Photodynamic therapy for acne conglobata of the buttocks: Effective antiinflammatory treatment with good cosmetic outcome

Sir,

Acne conglobata is an uncommon difficult-to-treat severe inflammatory acne variant that affects deep skin tissue, causing swelling, bleeding, purulent discharge and pain. Several therapeutic options have been used with variable results, often leaving residual disfiguring scars. Here, we report a case of histologically proven acne conglobata in a 16-year-old Caucasian man with a 5-month history of sudden-onset painful nodular cystic eruption on the buttocks. History did not reveal any drug usage or predisposing hereditary factors. Previous treatments with oral minocycline (4 weeks), topical retinoid and systemic isotretinoin (0.5 mg/kg/d) were ineffective. Examination revealed multiple inflamed nontender suppurative nodules localized on the buttocks [Figure 1a] and lateral aspects of the pelvis, with spontaneous bleeding and purulent discharge. No lesions were detected elsewhere on physical examination. Such protracted painful eruption severely affected the patient’s quality of life, interfering with daily activities. We, therefore, decided to start photodynamic therapy as monotherapy because of its antiinflammatory and antimicrobial effects as well as its ability to reduce the risk of disfiguring scars. After a written informed consent, 10% 5-aminolaevulinic acid in polyethylene glycol ointment was applied in occlusion for 3 h on the buttocks; irradiation was then applied with diode red light at 630 nm (S630, Alpha Strumenti, Milan, Italy) for 8 min, with a total light dose of 75 J/cm². Fluorescence, detected using violet light at 405 nm, was localized with high intensity, especially in inflammatory nodules. The patient was treated every 2 weeks for a total of six treatments over a period of three months. Intense pain and inflammation were reported after the first two sessions (visual analog scale mean values of 10/10 and 8/10, respectively) and were managed with oral paracetamol and topical application of corticosteroids, while only minimal discomfort was recorded at the successive exposures. At the end of the treatment period, a remarkable improvement of the clinical features was observed, with healing of the cutaneous nodules and no noteworthy adverse event [Figure 1b]. At 6 months’ follow-up, a lasting remission with favorable cosmetic results was observed [Figure 1c]. Photodynamic therapy typically involves topical application of the photosensitizing prodrug aminolaevulinic acid or its methylated ester, converted by the heme biosynthetic pathway predominantly to protoporphyrin IX and activated by light of appropriate wavelength to produce reactive oxygen species, especially singlet oxygen, which trigger apoptosis and necrosis of target cells. In addition to established indications in nonmelanoma skin cancer, photodynamic therapy is used with increasing...
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frequency in several inflammatory dermatoses as well as in wound healing.\textsuperscript{2,4} The greater absorption of aminolaevulinic acid together with higher production of protoporphyrin IX in hair follicles compared to other tissues seems to be the mechanism of action in inflammatory diseases of the pilosebaceous unit such as chronic folliculitis and hidradenitis suppurativa.\textsuperscript{4,6} In our patient, photodynamic therapy was very effective to prevent scars as well. This striking cosmetic outcome may be the consequence of a combination of antiinflammatory effect, immunomodulatory activity and keratinocyte photoactivation with subsequent paracrine induction of matrix metalloproteinases production in fibroblasts, favoring the remodeling of the dermal matrix architecture.\textsuperscript{4} The good tolerability, high safety profile and absence of durable side effects render photodynamic therapy a valid therapeutic option for acne conglobata; its use at an early stage of the disease may accelerate resolution of the cystic lesions, reducing the risk and the severity of disfiguring scars.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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Pleomorphic hyalinizing angiectatic tumor of soft parts with unusual lipoma-like clinical morphology

Sir,

A 63-year-old woman presented with a solitary, asymptomatic, subcutaneous swelling in the medial part of the left crura of seven months duration. Examination revealed a nodule which was 4 cm × 4 cm in size, skin-colored, partially mobile, relatively well-demarcated and non-tender [Figure 1]. The patient did not show any systemic symptoms or regional lymphadenopathy. A provisional clinical diagnosis of lipoma was made. The nodule was completely removed surgically with healthy tissue margins.

A histological image (hematoxylin and eosin stain) revealed clusters of thin-walled, markedly dilated vessels of various calibre with fibrinous eosinophilic material in their walls [Figure 2]. We distinguished two types of tumor cells – spindle cells arranged in bundles and round epithelioid cells with marked cellular and nuclear pleomorphism [Figure 3]. Sporadically, intranuclear pseudoinclusions were found. Occasionally, inconspicuous erythrocyte extravasation and hemosiderin deposits were seen. Mitoses in tumor cells were not observed. The tumor was located subcutaneously with infiltrative growth into the dermis. Immunohistochemically, we observed a diffuse positivity for vimentin and CD34 and negativity for S100, SMA, desmin, EMA, HMB45 and CD31. Listed findings confirmed the diagnosis of pleomorphic hyalinizing angiectatic tumor of soft parts.

The current WHO classification of soft tissue tumors considers pleomorphic hyalinizing angiectatic tumor a locally aggressive lesion of borderline behavior and uncertain differentiation. 

Recent studies assume that pleomorphic hyalinizing angiectatic tumor, hemosideric fibrolipomatous tumor and myxoinflammatory fibroblastic sarcoma are morphological variants of the same genetically defined entity, but only the last-mentioned variant has a potential to metastasise.

Pleomorphic hyalinizing angiectatic tumor occurs from the fifth to eighth decades of human life; the average age is 55 years. It is slightly predominant in female patients, at a 4:3 proportion. The tumor is frequently located in the lower extremity (63%), especially feet and ankles (27%).

A majority of the literature characterizes the clinical presentation of pleomorphic hyalinizing angiectatic tumor as a reddish-purple or livid/violaceous lesion that may imitate hematoma, Kaposi sarcoma or other vascular lesions. Some studies refer to it as an unspecific subcutaneous mass of clinically normal skin which resembles lipoma, Baker’s cyst, desmoid tumor or other benign or malignant tumors of clinically uncharacteristic morphology. Moreover, one study describes it as a combination of both clinical presentations as a hematoma-like area on the surface of a subcutaneous resistance. Some authors have described it as a case of circumscribed, painful, erythematous edema located in the lower third of crura, supporting the diagnosis of fatty necrosis, erythema nodosum or pretibial myxedema.

Based on the findings from the literature, we may consider the spectrum of clinical manifestation of pleomorphic hyalinizing angiectatic tumor to be wider than expected. Clinically, the appearance of pleomorphic hyalinizing angiectatic tumor is non-specific; therefore, histopathological analysis followed...