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## **Non-febrile spontaneous neck pain in a patient with diabetes**

### **Authors:**

Jérémie Bettoni<sup>a,b,c</sup>, Matthieu Olivetto<sup>a,b,c</sup>, Caroline Racz<sup>a,b,c</sup>, Stéphanie Dakpé<sup>a,b,c</sup>

<sup>a</sup> Maxillofacial Surgery Department, University Hospital of Amiens - France

Avenue Laennec, 80000 Amiens, France

<sup>b</sup> Facing Faces Institute

Avenue Laennec, 80000 Amiens, France

<sup>c</sup> EA CHIMERE

Avenue Laennec, 80000 Amiens, France

### **Corresponding author:**

Jérémie Bettoni, M.D.,

Maxillofacial Surgery Department, University Hospital of Amiens - France

Avenue Laennec, 80000 Amiens, France

Phone: +33 6 47 96 11 91

Fax: +33 3 22 66 83 29

Email: [jeremiebettoni@gmail.com](mailto:jeremiebettoni@gmail.com)

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## **Text (500 words)**

A 71-year-old-man with a medical history of type II diabetes treated by metformin presented to our emergency department for a posterior neck pain that had been worsening for three days. Despite stable hemodynamic values (temperature 36.2°C, blood pressure 134/80 mmHg, heart rate 79 beats/min), the physical examination revealed neck inflammation with multiple purulent pustules (Fig. 1) and limited active and passive neck motions due to pain. Laboratory analysis revealed a severe inflammatory syndrome with marked polymorphonuclear hyperleukocytosis ( $9.9/\text{mm}^3$  - normal range: 1.5 to 7) and a C-Reactive Protein level of 153 mg/L (normal range, < 5). A CT scan showed diffuse subcutaneous emphysema and musculocutaneous infiltration of the trapezius muscle with no deep accumulation (Fig. 2).

What is your diagnosis?

Clinically, the progressive worsening of a local anaerobic and necrotic skin infection in a patient with diabetes without severe general repercussions must lead to a suspicion of mixed necrotizing bacterial dermohypodermatitis (NBDH) [1]. A CT scan allows for visualization of the muscle damage and make the diagnosis of necrotizing fasciitis. It also helps the surgeon with the debridement procedure [2].

Despite the absence of general repercussions at the time of diagnosis, NBDH associated or not with necrotizing fasciitis constitutes a medico-surgical emergency

with a life-threatening prognosis [3] requiring multidisciplinary management based on [4]:

- treating symptoms of sepsis to correct possible hypovolemia, hydroelectrolytic anomalies, or acidosis and maintaining stable hemodynamic values;
- administering probabilistic broad-spectrum antibiotic therapy, combining penicillin G and clindamycin in the case of head and neck location. Treatment must begin as soon as bacteriological samples are taken (blood culture, tissue, and pustular fluid), targeting both Gram+ and Gram- anaerobic and aerobic bacteria, until bacteriological sample results are received;
- performing surgical exploration under general anesthesia, allowing for excision of the affected tissue. The viability of muscles is assessed macroscopically by their appearance and contraction in response to mechanical stimulation or electrocoagulation. The surgical procedure also allows for collecting deep bacteriological samples and for culture in aerobic and anaerobic conditions, that is essential for the secondary adjustment of antibiotic treatment.

Once surgical debridement has been performed, the surgical site must be left open to limit proliferation and microbial colonization and to allow for abundant washing during nursing care. Once the underlying tissue is deemed of good quality, the use of bud stimulating products or transition to negative pressure wound therapy is possible [5]. Depending on the size of the loss of substance and on the quality of the deep layers, reconstruction may be obtained either by controlled wound healing

or by split thickness skin grafting. The use of a pedicled or a free flap is rare and reserved for cases of articular or vascular exposure.

In our case, a split thickness skin graft was performed after 10 days of alginate dressing and 3 weeks of negative pressure wound therapy, with an acceptable esthetic result (Fig. 3).

**Conflict of Interest Statement: None**

**References**

[1] Bouvet A. Cellulitis and necrotizing fasciitis: microbiology and pathogenesis. *Ann Dermatol Venereol* 2001;128:382-9.

[2] Malik V, Gadepalli C, Agrawal S, Inkster C, Lobo C. An algorithm for early diagnosis of cervicofacial necrotising fasciitis. *Eur Arch Otorhinolaryngol* 2010;267:1169-1177.

[3] Derancourt C. Management of necrotizing cellulitis and fasciitis. *Ann Dermatol Venereol* 2001;128:452-7.

[4] Conférence de consensus. Erysipèle et fasciite nécrosante : prise en charge. *Med Mal Infect* 2000 ;30 :241-5.

[5] Frankel JK, Rezaee RP, Harvey DJ, McBeath ER, Zender CA, Lavertu P. Use of negative pressure wound therapy with instillation in the management of cervical necrotizing fasciitis. *Head Neck* 2015;37:157-160.

### **Captions to illustrations**

Figure 1: Clinical view of nuchal inflammation with multiple purulent skin pustules

Figure 2 : Axial CT scan with injection of contrast medium showing dermohypodermatitis, myositis of the trapezius muscle, subcutaneous and muscular emphysema and no objective accumulation.

Figure 3: Clinical view two months after initial management and one month following split thickness skin graft reconstruction





