A 30-year-old female presented to us with complaint of swelling over the distal left leg for 1 year. On examination, three nodules were present over the anterolateral junction of the left leg and foot. These nodules were 2 × 2 cm to 4 × 3 cm in size, skin colored with shiny overlying skin, bony hard in consistency, and two of them were covered with brownish grey crusts. [Figure 1] No discharge was present at the time of examination. The nodules were nonmobile with fixed overlying skin. An X-ray of the leg showed that nodules were limited to the subcutaneous tissue. A punch biopsy from the smallest nodule revealed normal epidermis with well-circumscribed mass of epithelial lobules in the dermis. [Figure 2a] High-power view showed polygonal cells with vacuolated cytoplasm and tubular lamina lined by cuboidal epithelium. [Figure 2b and c] PAS stain showed focal intracytoplasmic positivity [Figure 3].

Question
What is the diagnosis?

Answer
Nodular hidradenoma.

Discussion
Nodular hidradenoma, also called hidradenoma, clear cell hidradenoma, eccrine acrosiroma, eccrine sweat gland adenoma, clear cell myoepithelioma, or solid-cystic hidradenoma is an uncommon benign adnexal tumor originating from the distal excretory duct of the sweat glands. The disease is usually seen in 20–50 years of age and is two times more frequently seen in females. They are solid or cystic in consistency, enlarge slowly, and are referred to as giant hidradenoma when skin changes such as ulceration and color changes are evident. Hidradenomas usually are seen over the scalp and trunk, but they may rarely be seen over the lower extremities. Only a few cases of large hidradenomas over the foot are described in literature. Winkelmann et al. reported 41 cases of nodular hidradenoma of which only two were located on the foot. Feldman et al. described a 59-year-old man with clear cell hidradenoma on the toe of the right foot. Will et al. reported a case of recurrent clear cell hidradenoma over the lateral aspect of foot in a 40-year-old Caucasian male.

The differential diagnosis includes dermatofibrosarcoma protubersans, Madura foot, epidermoid cyst, and osteochondroma. Histopathology helps in reliably diagnosing the condition. It shows a well-circumscribed mass that may be encapsulated. Cuboidal or columnar cells lining the tubular lumina with cystic spaces are seen. Glycogen containing pale cells (clear cells) and basophilic polyhedral cells (epidermoid cells) are the two predominant cell types seen and are evidence of the sweat gland origins of the tumor. The clear cell...
predominant type is the most frequent histological type and is proposed to be derived from the eccrine sweat glands. Apocrine components may be focally present. Immunohistochemistry shows staining of tumor cells with antibodies against smooth muscle actin, vimentin, S-100, epithelial membrane antigen, p63, BER-EP4, and CK-CAM 5.2.[1]

The potential for malignant transformation warrants wide surgical excision.[5] Malignant hidradenocarcinoma may be malignant from the beginning itself if metastasis is present. Malignant lesions show increased mitotic figures, invasion of vessels and deeper tissue, and dispersed growth pattern. Malignant lesions do not respond favorably to radiotherapy and chemotherapy. The high chances of recurrence (10%) are attributed to incomplete excision as the tumor is located deep between the dermis and subcutaneous tissue.

Herein, we describe a rare case of nodular hidradenoma located over the distal leg and foot.

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Conflicts of interest
There are no conflicts of interest.

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