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Pleomorphic Fibroma.

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Pleomorphic Fibroma

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Case Presentation

Patient: 28 year-old African-American male.

History of Present Illness: The patient presented with a lesion on his scalp for two years. He states that the lesion started out as a bump and began to enlarge and become itchy. He thought it was a cyst and attempted to drain it on his own but he could not express any fluid.

Allergies: No known drug allergies

Medical/Surgical History: Hypertension.

Medications: None

Physical Examination: The patient has a 3 cm fleshy, compressible, non-fluctuant nodule on his right parietal scalp

Biopsy: *Advanced Dermatology Associates, LTD (ADA16-13941, 12/18/2016)*
Right scalp: "A polypoid lesion with a fibrous stroma, multinucleated cells, and scattered pleomorphic stellate nuclei. Factor XIIIa and CD68 immunostain demonstrates focal faint positivity in some of the target cells. Vimentin is diffusely positive in the target cell population. Mart-1, HMB-45, S-100, CD34, SMA, and CD56 are negative."

Diagnosis: Pleomorphic fibroma

Reason for Presentation: Interest.

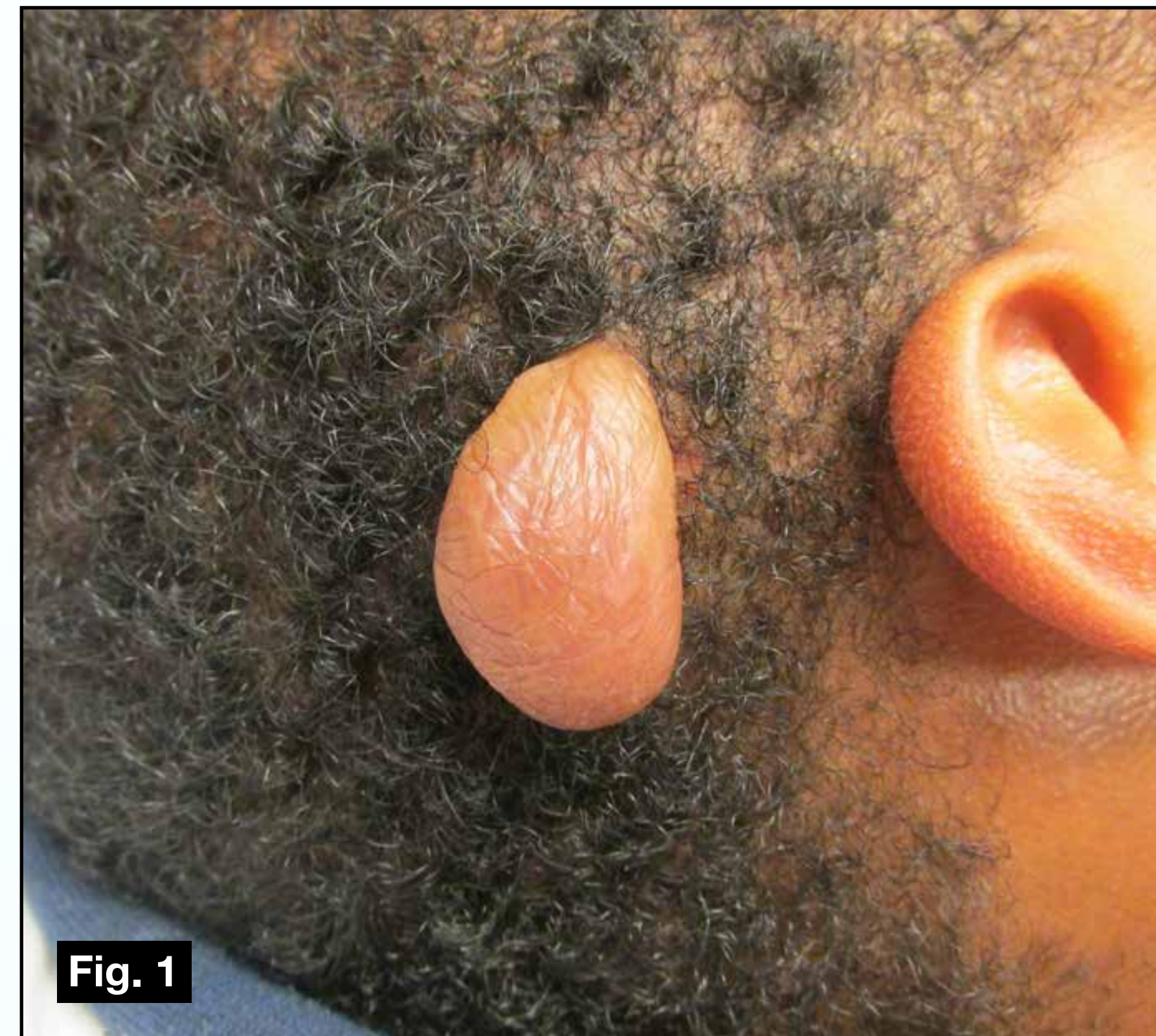


Figure 1: 3.0 cm fleshy, compressible, non-fluctuant nodule on his right parietal scalp

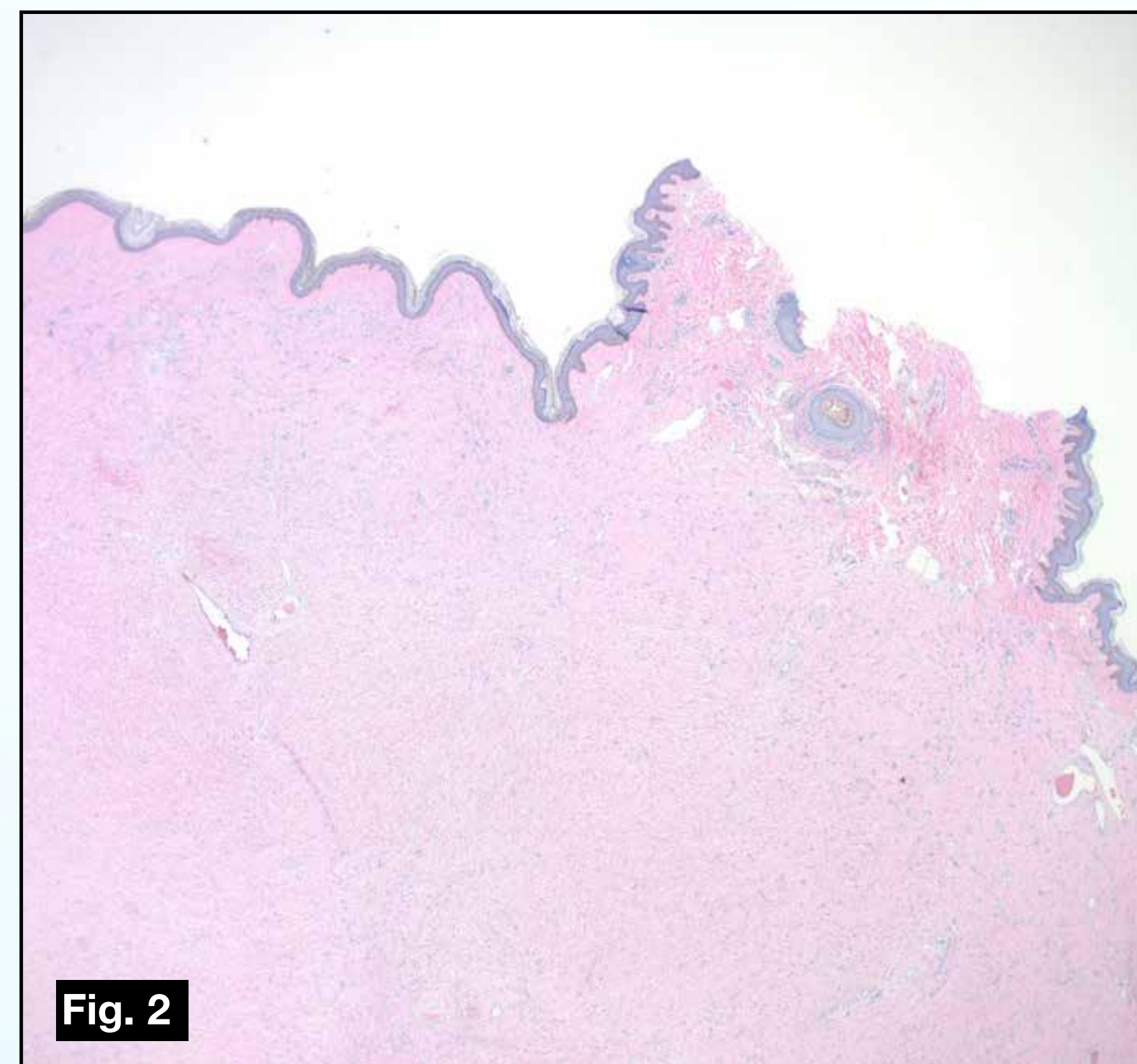


Figure 2: 2x magnification. A polypoid lesion with a fibrous stroma, multinucleated cells, and scattered large pleomorphic stellate nuclei.

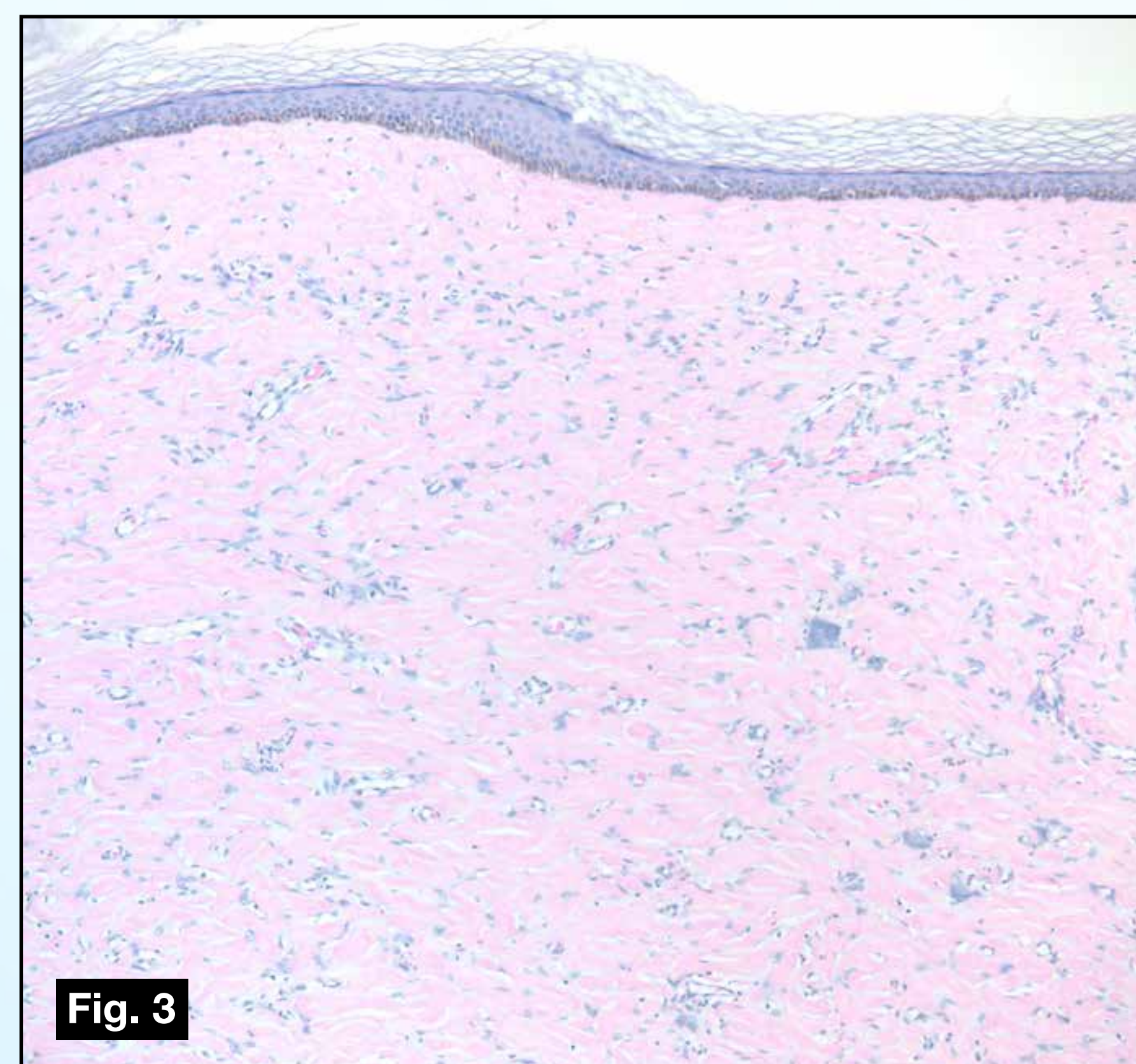


Figure 3: 10x magnification.

Discussion

Pleomorphic fibroma (PF) of the skin is a rare and benign entity originally described in 1989 by Kamino et al. It is usually found in adults in the fifth decade of life. PF commonly occurs on the extremities followed by the head, neck, trunk, and rarely along the subungual areas. Patients can present with a painless polypoid or dome-shaped nodule that is slow growing. The size can range from 0.5 to 2.0cm and can clinically look like a nevus, neurofibroma, hemangioma, fibrokeratoma, fibroepithelial polyp, or a cyst. When these lesions occur along the subungual space, it can deform the nail plate and appear like a pyogenic granuloma.

On histopathological examination, pleomorphic fibromas are well-circumscribed tumors composed of atypical, hyperchromatic cells of variable size with giant multinucleated cells embedded in a collagenous stroma. Mitotic figures are rarely present. PF will stain positive for CD34 and vimentin and will stain negative for S-100 and cytokeratin. The histopathological differential diagnosis includes atypical fibroxanthoma, dermatofibroma with monster cells, giant cell fibroblastoma, desmoplastic Spitz nevus, desmoplastic melanoma, and pleomorphic lipomas. PF can also look similar to sclerotic fibromas and have similar immunohistochemistry staining patterns. Therefore, some believe that pleomorphic fibromas and sclerotic fibromas are on the same spectrum.

Interestingly, in one case report, fine needle aspiration cytology was performed in a PF. The role of fine needle aspiration cytology is usually done in soft tissue tumors but this was the first time it was documented as being performed in a PF. It showed pleomorphic large nuclei (monster cells) with scanty cytoplasm. This was admixed with spindle cells and few multinucleated cells. No mitotic figures were seen and the lesion was diagnosed as a fibrohistiocytic lesion with atypical cells.

Treatment can include a simple excision of the lesion with rare reports of recurrence. Metastasis or regional extension has not been observed.

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