Open Access Maced J Med Sci **electronic publication ahead of print,**
published on July 24, 2017 as https://doi.org/10.3889/oamjms.2017.144

ID Design 2012/DOOEL Skopje, Republic of Macedonia
Open Access Macedonian Journal of Medical Sciences.
Special Issue: Global Dermatology
https://doi.org/10.3889/oamjms.2017.144
eISSN: 1857-9655
Clinical Image

Severe Acne Inversa - Dermatosurgical Approach in a Bulgarian Patient

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Citation: Lozev I, Pidakev I, Lotti T, Wollina U, Gianfaldoni S, Lotti J, França K, Batashki A, Tchernev G. Severe Acne Inversa- Dermatosurgical Approach in a Bulgarian Patient. Open Access Maced J Med Sci. https://doi.org/10.3889/oamjms.2017.144

Keywords: dermatosurgical approach; invasive approach; hidradenitis suppurativa; acne inversa; treatment outcome; secondary healing.

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Received: 17-Apr-2017; Revised: 22-Apr-2017; Accepted: 23-Apr-2017; Online first: 24-Jul-2017

Funding: This research did not receive any financial support.

Competing Interests: The authors have declared that no competing interests exist.

Abstract

We present a 55-year-old male patient - a smoker, admitted to a Medical Institute of MVR (Ministry of the interior, Sofia, Bulgaria), on occasion of pain and swellings, located in the area of both axillae, accompanied by purulent discharge, with bloody admixtures. Bilateral localised cystic rose above the skin surface, hyperpigmented nodules interconnected with multiple fistulas, was observed within the dermatological examination, resulting in a limitation of the possibility of movement of the hands in all directions. A subjective complaint of pain was obtained on palpation. Solid bilateral axillar cicatrices - formation was also established, which additional impeded the movements of the upper limbs. The disease was generalised affecting additional inguinal, femoral and perineal areas, while at this stage the patient refused categorically eventual photo documentation of them. The diagnosis of acne inversa was made based on the available clinical and para-clinical data, as dual antibiotic therapy with Clindamycin 300 mg, two times per day was initiated for two months, in combination with rifampicin 300 mg, two times per day also for two months. This led to a significant improvement in the clinic symptoms and the patient was hospitalised for radical surgery. A surgical management of the clinical findings was planned by an interdisciplinary team including surgeons and dermatologists. The procedure was performed under general anaesthesia. After a thorough cleaning of the operative field, a radical excision of the lesion in the left axillary and para axillar region was performed, comprising the skin and subcutaneous tissue forward the fascia pectoralis. Tissue was dissected in depth in the form of number 4, thereby creating the conditions for adaptation of the initially encountered communicating with each other skin defects. Two tubular drains were placed, followed by gradual suturing of skin and subcutaneous tissue with final applying of a sterile dressing. Effective medical treatment of patients (as in our case) with severe AI is limited. Adalimumab is the first biological approved for moderate to severe AI but does not result in stable CR (cure rate). Therefore its use in a neoadjuvant setting is under investigation. Wide local excision significantly reduces pain and improves the quality of life of AI patients. While local recurrences rate is low, the satisfaction with the cosmetic results is high. The recurrence rate is dependent on the region affected and the type of surgery. While in the axillary region primary closure may be used to reduce the time to healing, anogenital AI has the lowest recurrence rate of healing by secondary intention.

We present a 55-year-old male patient- a smoker, admitted to a Medical Institute of MVR (Ministry of the interior), on occasion of pain and swellings, located in the area of both axillae, accompanied by purulent discharge, with bloody admixtures. Bilateral localised cystic rose above the skin surface, hyperpigmented nodules interconnected with multiple fistulas, was observed within the dermatological examination, resulting in a limitation of the possibility of movement of the hands in all directions. A subjective complaint of pain was obtained on palpation. Solid bilateral axillar cicatrices - formation was also established, which additional impeded the movements of the upper limbs (Fig. 1b, 1f).

The disease was generalised affecting additional inguinal, femoral and perineal areas, while at this stage the patient refused categorically eventual photo documentation of them. The diagnosis of acne inversa was made based on the available clinical and para-clinical data, as dual antibiotic therapy with Clindamycin 300 mg, two times per day was initiated for two months, in combination with rifampicin 300 mg,

two times per day also for two months. This led to a significant improvement in the clinic symptoms (see preoperative images) (Fig. 1f) and the patient was hospitalised for radical surgery.

Laboratory investigations demonstrated severe ongoing inflammation and superimposed infection with *St. aureus* (leukocytosis of 21.3 Gpt/l, in normal range between 3.5-10.5, agranulocytosis 91.8%, with a normal range up to 70%, highly increased CRP, haemoglobin 89 g/l (normal range 120-180 g/l). Erythrocyte transfusion in combination with systemic cefazolin 2g/3 times per day for a total period of seven days was initiated, leading to an improvement of the clinical situation and laboratory aberrations. A surgical management of the clinical findings was planned by an interdisciplinary team including surgeons and dermatologists. The procedure was performed under general anaesthesia. After a thorough cleaning of the operative field, a radical excision of the lesion in the left axillary and para axillar region was performed, comprising the skin and subcutaneous tissue forward the fascia pectoralis (Fig. 1a, 1c, 1d, 1e). Tissue was dissected in depth in the form of number 4, thereby creating the conditions for adaptation of the initially encountered communicating with each other skin defects (Fig. 1c, 1d, 1e). Two tubular drains were placed, followed by gradual suturing of skin and subcutaneous tissue with final applying of a sterile dressing.

Figure 1: Radical excision of the lesion in the left axillary and para axillar region was performed, comprising the skin and subcutaneous tissue forward the fascia pectoralis. Tissue was dissected in depth in the form of number 4, thereby creating the conditions for adaptation of the initially encountered communicating with each other skin defects. Two tubular drains were placed, followed by gradual suturing of skin and subcutaneous tissue with final applying of a sterile dressing.

A radical excision of the right axillar fossa was also performed, including also the skin and subcutaneous tissue of the para axillar and axillary region (Fig. 1g). A thorough hemostasis was made with a partially adjusting of the wound in its two poles, while a relatively large portion of the defect was let to heal secondary, because of lack of tissue (Fig. 1h). The postoperative period underwent without complications.

Hidradenitis suppurativa (HS) or acne inversa (AI) is a debilitating suppurative disease of the apocrine/follicular glands. Medical treatment has some efficacy at early-stages but is costly and requires frequent physician visits. The advanced disease usually requires surgical intervention [1].

AI is not easily treated as a rule. Although not uncommum – it affects about 1% of adult population in Europe - AI is often misdiagnosed outside specialised clinics and inappropriately treated as a simple boil or abscess [2]. In recent years, guidelines have been developed, based both of expert opinion and the available literature. A multifaceted approach is necessary as AI lesions include as inflammation (amenable to medical treatment) as well as fibrosis (amenable to surgery only). The recommended antiinflammatory therapies encompass both antimicrobials and regular anti-inflammatory drugs [2].

Treatments with the following agents seem to be possible: clindamycin, tetracycline, rifampicin, ertapenem, dapsone, triamcinolone, infliximab, adalimumab, and anakinra, but only adalimumab has been approved in Europe. All other treatments are off-label [2]. The current approach to the management of fibrotic lesions is surgery since it is not susceptible to medical treatment. A comprehensive three-pronged approach with adjuvant therapy, medical therapy, and surgery is recommended [3].

The list of comorbidities and complications associated with AI is extensive [4]. Among the complications of AI, squamous cell carcinoma is considered the most severe. More than 90 cases of patients AI developing squamous cell carcinoma have been identified. Most of the squamous cell carcinomas appear on the perineal or buttock areas with a 2-year survival rate of less than 50%. Those authors believe that the development of squamous cell carcinoma in patients with acne inversa is a typical condition of an immunocompromised district [5]. The "immunocompromised cutaneous district" is a novel concept that applies to an area of diseased or injured skin where local immune control has been altered, thereby permitting the development of a dysimmune reaction, infection or tumour confined to the diseased or injured site [5].

Effective medical treatment of patients (as in our case) with severe AI is limited. Adalimumab is the first biological approved for moderate to severe AI but does not result in stable CR (cure rate). Therefore its use in a neoadjuvant setting is under investigation [6].

Wide local excision significantly reduces pain and improves the quality of life of AI patients. While local recurrences rate is low, the satisfaction with the cosmetic results is high [7, 8]. The recurrence rate is dependent on the region affected and the type of surgery. While in the axillary region primary closure may be used to reduce the time to healing, anogenital AI has the lowest recurrence rate of healing by secondary intention [4, 8].

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