Journal Homepage: -www.journalijar.com
INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)
Article DOI:10.21474/IJAR01/7004
DOI URL: http://dx.doi.org/10.21474/IJAR01/7004

RESEARCH ARTICLE

VERNEUIL'S DISEASE.

Ouafaa Dhaidah[1], Sara Zahid[2], Abdelkodus Bhihi[1], Mehdi Sahibi[1], Adil Dehhaze[1], Mariem Quaboul[1], MoulayDriss Elamrani[1], Yassine Benchamkha[1] and Salwa Ettalbi[1].

1. Department of Plastic and Reconstructive Surgery in CHU Mohamed VI, Marrakech, Morocco.
2. Department of Dermatology in CHU Mohamed VI, Marrakech, Morocco.

Manuscript Info

Manuscript History

Received: 20 March 2018
Final Accepted: 22 April 2018
Published: May 2018

Keywords:-
Verneuil's disease, dermatology, Surgery.

Abstract

Verneuil's disease is a chronic fistulating, sclerosing and scar-forming suppuration. Its diagnosis is often misunderstood and therefore mistaken for another pathology.
Through the analysis of 13 observations of Verneuil's disease, we wanted to take stock of the clinical diagnosis, the ethiopathogenesis and the therapeutic principles of this disease.
Descriptive retrospective study including all hospitalized patients in the plastic surgery department of CHU Mohammed VI in Marrakech Morocco for a Verneuil's disease, from January 2009 to December 2015. The characteristics of the disease and the therapeutic proposal were analyzed and the effectiveness and satisfaction of the surgical treatment evaluated.
In 6 years, 13 patients (10 men and 3 women) with an average age of 43.8 years were hospitalized in our department. Smoking was present in six of our patients ie 46% of our active smoking-type patients with an average of 31.1 years packs. The mean age of onset of the disease for women was 24.2 years and 30.6 years for men. The average diagnosis time for the disease was 9.32 years with extremes of 2 months and 43 years, the diagnosis was carried by a dermatologist in the majority of cases. The average body mass index value of patients in our series is 25.78 kg / m2 with extreme values of 20.2 and 31.1 kg / m^2, which corresponds to an overweight. The most common localization is axillary localization followed by gluteal localization. Hurley's score varied between 3 grades with a predominance of grade 3 for the 34 territories reached for our 13 patients. Two of our patients had ulcerated-budding lesions with irregular edges on scar placards, in whom the cutaneous biopsy demonstrated a squamous cell carcinoma. Eleven patients had a total lesion excision, unlike partial excision, which has never been performed for any of these patients. Two patients underwent carcinological tumor excision with lymph node dissection for squamous cell carcinoma. The type of cover that has been most used in this series is the direct suture. Skin transplantation by thin skin was performed for 7 territories in 6 patients with a delay of 3.5 months, with extreme values of 2 and 6 months. The territories where the skin graft was carried out are the gluteus territory to the number of 4 and the

Corresponding Author:- Ouafaa Dhaidah.
Address:- Department of Plastic and Reconstructive Surgery in CHU MohamedVI, Marrakech, Morocco.

axillary territory to the number of 3. The directed healing was carried out for the two patients who benefited from a carcinological excision.
The complications found in our patients 1 cases of haemorrhage, 1 case of perioperative recurrence, 1 case of sequellar bridle, 2 cases of hypertrophic scar, 2 cases of persistent pain. The satisfaction of the surgical treatment could be evaluated in postoperative with a follow-up of more than 9 months in 7 patients who are satisfied with the surgical treatment.
At a time, when new molecules have been developed and studied for the treatment of Verneuil's disease, surgical excision remains a treatment of choice in some situations. Medico-surgical discussion is essential for the management of this disease and its development must be a priority.

Introduction:-

Verneuil's disease or suppurativehidradenitis (SH) is a chronic inflammatory and suppurative, fistulizing and sclerosing disease of pilosebaceous follicles in anatomical regions rich in apocrine glands. The disease was named by Verneuil, a French surgeon, who has discovered in 1864 that the initial phenomenon was an inflammation of the sweat glands.

This is a rare condition whose incidence has not been clearly established. The prevalence varies from 0.03% to 8% in the industrialized countries.

The pathophysiology of Verneuil's disease is still subject to many controversies [1].

Studies show multiple risk factors for SH: smoking and obesity are the two major risk factors.

Its positive diagnosis remains clinical. However, there are many differential diagnoses. So, the benefit of para-clincal balance and particularly the pathological study to allow the discernment of these diagnoses.

Although the vital prognosis is rarely involved.Some complications can be serious, local (malignant degeneration) as well as general, where we note the importance of psychic and socio-professional impact due to unsightly scars.

Therapeutically, the medical care is multidisciplinary but not consensual, It advocates to curb relapses and treat lesions made for the purpose of better comfort for the patient.

The objective of our study is to put a spotlight on this rare disease, on its epidemiological, clinical, and therapeutic aspects, this through the results of a retrospective study carried out in Plastic surgery department of CHU Mohamed V in Marrakech Morocco and to confront them to those found by other authors.

Material and Methods:-

We performed a retrospective descriptive study concerning a serie of 13 patients with Verneuil's disease that were collected in the plastic surgery and burns department of CHU Mohamed V Marrakech in Morocco over a period of 6-years starting from January 2011 to January 2017.

Discussion:-

There is a female predominance [2] with a sex ratio of 1: 2.7 to 1: 3.3 according to many studies [3] [4] around the world.

Our serie is distinguished by the predominance of the male sex with a sex ratio of 3.3, this can be explained by the severity of the disease which is more important for men [5] and therefore requires more frequent use of surgical treatment.

In the table below, the comparison of the case series shows the presence of a discrepancy of the results, this can be explained by the sampling method which differs according to the type of study.

Authors	Countries	Number of patients	Men	Women
Z. Belhabib [6]	Morocco (Rabat)	106	98%	2%
F. Bordier-Lamy et al [7]	France	93	41%	59%
F.Vilchez-Marquez et al [8]	Spain	21	57%	43%
K. Mc Millan et al [9]	USA	236	35,10%	64,90%
B.Kim [10]	Canada	80	32,50%	67,50%
H. Xu [11]	China	53	62,26%	37,73%
I.Kurakuwa[12]	Japan	100	69%	31%
Our study	Morocco (Marrakech)	13	77%	23%

Table I:-Comparison of the distribution of SH between the two sexes.

The average age of the patients in our study was 43.8 years at the time of the study which is slightly high compared to other studies as shown in the attached table, this can be explained by the management delayed surgical treatment of serious forms in our context.Indeed several studies demonstrate the value of early surgical treatment when it is requested [13.14] to get a better therapeutic response.

The sampling mode of each study can also explain this difference in ages average.

D. Guedes De Carvalho et al [1]	France	35	33,42
Anne M.R.Schrader (15)	Netherlands	846	38
Z. Belhabib [6]	Morocco (Rabat)	106	39
C. Dessinioti [16]	Greece	133	34,5
Our Study	Morocco(Marrakech)	13	43,8

Table II:-Comparaison between age average of different studies

In our study, six of our patients (5 men and 1 woman) declared that they were single(about 46% of the cases).
Indeed, Verneuil's disease has a great psycho-social impact. The fear of stigmatization and shame, particularly because of the scent of sores and scars, is responsible for social isolation [17]. Also, SH is responsible for major disruptions in sex life: SH patients had more sexual dysfunction and distress than the control group for the Kurek et al. [18]. Sexual distress was more important for women than for men in the same study.

The unemployment rate in our population was 39%, reaching a rate of 25% for a serie of patients with SH achieved in Denmark in 2016 [19].

Other studies have shown a rate of 58.1% absenteeism for the patients with SH and that causes an average loss of 33.6 ± 26.1 working days per year [20]. This suggests the important impact of the disease on the work status.
No data on the specific reason for unemployment was available. One might think that the pain and psychological aspects of SH affect the patient's ability to maintain his job [20].

The topography of the lesions most found for these patients is the axillary and sub-mammary locations [20].

None of our patients had a familial antecedents, which does not match the literature where several studies speak of SHas an autosomal dominant disease (21).

A molecular genetics study found a link to two locis on chromosomes 6 and 19 in three families, but no link of these loci to other families.

A family history has been repeatedly documented in subgroups of patients [3]. In one study, 14 of the 26 index cases (53.8%) had a familial antecedents. Data from 11 families (42.3%) suggest monogenetic transmission in autosomal dominance. However, the frequency of the disease in families was 50% lower than would have been expected for autosomal dominant inheritance [3]. Among the reasons for this discrepancy, it can presentan hormonal influence on gene expression, a polygenic rather than monogenic transmission and gene- environment interactions. This discrepancy is shown in the table below:

F. Bordier-Lamy et al [7]	France	93	4,49%
I.Kurakuwa[12]	Japan	100	2%
C. Dessinioti [16]	Greece	133	25,60%
Our Study	Morocco (Marrakech)	13	0%

Table III:-Comparison of the familial antecedent effect in the different studies.

Smoking is much more common for patients that have SH compared to the general population [3]. According to a review of the literature, this association is evaluated with an average odds ratio of 4.34 (95% CI 2.48-7.60) [22]. Although it is associated with the SH, it is currently impossible to say whether it constitutes a real risk factor. Indeed, the available results concerning the relationship between severity of the disease and smoking are contradictory. One study reports a significantly higher severity for the smokers compared to nonsmokers (23) while others confirm that no difference [24]. Another study reports a significant association between the smoked packet-year number and the severity of SH [25]. It is difficult to determine whether smoking is a risk factor or a consequence of this chronic condition [26].

Furthermore, although one study reports a higher rate of remission in non-smoking patients compared to current smoker ones patients [27].The impact of smoking cessation on the course of the disease has not been studied.
The average body mass index found for our patients is consistent with the literature data

Authors	**Countries**	**Population**	**Body Mass Index>25**
F. Bordier-Lamy et al [7]	France	93	39%
B.Kim [10]	Canada	80	41,25%
Anne M.R.Schrader (15)	Netherlands	846	63,80%
I.Kurakuwa[12]	Japan	100	15%
Our Study	Morocco (Marrakech)	13	61%

Table IV:-Comparaison Between The Weight Effect In The Different Studies

Overweight is associated with severe forms of SH [15].

There is also a prevalence of the metabolic syndrome, which is much higher for the patients with SHthan in the general population (between 40 and 50% according to the studies [28] [29]).

These results are not surprising because of the high rates of obesity for patients with SH. The biological mechanisms that may be involved in this epidemiological association remain unknown and the metabolic syndrome may be related to the patient rather than to the disease itself. Currently, it is not possible to confirm if the link between the metabolic syndrome and the chronic inflammatory pathology[29].

Our results compared to those of the literature summarized in this table regarding the presence of associated diseases:

Authors	**Countries**	**Population**	**MICI**	**Pilonidal cyst**	**Acne**	**Diabete**
F. Bordier-Lamy et al [7]	France	93	1%	28%	30%	7,50%
D. Guedes De Carvalho et al [14]	France	35	8,57 %	14,29%	34,29 %	-
F.Vilchez-Marquez et al [8]	Spain	21	-	-	-	9,50%
B.Kim [10]	Canada	80	-	-	-	25,60%
H. Xu [11]	China	53	-	-	34%	-
I.Kurakuwa[12]	Japan	100	0%	2%	6%	11%
Our Study	Morocco (Marrakech)	13	0%	0%	23%	15%

Table V:-Comparison between different studies on the presence of diseases associated with SH.

Acne:-
The results of our study are consistent with literature data, but although many publications suggest an association between SH and acne, this is controversial. A history of severe acne is reported for 44.3% of men and 23.6% of

women affected by SH, but the concomitant presence of acne and SH is uncommon (13%) [24]and There is no association between SH and current acne. In addition, the diagnosis of acne is sometimes wrongly retained for patients with SH. Large scars, neck damage and failure of retinoid should guide the diagnosis of Verneuil's disease.

Pilonidal cyst:-
The pilonidal cyst is frequent for the patients who have SH, especially men (30.2% of the patients in the Canoui-Chrérine study (24). The absence of cases in our study can be explained by the retrospective character and the limited number of our studied population(Only 13 patients).

Inflammatory chronic diseases of the intestine:-
It increases 9 times the risk of developing Verneuil disease and has been reported for the patients with IBD compared to the general population [30]. The prevalence of SH in cases of Chron's disease or ulcerative colitis is estimated to be between 23% [9] and 6.8-10.6% [31] according to the articles. However, the prevalence of IBD for patients with SH remains unknown.
The absence of cases in our serie can also be explained by the retrospective nature and the limited number of our population.

Neutrophilicdermatoses:-
The association between pyodermagangrenosum and SH is rare but described in several clinical cases and small series (32). One study reports the presence of SH in 5% of patients with pyodermagangrenosum (33). This can occur in areas affected by Verneuil's disease [32].

Rheumatological pathologies:-
Various rheumatological manifestations have been reported to the association with Verneuil's disease. Spondyloarthropathies appear to be associated with SH. A higher rate of spondyloarthropathy has been reported for the patients that haveVerneuil disease compared to controls done by Richette. [34].

Extra-cutaneous cancers:-
To our knowledge, there is only one Swedish epidemiological study that has presented this problem [35]. This registry-based study examined the relative incidence of cancer for patients with SHfrom 1965 to 1997. About 2,119 patients were included. The overall risk for all types of cancer was increased by 50% in this cohort of patients hospitalized for SH based on the observation of 73 cases of cancer for patients with SH by comparing the figures with the incidence ,expected the Swedish population. The data shows a coexistence of SH and cancer, but these observations would need a confirmation for other SH populations. Such confirmation could guide etiological and pathogenic research on SH.

In our population, we have looked for the main functional signs that motivate consultation.

We found that the rash itself was the first reason for consultation, followed by the unsightly healing character and then equally by the iterative flows and pain. During our literature review, we did not find any study that deals with this parameter.

The average age of onset of the diseasefor our patients was 27.3 years whereas it is usually reported at 21.8 years in the literature (36), the delay diagnosis of the disease is important in our context and may explain this difference.
The diagnosis of SH is clinical and does not require any further examination. Anatomo-pathological analysis of SH lesions is non-specific and unnecessary for diagnosis.

Diagnosis criteria were adopted at the 2nd International Conference ofSuppurativeHidradenitis organized in San Francisco on 5 March 2009 (3).

The diagnosis can be retained in the presence of the following three criteria:
1. Typical lesions: deep painful nodules, abscesses, fistulas, hypertrophic "rope" scars, open comedones.
2. Typical location: armpits, groin, perineal area, perianal area, buttocks, sub-mammary folds and intermuscular furrow.
3. Recurrent and chronic character of lesions

The heterogeneity of the clinical presentation and the lack of knowledge of SH lead to a significant diagnostic delay. On average, patients consult the doctor for the first time after 2.3 years after the onset of the disease symptoms [37]. The diagnosis remains unknown for a long time because depending on their location, the lesions are considered as a common abscess, anthrax, a furunculosis, acne, a bartholinitis, an infected or inflammatory epidermal cyst.

The typical distribution of SHlesions correspond closely to the anatomical location of the apocrine sweat glands: axillary troughs and inguinal regions. Lesions can also occur on a line linking these two areas and passing through the breasts and extending to the anal area.

According to Canoui-Poitrin, the most frequently affected locations in order of frequency are the inguinal region (89.7%), the armpits (69.4%), the perineal and perianal region (37.2%), the buttocks (27.2%) and the breast area (17.6%) (24).

The axillary trough and the inguino-crural zone are the two main areas affected for SH (38, 3, 2).
Inguino-crural or groin involvement aremore common than axillary involvement, and is particularly common for women.

Inguinal involvement is less common for men and scrotal location is rare.
The breast may be affected for women, particularly in submembrane folds, sometimes in the inter-mammary fold and areola.

We found the perineal and perianal lesions are mainlyaffected for men.

Buttocks are an atypical localization more common for men.

Other atypical localizations have been reported: the neck, the belt, the peri-umbilical zones, the external auditory canal, the retro-auricular zone and the eyelashes.

Our serie is distinguished by the predominance of the axillary region followed by the gluteal region with a predominance of these two territories for men, the genitofemoral region and sub-mammary were more common for women.

			Axillary	Diaper	Pubic	Perineal	Genito-femoral	Submammary
Authors	Countries	Population	T/H/F	T/H/F	T/H/F	T/H/F	T/H/F	T/H/F
D. Guedes De Carvalho [14]	France	35	19/10/9	6/ 4/2	4 2 2	12/6/6	17/7/10	4 /0/4
H. Xu [11]	China	53	11/9/2	-	-	5/4/1	8/7/1	2/0/2
I.Kurakuwa[12]	Japan	100	38/21/17	59/51/8	26/14/12	-	1/0/1	1/0/1
Anne M.R.Schrader (39)	Netherlands	846	541/156/385	350/116/234	227/54/173	158/67/91	-	175/27/148
Our Study	Morocco (Marrakech)	13	13/11/2	9/8/1	2/1/1	2/2/0	4/4/0	4/0/4

Table VI:-Comparison of the topography of the attack between different studies.

The severity of SH is an important parameter that it is taken in consideration in the reasoning of the therapeutic care of the disease.

In front of a painful and abscessed inflammatory lesion, the Slit / drainare performed routinely and relieves the patient quickly [40]. This emergency surgical procedure, too often practiced on a lesion considered as a common abscess and without the diagnosis of Verneuil's disease was only mentioned, is useful if there is indeed a purulent collection. In the opposite, it is useless and even deleterious if the nodule is not softened. In all cases, this is a short-term solution. In major part of cases there is a recurrence [41,42].

This procedure is useful and better accepted for Hurley Stage I patients, in whom abscess drainage is permanent or recurrent. The limited excision is at best performed in monobloc, taking deep skin and subcutaneous tissue without reaching the musculo-aponeurotic barrier and leaving clear margins.

Limited excision can be used in complicated cases, with well-defined small to medium-sized lesions separated by healthy tissue (Hurley grade I). In more serious cases, when fistulas are present (Hurley grade II) or in interconnected fistulas (Hurley grade III), the major part of the authors recommend extensive excision of lesions [40].

In a retrospective study, 57 patients with mild to moderate stage Verneuil's disease (Hurley grade I) [43] were treated surgically outpatient, by excision plus primary closure of lesions under local anesthesia, patients were adapted for limited excision if they had Hurley Grade I lesions, not exceeding the palm size of the hand.

The only radical treatment consists in a wide, a deep and complete excision [40] of the distribution zones of the apocrine sweat glands affected during episodes of superinfections or extensive chronic forms, leaving lateral margins of one to two centimeters of healthy tissue.

The procedure is performed most often under general anesthesia.

Excision carries deep skin and subcutaneous tissue without reaching the musculo-aponeurotic barrier.

The extent of the excision and the long delay of a directed cicatrization can lead to propose the repair of the large affected surfaces , either by cutaneous grafts carried out generally in a delayed way within 2 to 3 weeks or immediately by recovery plasty. These technics provide faster healing, avoid vicious retractions and scars, but appear the risk of the local recurrence thatcould be high[44].

To perform the transplantation , it is necessary to wait until a quality, non-haemorrhagic and uninfected bud is obtained. The preparation period will require iterative bandages after the resection surgery, which can take several weeks especially in the aftermath of infectious cellulitis.

In Hurley's stage III chronic hidradenitis stage, the treatment must be medico-surgical. Healing the medical treatment of stage III disease is not to be expected. All medical treatments are therefore palliative and transient, which means that the disease reappears soon after stopping treatment. The antibiotic combination of clindamycin and rifampicin may also be useful [21]. Immunosuppressive therapy may be another interesting strategy for controlling the disease at this stage [21]. Classically, corticosteroids and ciclosporin can be also used. Several authors have recently suggested the use of tumor necrosis alpha inhibitors factor and their results may be confirmed in the future by randomized studies. For now, this treatment should be taken as experimental [21].

In our study,before surgery, the patients have benefited only of antibiotic treatment along and during outbreaks.
The surgical indication for large resection was retained in our patients who had severe Verneuil disease (mainly Hurley II or III). This result is in line with the guidelines of the European Expert Group published in 2015 recommending extensive surgical excision for the most severe diseases [45].

The average age of our patients was 43.3 years at the time of surgery, in the literature, the surgical treatment appears more effective when the duration of the disease before surgery is lower: According to In Bieniek et al., the disease had progressed for 9.8 years in the full-remission group versus 13.3 years for the other group (46). This data raises the question of why surgery is retained for older patients. Perhaps it would be more interesting to perform the surgical procedure as soon as possible.

The 13 operated patients underwent surgical interventions in which 20 locations were operated. In average, they underwent 1.9 procedures and operated on 1.53 sites. These same results were found approximately in the study by D. Guedes et al. [14] where 20 patients have been operated for a total of 32 surgeries in which 54 locations were operated. On average, they underwent 1.6 operations and operated on 2.7 sites.

The most frequently used reconstruction method was direct suture (55%).

Thin skin grafting was performed in 35% of cases and directed healing for 10% of cases.

In the literature, thereconstructionmode employed varies according to the authors. In a series of 204 operated locations, Bieniek. report the use of directed healing (with or without partial suture) for 87 locations (42.7%), thin skin graft for 46 locations (22.6%), direct suture for 51 locations (25%) and the flap for 20 locations (9.8%). In this study, these were localized resections with margins of 1 to 2 cm and the average excision surface was not mentioned. Rompel. the most frequently used direct suture (41.1%), followed by thin skin grafting (26.1%), directed healing (20.7%), and flaps (10.0%). 8%) for the reconstruction of 241 large exereses (47). Also, in a study of gluteal and perianal locations, reconstruction was directed healing in 57.1% of cases and skin grafting in 42.9% of cases [48].

In our study, the patients contacted felt that the procedure may be less stressful than the disease itself before the procedure. In the Bordier-Lamy et al. Study, 32% of women and 9% of men considered surgery to be "overwhelming".

Almost all the patients who have been contacted said they were "satisfied" with the surgical treatment. This is consistent with the satisfaction rates reported by Bordier-Lamy et al. [7]. Also, the surgery allows a frank improvement of the life quality. In our study, the patients contacted said they were "very much" embarrassed in their personal and professional lives before the surgery, whereas after the surgery, they said they were "almost not" embarrassed in their personal life and professional life. This result seems to emphasize the importance of surgery for the management of the most serious diseases.

The complications of chronic hidrosadenitis are multiple and depend on many factors.

There are general complications and local complications.

1. Infectious: Episodes of superinfection, erysipelas, see necrotizing fasciitis [49]
2. Lymphoedema: Chronic inflammation may be responsible for obstruction or destruction of the lymphatic system with consequentlymphoedema [50], [51]. This complication is observed mainly in scrotal zones [52].
3. Urinary and digestive incontinence: Fistulas can perforate surrounding elements such as muscles or fascia leading to fistulas in the genital and perianal region [21].
4. Malignant degeneration:

The risk of squamous cell carcinoma in HS has been estimated to be between 1.7% and 3.2% [53].
There is a male predominance of the impairment according to a review of the English literature conducted in 2016 on all cases of identified malignant degeneration [54], 86.5% of collected cases were men, the average age was At 52.4 years, the mean duration of SH was 25.5 years, and the peri-gluteal location was the most frequent location of malignant degeneration.

The most common histological type is the squamous cell carcinoma [21].

The long course of Verneuil's disease before degeneration contrasts with the dramatic evolution of squamous cell carcinoma. Of all the cases recorded in one study, 50% of patients die less than two years after surgery (55). For survivors, the threshold is usually rarely more than one year [55]. This suggests that squamous cell carcinoma complicating SH is more aggressive than squamous cell carcinoma occurring on healthy skin.

The only curative treatment is the wide excision with surgical revision in case of insufficient margins [21]. The secondary healing of the wound in the perineal area is surprisingly satisfactory. It has been suggested that early reconstruction may mask recurrence and this is why directed healing without discharge colostomy is advocated [21].
Squamous cell carcinoma is a relatively chemoresistant tumor [21].

Radiotherapy is ineffective because of the extension and volume of the mass that should be irradiated [21].
This is why these two types of treatments should only be considered palliative.

Two of our male patients aged 62 and 73 years developed a squamous cell carcinoma at the gluteal level allowing late diagnosis of Verneuil's disease after 35 and 48 years of evolution respectively, this was with an assessment of

extension revealing the presence of inguinal lymphadenopathy (inguinal ultrasound and thoracoabdominopelvic CT) at the time of diagnosis.

1. Psycho-social retreat: The prevalence of depression is greater in case of SH compared to the general population: 5.9% versus 3.5% according to Shavit et al. [40]. The same is true for anxiety, which affected 3.9% of patients with HS versus 2.4% of the general population in the same study [36].
2. Chronic inflammatory condition: Chronic suppurations lead some patients to complications such as anemia, hyperproteinemia or amyloidosis [21].
3. Septicemia and septic shock: These are complications that remain rare in SH [56]

These complications found after Verneuil 's disease surgery in our series and F. Bordier - Lamy' s series.

	Study of F. Bordier – Lamy (7) (93 cases)	Notre série
Post-operative Infection	11 (11.82%)	0
SutureLacing	7 (7.52%)	0
Hemorrhage	2 (2.15%)	1(7,6%)

Table VII:-Comparaison between complication types in the different studies

The distant postoperative complications are:

1. -persistent pain
2. -the strap
3. lymphedema
4. fistula
5. the hypertrophic scar
6. the orificial stenosis
7. failure of transplant / flap
8. the recidivism

The table below represents our results compared to those of F. Bordier - Lamy 's.

	Study de F. Bordier – Lamy (7) (Effectif de 93 cas)	Our Study
Persistant pain	17 (18,27%)	2 (15,38%)
lymphedema	2 (2,1%)	0
Fistula	2 (2,1%)	0
Hypertrophicscar	2 (2,1%)	2 (15.38%)
Orificialstenosis	1(1,07%)	0
Failure of transplant / flap	1 (1.07%)	0
Recidivism	2 (2,1%)	1(7.6%)
Strap	12 (12,9%)	1 (7,6%)

Table VIII:-Comparaison of distant complications between our study and F.Bordier- Lamy one

The presence of recurrence or perioperative involvement had to be evaluated by phone call because the patients are not systematically reviewed after the surgical treatment. In our study, We were able only to contact 7 patients.

A recurrence (defined by the appearance of new lesions on the operated area) was not reported for the 7 patients that have been contacted, this was with a delay of more than 6 months and a perioperative involvement (defined by the appearance of new lesions next to the operated area) was reported by a patient (contralateral axillary disease).
In the literature, the rates of recurrence after excision vary according to the authors. It is 2.5% according to Rompel et al. (57) and 1.8% according to Bocchini et al. (58) after extensive excision and 23% according to Van Rappard. after localized resection [59].

Several articles report lower recurrence rates after extensive resection compared to localized ones:

1. 27% versus 42.8% according to Ritz. after an average follow-up of 72 months [60] (recidivism time was respectively after 11 and 20 months on average)
2. 0% against 27% according to Soldin. [61]
3. 26% versus 38% (p = 0.04) according to Bordier-Lamy et al. in a French retrospective study of 205 locations operated from 1985 to 2007 [7](onset after 22 months on average [45-62]).

This difference seems to be confirmed by a review of the recent literature: Mehdizadeh et al. report a recurrence rate of 13% in case of extensive resection, 22% in the case of localized resection and 27% with the Deroofing technique [63]. However, these data must be analyzed with caution because there is a great heterogeneity between the articles included in this meta-analysis concerning the following data: time of follow-up, type of surgery, severity of the disease, operated locations and method of the result evaluation.

Also, the distinction between "localized" and "wide" resection is unclear. The concept of "broad" or "radical" resection does not refer to any commonly accepted definition. In the article by Rompel et al., Wide excision is performed by marking the fistulous paths intraoperatively using a colored solution [47] whereas in the study by Soldin et al., It corresponds to excision of all the hairy skin from the area to be treated with an additional margin of 2 cm [64]. In our study, the analysis of medical records did not distinguish between these two types of excision.

No statistical analysis was done to compare the frequency of relapses by location according to our knowledge. In the literature, recurrences after surgery appear to occur more frequently in inguinal and sub-mammary zones compared to axillary and perianal ones. Harrison et al. reported recurrence after radical surgery in 3% of axillary locations, 0% of perianal locations, 37% of inguino-perineal locations and 50% of sub-mammary locations [65]. In the Bocchini et al. Study, the recurrence rate in the gluteal and perianal area was 1.8% [58].

In the literature, recurrence rates seem to vary according to the type of reconstruction used after extensive excision. Mandal et al. reported 69.88% recurrence after direct suture against no recurrence after graft or flap (66). According to the Mehdizadeh et al. Meta-analysis, recurrence occurs in 15% of cases after direct suture, 8% after flap and 6% after transplant [63]. In other studies, no link could be found between the recidivism rate and the type of reconstruction used [57].

Conclusion:-

It is certain that knowledge of this mysterious and intriguing entity have been accumulated and that little controversy has remained. However, it is perfectly clear that many questions remain to be solved. The tools for obtaining these answers exist in the modern arsenal of techniques such as molecular biology, imaging, pharmacogenetics, genetics, biochemistry and others. The most delicate of these many questions, which await answers, concern the recognition of early manifestations of the disease that may resemble other unlinked conditions, this early recognition could allow treatments to avoid progression to disabling chronicity. end of the disease for which there is no other therapeutic option than that of a large surgery.

Nevertheless, our study confirms the effectiveness of surgical excision during Verneuil's disease with a recurrence rate of 7.6% and a relative satisfaction of the patients who had been operated on. However, despite all the existing data, it remains difficult to determine which are the best targets for this treatment and what is the best time to achieve it.

The recent proliferation of therapeutic drug options makes the discussion between dermatologist and surgeon meaningful. This multidisciplinary approach seems essential to develop in order to consider all the possible treatments and to develop a therapeutic strategy adapted to each patient.

Competing Interests:-

The authors declare no competing interests.

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