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CLEAR CELL ACANTHOMA: CLINICAL AND DERMATOSCOPIC CHARACTERISTICS

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ნინო ფაილოძე

გამჭირვალე უჯრედოვანი აკანტომა: კლინიკური და დერმატოსკოპიული მახასიათებლები

კლინიკა „მარჯანი", თბილისი, საქართველო

რეზიუმე

სტატიაში წარმოდგენილია გამჭირვალე უჯრედოვანი აკანტომის სამი შემთხვევა, მათი დერმატოსკოპიული მახასიათებლები და კორელაცია ჰისტოლოგიურ სურათთან. გამჭირვალე უჯრედოვანი აკანტომა წარმოადგენს კანის კეთილთვისებიან ეპიდერმულ წარმონაქმნს, რომელიც თავდაპირველად ნეოპლაზიურად იყო აღწერილი, თუმცა დღესდღეობით ზოგიერთი ავტორი მას რეაქტიულ დერმატოზად მიიჩნევს. მიუხედავად იმისა, რომ გამჭირვალე უჯრედოვან აკანტომას აქვს არასპეციფიკური კლინიკური სურათი და შეიძლება გაგვიჭირდეს სხვა დერმატოზებისაგან მისი დიფერენცირება, მას ასევე აქვს ძალიან სპეციფიკური და ადვილად ამოსაცნობი დერმატოსკოპიული ნიშნები, რაც გულისხმობს მრავლობით სწორხაზოვან ან მრუდე გლომერულარულ და წერტილოვან სისხლძარღვებს, რომლებიც განლაგებულია „მარგალიტების ძაფის" (string of pearls) მსგავსი ხაზოვანი წყობით.

Benign skin tumors are one of the most common pathologies, occupying an intermediate position at the junction of dermatology, oncology and surgery. Differential diagnosis of such tumors remains a pressing issue, and the variety of diagnostic methods does not solve the problem. Their timely diagnosis, differentiation and removal are very important for dermatologists and oncologists. One of such uncommon, benign and slowly progressing lesions is clear cell acanthoma originating from epidermal keratinocytes. The diagnosing of clear cell acanthoma in usual clinical practice is rather difficult because clinically it is hard to distinguish whether the lesion is benign or malignant and as a rule we need the final decision which can be made histopathologically. The clinical differential diagnosis includes: basal cell carcinoma, Bowen's disease, irritated seborrheic keratosis, verruca vulgaris, pyogenic granuloma and even amelanotic melanoma. It was first described by Degos as a benign tumor of epidermal origin, but it's exact etiology is unknown and even now it remains unclear whether clear cell acanthoma is a tumor or an inflammatory dermatosis [1].

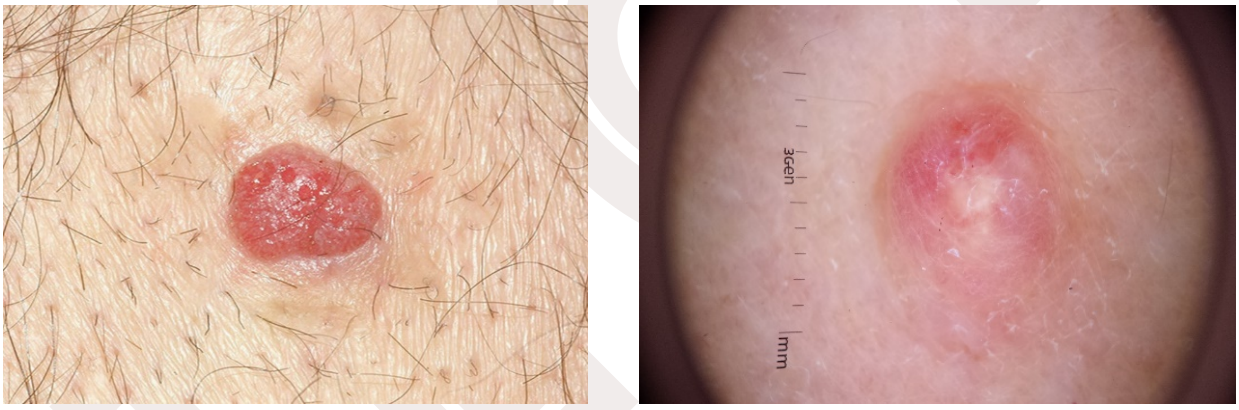
Clear cell acanthoma occur equally in both sexes, mainly in middle-aged persons with a peak of incidence between 50 and 60 years of age, in the literature there are only isolated cases of the development of this lesion in children and young people. There are also no racial or ethnic predilections for this tumor [2]. The tumor most often occurs as a dome-shaped solitary papule or nodule with a diameter of 0.5-2.0 cm on a wide base, slightly infiltrated, pink in color, sometimes with peripheral scales or even superficial erosion, localized mainly on the extremities, more often on the shins. It has a peripheral collarette of wafer-like scales and a vascularized erythematous component that blanches on pressure. May be just because of such appearance it has also been suggested that this lesion is an inflammatory psoriasiform dermatosis [3].

Clear cell acanthomas most commonly occur on the lower extremities. Other less common sites of involvement include the trunk, forearm, face, inguinal area, nipple, scalp, and vermilion mucosa of the lip [4]. The growth of the formation is very slow, it can persist for years. The pathogenesis of clear cell acanthoma is unknown. The higher incidence in legs may suggest a reactive, inflammatory nature,

probably induced by stasis dermatitis. Clear cell acanthomas are often commonly mistaken with irritated seborrheic keratosis, basal cell carcinoma, psoriasis or non-pigmented form of melanoma [5]. In such situation dermatoscopic recognition of this pathology may help to avoid unnecessary biopsies and surgical excisions. Dermatoscopy now being used in the diagnosis of nonpigmented skin lesions displaying cutaneous neoangiogenesis. The dermatoscopic signs of this formation were first described by A. Blumm and turned out to be very characteristic with typical and specific presentiation of a clear vascular network, forming the so-called “strings of pearls” [6]. For diagnosis and decision-making on surgical treatment, such a specific dermatoscopic picture is extremely important.

In our article we present 3 cases of clear cell acanthomas, all patients were with the age of 55-68 years old, all females, had a pink-brown, well demarcated lesion located on left buttock, on the shin and neck, looking as a solitary nodules about 20 mm in diameter, with peripheral scales and stuck round edges. The lesions appeared 2-3 years ago and growing slowly without any subjective claims. There was no evidence pointing to a positive traumatic origin, the lesions were neither itchy nor painful and were treated without results as psoriatic plaque with topical steroids (Figure 1). General condition of the patients were good. Skin was pale, regional lymph nodes were not palpable. Laboratory tests results including complete blood cell count, urine analysis, and liver function test were within normal limits.

Figure 1. Clinical photograph of clear cell acanthoma.
Nodular dome-shaped lesion with pink to brown coloration and peripheral scaling



During the dermatoscopy which was captured with Dermlite DL3 dermatoscope using ultrasound gel and when all found images were evaluated using algorithm of Harald Kittler, we received that the most characteristic was the pattern of blood vessels. On the periphery it was linear, on the central part multiple dotted vessels were arranged partly in linear, pearl-like distribution and partly in reticular appearance. These dotted vessels which represent the dilated capillaries oriented mainly perpendicular to the skin surface in the elongated dermal papillae, formed a reticular appearance due to the regular distribution over the surface. Additionally the multiple dotted vessels were circumscribed by a translucent collarette scaling (Figure 2).

The lesion was excised and multiple shave biopsies were performed. In all pathology images are seen acanthotic epidermis containing larger than usual keratinocytes (~2x normal epidermal keratinocytes), well demarcated from adjacent epidermis. Also hypergranulosis, minimal nuclear pleomorphism, the vessels within the dermal papillae are dilated, tortuous and run vertically up the papillae (Figure 4).

Figure 2. Dermoscopy with polarized light showing glomerular vessels with "pearl necklace" distribution

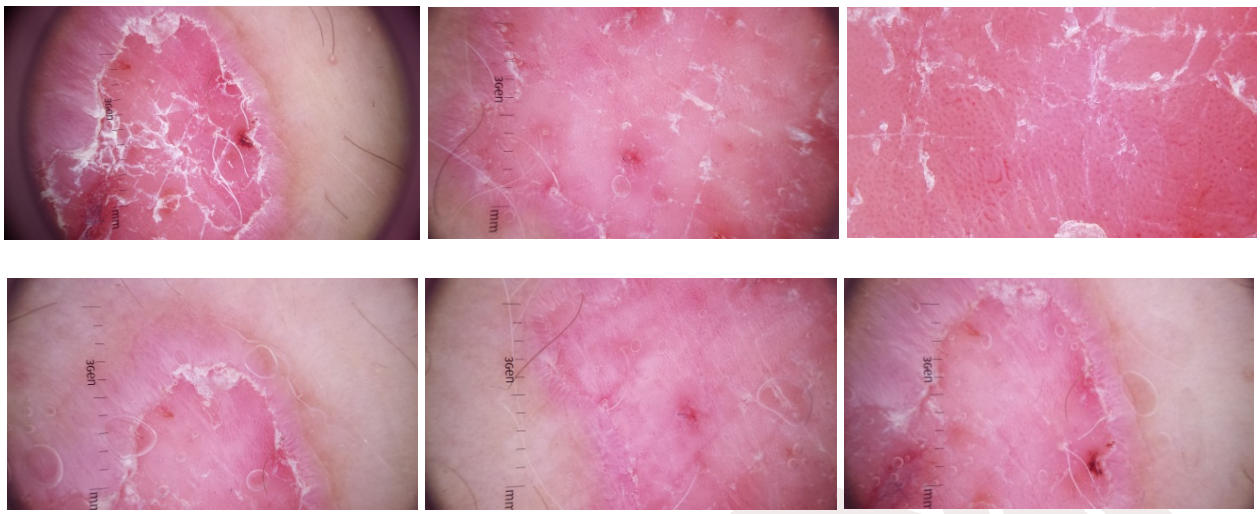


Figure 3. Details of glomerular vessels

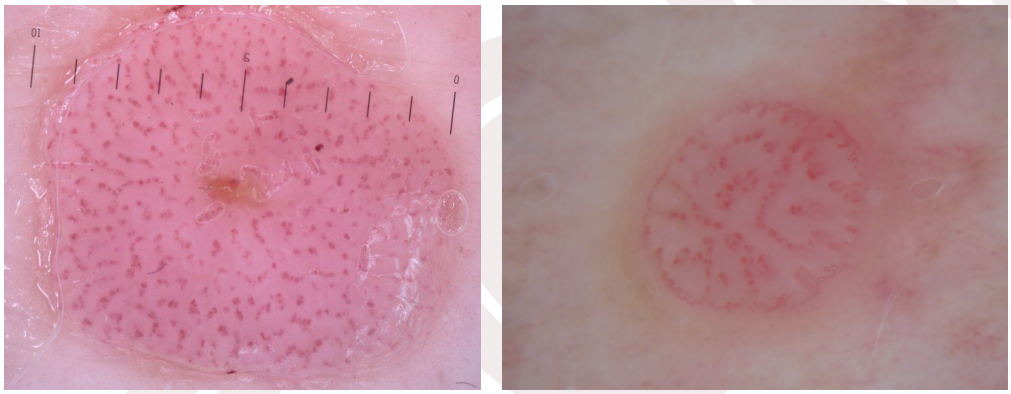
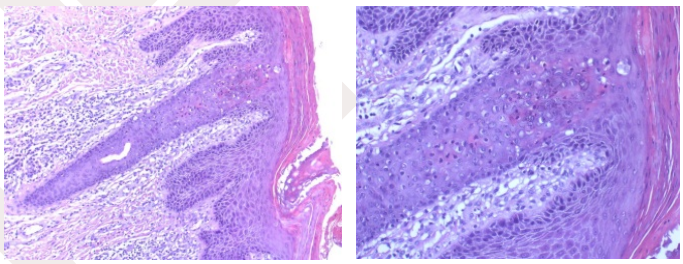


Figure 4.



About dermoscopic-pathologic correlation, the 'string of pearls' corresponds to the capillaries oriented perpendicular within the elongated dermal papillae. The dernatoscopic pattern is highly characteristic and could be used as a diagnostic clue helping clinicians to identify this benign epidermal tumor, differentiate it from other benign and malignant conditions and avoid mistakes and unnecessary biopsies

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SUMMARY

In the article are presented three cases of clear cell acanthoma, their dermatoscopic characteristics and correlation with histological picture. Clear cell acanthoma is benign epidermal lesion initially described as neoplastic which some authors now regard to as a reactive dermatosis. These tumors clinically develop in middle-aged to elderly individuals as an asymptomatic lesion and typically present as a nodule or small plaque with slow and well-defined growth located mainly on the lower limbs. Despite the fact that clear cell acanthoma has a non-specific clinical appearance and may be mistaken with a number of other dermatoses, it has very specific and easy to recognize dermatoscopic features referring to many linear or curvilinear glomerular and dotted vessels arranged in a linear necklace-like arrangement called " string of pearls". In pathology images were seen acanthotic epidermis containing larger than usual keratinocytes (~2x normal epidermal keratinocytes), well demarcated from adjacent epidermis, as well as hypergranulosis, minimal nuclear pleomorphism, and dilated tortuous vessels within the dermal papillae, running vertically. About dermoscopic-pathologic correlation, the 'string of pearls' corresponds to the capillaries oriented perpendicular within the elongated dermal papillae.

Keywords: clear cell acanthoma, dermatoscopy, histopathology