (range 26 to 57). The diagnosis of Verneuil's disease was made in 12 patients by a surgeon and in 3 by a dermatologist. The mean interval between the first symptom and diagnosis was 55.5 months (range 8 to 240 months). All patients underwent surgery after developing abscesses, fistulae, inflammatory nodules, or keloids. One patient presented with a subcutaneous peri-areolar nodule on the right breast and bilateral axillary involvement. Isolated perianal involvement was observed in 3 patients, and multiple sites (anus, groin, scrotum, buttocks, and labia majora) were affected in 6 patients. Only one patient presented with unilateral axillary disease. Four patients presented with two affected sites (perianal and bilateral axillary regions). Among the 9 patients with suppurative, bacteriological cultures from 6 patients identified one or several of the following organisms: *Staphylococcus aureus* (3 cases); *Proteus mirabilis* (2); *Streptococcus, beta hemolytic* (1); *Corynebacterium sp.* (1); *Clostridium bifermentans* (1); and *Bacteroids levii* (1). In 3 cases no bacteria were identified. Concomitant pathologies included anal fistulae (3, two lower trans-sphincter anal fistulae and one "horseshoe" fistula); acne (2, predominantly on the face and upper back); and psoriasis (2). Six patients underwent medical treatment while awaiting surgery. Three were treated with isotretinoin with or without antibiotic therapy (pristinamycin or oxacillin) and 3 received antibiotics alone (oxacillin or metronidazole). All patients underwent surgery under general anesthesia. Surgery was performed once in 7 patients, twice in 4 patients, three times in 2 patients, and four times in 2 patients. The procedure consisted of wide and deep excision of the skin and subcutaneous fat of the affected areas. Injection of methylene blue into each fistula and sinus illustrated the extent of the lesions. Left iliac lateral colostomy was performed in 5 patients with extensive perianal lesions. In these 5 patients, skin grafts were placed on the area after 15 days of wound care. The grafts were taken from the posterior aspect of the thighs. Ten axillary plasties were performed in 6 patients, five with dorsalis major flaps and five as Z-plasties.

**Results**

The mean duration of surgery varied by site and procedure: perianal excision: 15 minutes; perianal skin graft: 60 minutes; unilateral axillary excision with dorsalis major flap: 150 minutes; and excision of axillary skin with Z-plasty: 55 minutes. The immediate post-surgical course was uncomplicated. The mean healing time also varied with site: axillary area with Z-plasty or dorsalis major flap: 15 days; perianal excision: 61 days with a skin graft, 90 days with primary repair. The colostomy was reversed after complete healing. Three patients had perianal relapses. One case presented with inflammatory nodules and multiple fistulae and underwent additional excision under general anesthesia. In two other cases subcutaneous nodules were excised under local anesthesia, and the defects were repaired with simple interrupted sutures. Two patients developed axillary strictures that required excision of the Z-plasty scar followed by physical therapy for shoulder movement. One patient developed anal margin stenosis that was treated by excision of the scarred tissue and multiple anal dilatation procedures. One patient developed excessive perianal hypertrophic scars requiring treatment with silver nitrate.

**Discussion**

We report our experience with surgical therapy in 15 cases of Verneuil's disease. The most commonly affected sites were the perianal (13 cases) and axillary (6) regions, and in many cases multiple sites were involved. We observed three relapses, and 4 patients developed late complications: two had axillary strictures, one had anal margin stenosis, and one had hypertrophic scarring.
Verneuil's disease affects adolescents and young adults. Diagnosis is generally made when the disease is advanced and the clinical diagnosis is straightforward [2, 4]. The disease can be limited to the perineum, can affect the anal margin uniformly or bilaterally, or can extend to the groin, scrotum, pubis, buttocks, inner thighs, and labia majora. The perianal area is most frequently involved (13 of our 15 patients) and may coexist with disease at other sites, particularly the axillae (6 patients) or areolae [4]. The course of hidradenitis is chronic and progressive. The perianal forms extend locally, developing fistulae and sinuses in the surrounding areas. Each flare generates physical and mental discomfort for the patient. Reported complications include amyloidosis [4], epidermoid carcinoma [5, 6, 7], and fecal incontinence [4]. Verneuil's disease and anal fistula frequently coexist. The fistulae develop from suppuration of Herman & Defosse's glands, stemming from crypts on the pectineal line. They are comprised of a primary orifice on the pectineal line and one or several secondary external orifices at the anal margin. The search for an anal fistula must be systematic, and it can be performed either by injection of methylene blue through the external orifice to identify the primary crypt on the pectineal line or by blunt exploration with a stylet. Three of our patients had anal fistulae, with lower trans-sphincter and "horseshoe" presentations.

Medical treatment is only effective in mild forms of the disease and often yields only temporary improvement. Treatment consists of antiseptic and antibiotic therapy, at times in combination with isotretinoin [4, 9]. In our series, treatment with antiseptics and antibiotics reduced the abscess and inflammation before surgery. Some authors propose destruction of affected areas by CO₂ laser and healing by secondary intention [9, 10]. The radical treatment of Verneuil's disease is, however, surgical. Preoperative intestinal preparation is recommended along with prophylactic antibiotic treatment, given as a single parenteral dose of 0.5 g imidazole during induction (as per the 1999 recommendations of the French Society of Anesthesia and Reanimation for the use of prophylactic antibiotics during proctologic surgery). Small lesions can be excised under local anesthesia. Methylene blue, injected into the fistulae and sinuses, reveals the extent of the lesions. The search for an anal fistula is systematic: rectal palpation can reveal a nodule on the pectineal line that corresponds to the primary crypt of the anal fistula. Methylene blue, injected into the secondary fistula at the anal margin, will seep into and reveal the primary pectineal crypt. The boundaries of the fistula can also be explored with a stylet. The recommended width of the lateral excision margins is 2 cm of unaffected tissue. The excision depth must reach the aponeurosis [11, 12, 13, 14, 15]. Extensive lesions are generally symmetrical. The principle of exploration and excision is the same. The area surrounding the anus and the median raphe must be respected [14, 16]. Lateral discharge colostomy is often necessary and is reversed after healing. The surgical defect can be repaired either by granulation, which occurs within 3 to 5 months, by primary linear closure, or by skin grafting, generally 15 days after excision of the affected skin. Primary closure followed by skin grafting may be proposed. Skin grafts improve healing time and prevent strictures and retraction of the adductor muscles.

In the axillary fold, excision follows the same guidelines. The defect can be repaired either by Z-plasty or, in view of its mobility and volume, with a dorsalis major flap [14, 17]. Relapse may occur in the surrounding skin or at a distance as subcutaneous nodules or abscesses. They are generally localized and amenable to excision under local anesthesia. The complications of surgical treatment are wound infection, graft retraction, joint structure, stenosis of the anus and/or anal margin, and fecal incontinence. Four complications occurred in our 15 patients.

In summary, our experience reinforces previous reports of excisional approaches for hidradenitis suppurativa. Surgical treatment, in one or
more stages, appears to be the only definitive treatment for Verneuil's disease.

To cite the present paper, use exclusively following reference:

REFERENCE(S)
[10] Lapins J, Jarstrand C, Emtestam L. Coagulase negative staphylococci are the most common bacteria found in cultures from the deep portions of hidradenitis suppurativa lesions, as obtained by carbon dioxide laser surgery. Br J Dermatol 1999;140:90-5.
