AEDV HIGHLIGHTS
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12-16 September 2018
PARIS, France
Systemic diseases

Dra. Raquel Rivera
Hidradenitis Suppurativa

Wednesday, 12th September 2018
International Society Meeting: EHSF - European Hidradenitis Suppurativa Foundation
13:30 - 17:30 Place: Room 252AB

Chairs: Prof. Gregor B.E. Jemec (Charlottenlund - Denmark), Assoc. Prof. Łukasz Matusiak

- mTOR - a novel cascade in the pathogenesis of AI? Dr. Anke König
- Is there a role for specific biomarkers in HS? MD, PhD Francesca Prignano (Firenze – Italy)
- Questionnaire-based epidemiological study of hidradenitis suppurativa in Japan revealing different characteristics from Westerners MD, PhD Tadashi Terui
- The new technologies in the study of hidradenitis suppurativa Dr. Giovanni Damiani
- Medical infrared thermography: a new promising imaging technique to assess hidradenitis suppurativa lesions Dr. Farida Benhadou
- Hidradenitis suppurativa and oral implications Dr. Giovanni Damiani
- Hidradenitis suppurativa and antibiotic resistance: state of art Dr. Graziana Amendolagine
- Can targeted HS antibiotherapy avoid mastectomy in granulomatous mastitis? MD Delage Maïa
- Brazilian experience in hidradenitis suppurative surgery: the role of cotton dressing MD, PhD Edileia Bagatin
- Pro/contra: Antibiotics vs biotherapies in HS: antibiotics Dr. Olivier Join-Lambert
- Pro/contra: Evidence of genuine epithelial inflammation in hidradenitis suppurative emerges the need of targeted anti-inflammatory treatment Prof. Dr. Christos C. Zouboulis (Dessau – Germany)
Hidradenitis Suppurativa

- **mTOR** (mammalian target of rapamycin) signaling is "switched on" in HS, high mTOR activity at sites of inflammation and proliferation.
- mTOR might represent a molecular marker that is affected by the severity of HS and that is indicative of associated insulin resistance (G. Monfrecola et al. JEADV 2016, 30, 1618–1633).
- **No Biomarkers** metabolic and androgens (N 23).
- **HS in Japan** (N 300). Differences from Europe:
  - Ratio Male: Female 2:7:1
  - Low comorbidities (obese only 16% vs more than 75% in Europe)
  - Low family history 4% vs 30-40% in Europe
  - 60% smokers (vs 30% in Japanese population) (89% smokers in European with HS)
  - High prevalence of buttock lesions 46% vs 29% in Europe
HS comorbidities

- Brain → Psychiatric disorders
- Lung → Interstitialdiases
- Vessels → Vasculopathies
- Heart → MACE
- Digestive system → Crohn’s disease
- Pancreas → Diabetes
- Joints and Bone → Muscular-skeletal pain
- Adipose tissue → Metabolic syndrome
Recommendations for the management of comorbidity in hidradenitis suppurativa.

<table>
<thead>
<tr>
<th>Comorbidities associated with hidradenitis suppurativa (HS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cardiovascular risk factors (CVRF):</strong></td>
</tr>
<tr>
<td>• Diabetes mellitus (DM)</td>
</tr>
<tr>
<td>• Dyslipidemia (DLP)</td>
</tr>
<tr>
<td>• Obesity (OB)</td>
</tr>
<tr>
<td>• Hypertension (HT)</td>
</tr>
<tr>
<td>• Metabolic syndrome (MS)</td>
</tr>
<tr>
<td><strong>Other diseases:</strong></td>
</tr>
<tr>
<td>• Inflammatory Bowel Disease</td>
</tr>
<tr>
<td>• Inflammatory joint disorders</td>
</tr>
<tr>
<td>• Anxiety and depression</td>
</tr>
<tr>
<td><strong>Consumption habits associated with HS</strong></td>
</tr>
<tr>
<td>• Tobacco</td>
</tr>
<tr>
<td>• Alcohol</td>
</tr>
</tbody>
</table>

**Recommended screening intervals for associated comorbidities:**

- Every 12 months
- More frequently if the clinical situation so suggests
Hidradenitis suppurativa and oral implications
Dr. Giovanni Damiani

**TEETH LOST**

- 1 to 3
- 4 to 6
- >6

**PERIODONTITIS**

- Absent
- Mild
- Moderate
- Severe

**IMPLANTS IN 44 PATIENTS (59.5%)**

**IMPLANTS STATUS**

- Absent
- Peri-implantitis
- Perimucositis

**BONE RESORPTION**

- Absent
- Present
- Pathological
Infrared thermography (new tool to assess lesions)
Infrared thermography (new tool to assess lesions)

Ultrasound, surgery and hidradenitis; a perfect triangle

(1) Department of Dermatology. (2) Department of Plastic Surgery
Hospital Universitario 12 de Octubre

Introduction & Objectives:
Hidradenitis suppurativa (HS) is an inflammatory cutaneous disease of the hair follicles that usually presents with painful, deep and inflamed lesions in the areas of the body with apocrine glands, most frequently the axillary, groin and anogenital regions.
Managing the disease can be really difficult due to his chronic and recurrent character. No ideal treatment regimen has been defined, but several therapies have been found to reduce lesion severity and improve symptoms. When medical therapy of established and growing lesions is ineffective, surgery is the accepted method of dealing with HS.
Cutaneous ultrasound (US) allows real-time visualization defining the type of lesion, its anatomical extension, and the degree of inflammatory activity, which affects adequate patient management. Therefore, US can improve surgery of HS, determining the true nature and extension of the lesions. Here we present a case with Intraoperative US that helped improve the surgery of a HS patient refractory to antibiotic treatment.

Materials & Methods:
A 19-year-old patient with axillary Hurley III HS was admitted to Dermatology ward for antibiotic treatment. After three weeks of intravenous antibiotic treatment the lesions did not respond adequately and chronic fistulas and cutaneous absceses were still present and actively draining. Manual draining and curettage was impossible to perform due to unbearable pain. In cooperation with Plastic Surgery department we decided that surgery treatment of the lesions will be the most adequate course of action.

The patient was admitted to surgery performed by the Plastic Surgery team. The patient underwent general anesthesia. At first surgeons delimited and drawn the area where the lesions were clinically evident. Cutaneous ultrasound (US) was performed after that to review the delimited areas and evaluate the surrounding areas. We search for US lesions (pseudocyst, fluid collection and fistulous tracts) invisible to clinical evaluation, then redrew the area and identify new incision sites.

Results:
After US evaluation, 3 new fluid collection and 1 fistulous tract were identified in the left axilla and 2 fluid collection in the right axilla. The margins of the main fistulas at the left axilla were also increased.

Figure 1. Delimited area. Hidradenitis lesions (abscess, fistulous tracts). After US, new areas were drawn.

Figure 2. US performed intraoperative
a) Fistulous tracts: hypoechic bandlike structures in the dermis — hypodermis connected to each other.
b) Fluid collection: 6x8cm anechoic oval shaped fluid deposit in the dermis, connected to the base of widened hair follicle

Figure 3. Two months after surgery. Scars and granulation tissue after second intention healing.

Conclusions:
HS is currently considered a prevalent disease with autoimmune and genetic backgrounds and chronic inflammatory activity that according to imaging information usually involves both the dermal and hypodermal layers and shows subclinical activity. US identify areas clinically "invisible" and help to better evaluate and treat HS.
HS is treated based on the subjective impact and objective severity of the disease. Locally recurring lesions can be treated surgically, where as medical treatment either as monotherapy or in combination with surgery is more appropriate for widely spread lesions.
US can be really useful to assess HS surgery. Performing intraoperative US once the patient is anaesthetized allows better review the clinically delimited areas and evaluate the surrounding areas. Here we present a case were thanks to Intraoperative US, the draining of the lesions and the global results of surgery were frankly improved.
Granulomatous mastitis (localized form of HS?)

- 12 females
  (8 with HS in other localisations)
- Non smoking, normal BMI, later age of 1st lesions appearance
- 11/12 patients remissions in an average of 5 mo
- 2 patients cancelled a scheduled mastectomy
Granulomatous mastitis (localized form of HS?)

Treatment used depending on Hurley’s staging

<table>
<thead>
<tr>
<th>Stage</th>
<th>Induction</th>
<th>Consolidation</th>
<th>Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6 weeks: rifampin + moxifloxacine+metronidazole</td>
<td>4 weeks: rifampin+ moxifloxacine</td>
<td>Cotrimoxazole for &gt; 1 year</td>
</tr>
<tr>
<td>2</td>
<td>3 weeks: iv/im ceftriaxone+ metronidazol Then 3 weeks : rifampin +</td>
<td>6 weeks: rifampin + moxifloxacine</td>
<td>Cotrimoxazole for &gt; 1 year</td>
</tr>
<tr>
<td></td>
<td>moxifloxacine+ metronidazole</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>6-10 weeks: iv ertapenem Then 6 weeks : rifampicine+</td>
<td>8 weeks: rifampicine+ moxifloxacine</td>
<td>Cotrimoxazole for &gt; 1 year</td>
</tr>
<tr>
<td></td>
<td>moxifloxacine+ metronidazole</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Join- Lambert et als. Dermatology 2011;222:49–58
Pro/contra: Antibiotics vs biotherapies in HS: antibiotics

- Microbiology
  - Opportunistic commensal flora
  - 50% Hurley 1: *Staphylococcus lugdunensis*, sometimes *P. acnes*
  - 90% Hurley 2 y 3: polymorphus anaerobic profile: *Prevotella*, *Prophyromonas*, with aero-anaerobes: *Actinomycetes* and *S. milleri*

- Targeted antibiotherapy works:
  - Disappearance pain and draining
  - Disappearance inflammation (edema, erythema, draining)
HS new option: Associate TARGETED antibiotherapy with a (targeted) biotherapy for induction treatment?

• Problems:
  • Relapses under maintenance tt°: always in a scar
    • biofilm: justification for combined surgery
  • Resistences to AB (54-88%)
    • Reserve potent AB only for severe patients
    • Avoid repeated use of potent AB. SURGERY is mandatory after the 2nd relapse within 6 months after complete remission

• HS new option: Associate TARGETED antibiotherapy with a (targeted) biotherapy for induction treatment?
**Introduction**

Adalimumab approval for the treatment of moderate and severe variants of hidradenitis suppurativa (HS) has become an important advance for this condition. There is some controversy about the need of biological therapy discontinuation in those cases where a surgery is indicated. This is justified by a possible increase of complications mainly related with infections. Focusing on HS, there is a high interest in not withdrawing the biological therapy, given that the expected results of the surgery could be better. The hypothesis, that is widely accepted by the general and dermatologic surgeons, is that a patient with a well controlled inflammatory activity before, during and after the intervention will reduce immediate and late surgical complications, offering the best results in the HS management.

We present a retrospective study with the aim of assessing the efficacy and safety of TNF-α blockers in a case series of patients with moderate or severe HS with fascio-cutaneous flap surgical indication to cover wide wounds related with the cutaneous disease that continued with the biological therapy along the process.

**Material and Methods**

We included all the HS patients under biological therapy that were surgically treated with indication of complex flap to remove complex fistulas after achieving a HiSCR between 2016-2018 from our Department.

**Results**

8 patients were included, 7 males and 1 female with ages between 34 and 65 (adalimumab 7 cases, infliximab 1 case). Surgical locations were: axillae (4 cases), buttocks (2 cases), groins (1 case) and thigh (1 case).

7 cases remained under treatment with antiTNF-α and maintained HiSCR after surgery, with a median follow up of 6 months. Only one patient discontinued adalimumab treatment because he required a stoma in order to avoid infection. After 3 months, because of the development of new flares, Adalimumab was reintroduced and HiSCR was achieved after 12 weeks.

During the short follow-up during the next 4 weeks after surgery, 3 patients had surgical wound dehiscence without infection; 2 cases were managed with conservative measures to promote second intention healing and 1 case underwent a minor complications. No long-term complications were detected.

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**Discussion and Conclusion**

Although it is necessary to individualize each case, along with our experience, we support the continuation of antiTNF-α therapy in those patients with HS who will undergo any cutaneous surgery.

**Table: Patients and Data**

<table>
<thead>
<tr>
<th>Patient</th>
<th>Gender/Age</th>
<th>Treatment</th>
<th>Comorbidities</th>
<th>Location and Type of Lesion</th>
<th>Type of Surgery and Reconstruction</th>
<th>Complications and Solutions</th>
<th>Follow-up Time (months)</th>
<th>Achievement of HiSCR after surgery and duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M/62</td>
<td>ADA</td>
<td>AD, Ulcerative colitis</td>
<td>Left axilla: complex fistula</td>
<td>En bloc resection/Rotation fasciocutaneous flap</td>
<td>Dehiscence, wound care</td>
<td>18</td>
<td>YES</td>
</tr>
<tr>
<td>2</td>
<td>F/42</td>
<td>INFLIXIMAB</td>
<td>Crohn’s Disease, Diabetes</td>
<td>Left groin: Simple fistula and scarring tissue</td>
<td>Direct closure</td>
<td>Dehiscence (thigh), wound care</td>
<td>12</td>
<td>YES</td>
</tr>
<tr>
<td>3</td>
<td>M/41</td>
<td>ADA</td>
<td>AD, Smoking</td>
<td>Right axilla: Multifocal complex fistula</td>
<td>En bloc resection/Rotation fasciocutaneous flap</td>
<td>No</td>
<td>25</td>
<td>YES (Loss after 18 months because of flare in buttocks)</td>
</tr>
<tr>
<td>4</td>
<td>M/60</td>
<td>ADA</td>
<td>AD, Smoking</td>
<td>Right axilla: complex fistula</td>
<td>En bloc resection/Rotation fasciocutaneous flap</td>
<td>Dehiscence/minor surgery for direct closure</td>
<td>29</td>
<td>YES (Loss after 17 months because of flare in groin)</td>
</tr>
<tr>
<td>5</td>
<td>M/52</td>
<td>ADA</td>
<td>AD, Crohn’s Disease, Ulcerative colitis, Depression</td>
<td>Right buttck: complex fistula</td>
<td>En bloc resection/Advancement flap</td>
<td>No</td>
<td>8</td>
<td>YES</td>
</tr>
<tr>
<td>6</td>
<td>M/40</td>
<td>ADA</td>
<td>Crohn’s Disease</td>
<td>Left axilla: simple fistula and scarring tissue</td>
<td>En bloc resection/direct wound closure</td>
<td>Pyoderma gangrenosum over the scar (hospital confluence)</td>
<td>6</td>
<td>YES (Loss after 3 months because of flare in right arm)</td>
</tr>
<tr>
<td>7</td>
<td>M/65</td>
<td>ADA</td>
<td>AD, Chronic kidney disease</td>
<td>Left buttck: complex fistula</td>
<td>En bloc resection/direct closure</td>
<td>Dehiscence, wound care</td>
<td>15</td>
<td>YES (Loss after 12 months because of flare in left groin)</td>
</tr>
<tr>
<td>8</td>
<td>M/59</td>
<td>ADA</td>
<td>Morbus Crohn</td>
<td>Perineal and right buttock: multifocal complex fistula</td>
<td>En bloc resection/Rotation fasciocutaneous flap</td>
<td>Dehiscence/minor surgery for direct closure</td>
<td>10</td>
<td>YES</td>
</tr>
</tbody>
</table>

**References**

- Skin Grafts Better than Flaps? Rubi C, Martorell A, Pérez-Surg 2017
- A, Marín-Jiménez I,Martorell A. Actas Dermosifiliogr 2016
Erythematous papules that progress to reticulated hyperpigmentation: three cases of prurigo pigmentosa

Constanza Riquelme-Mc Loughlin, José Riera, Xavier Fustà, Irene Fuertes, Mercé Alsina, Pilar Iranzo, José M. Mascaro Jr.

Department of Dermatology, Hospital Clinic de Barcelona. Universitat de Barcelona

Introduction

Prurigo pigmentosa is an infrequent skin disorder, affecting mainly young women that has been predominantly described in Asians. It is clinically characterized by recurrent erythematous and pruritic papules that evolve into a reticulated hyperpigmentation with a specific predilection for the chest, upper back and lumbosacral region. The histological findings vary according to the stage of the disease and although they can be characteristic, they are not specific. A perivascular and superficial interstitial infiltrate of neutrophils with neutrophilic spongiosis has been described in early stages. Subsequently, infiltrates of eosinophils and lymphocytes with focal lichenoid changes develop, in the later stages, hyperplasia and parakeratosis in the epidermis with pigmented incontinence can be found.

Table 1: Epidemiology, clinical manifestations and histopathology of three patients with prurigo pigmentosa

<table>
<thead>
<tr>
<th></th>
<th>Patient 1</th>
<th>Patient 2</th>
<th>Patient 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age of onset (years)</strong></td>
<td>16</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td><strong>Time until diagnosis</strong></td>
<td>5 years</td>
<td>1 month</td>
<td>5 years</td>
</tr>
<tr>
<td><strong>Anatomic location</strong></td>
<td>Submammary folds and posterior flank</td>
<td>Submammary folds, shoulders and upper back</td>
<td>Submammary folds</td>
</tr>
<tr>
<td><strong>Histology</strong></td>
<td>Spongiosis and exocytosis of lymphocytes and eosinophils. In the dermis, edema with lymphocytes and polymorphonuclear cells and infiltrate of plasma cells with melanophages.</td>
<td>Acute spongiotic dermatitis suggestive of contact dermatitis.</td>
<td>Hyperplastic epidermis with focal hypergranulosis and orthokeratotic type hyperkeratosis.</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td>Minocycline 100mg/day</td>
<td>Minocycline 100mg/day</td>
<td>Doxycycline 100mg/day</td>
</tr>
<tr>
<td><strong>Follow-up</strong></td>
<td>10 years without flares</td>
<td>5 months without flares</td>
<td>1 year without flares</td>
</tr>
</tbody>
</table>

Material and Methods

We report three patients diagnosed with prurigo pigmentosa at a tertiary hospital in Spain from 2008 to 2017. The patients were diagnosed on the basis of clinical course and clinico-pathological correlation.

Conclusions

The differential diagnosis of prurigo pigmentosa varies depending on the clinical stage. It includes contact dermatitis, reticulated confluent papillomatosis of Gougerot-Carteaud and Dowling-Degos disease. Its histological presentation is not specific. Therefore, the clinical-pathological correlation is essential for its diagnosis.

References

PRURIGO PIGMENTOSA IN YOUNG CAUCASIAN WOMAN

Kojanova M1, Stork J1, Fialova J1, Cetkovska P2
1Department of Dermatovenereology, Charles University in Prague, Faculty of Medicine and General University Hospital, Prague, Czech Republic
2Department of Dermatovenereology, Charles University in Prague, Faculty of Medicine and General University Hospital, Pilsen, Czech Republic

Introduction & Objectives:
- Prurigo pigmentosa is a pruritic dermatosis in young adults of Asian descent. Clinical features include recurrent eruptions of pruritic erythematous macules and papules that resolve with reticulate hyperpigmentation.

Materials & Methods:
- We describe a 22-year-old Caucasian woman with prurigo pigmentosa. The diagnosis was based on the clinical and histopathologic findings.

Results:
- The patient suffered from pruritic skin lesions on her trunk of 7-day duration. It was the 4th episode of similar rash in span of two years with previous episode 6 months before. There was 10 kg weight loss due to voluntary dietary change. Physical examination revealed erythematous urticarial papules intermingled with erythematous and brownish macules in reticular pattern distribution in the middle of the chest in intermammary area, adjacent epigastrium and lumbar area (Figure 1, 2).

- Punch biopsy taken from erythematous lesion revealed slight spongiosis and exocytosis of lymphocytes in the epidermis, perivascular lymphocytic infiltrates with admixture of neutrophils and eosinophil and nuclear fragments in the upper middle dermis (Figure 3, 4). Laboratory examinations showed normal results. Topical corticosteroids and topical tacrolimus had limited effect. Skin lesion resolved in two weeks after intramuscular application of betamethasone in dose of 7 mg leaving reticular brown pigmentation in affected areas. Retrospective examination of clinical photographs and microscopic slides of the last two episodes led to the diagnosis of prurigo pigmentosa. Two years after the last episode she maintained her weight and was without skin eruption.

Conclusions:
- Prurigo pigmentosa is rarely reported in patients outside Japan and Korea. Clinical features, course, histopathological findings, association with dietary changes and weight loss in our patient are compatible with the diagnosis of prurigo pigmentosa. This is the first case observed in the Czech Republic.