

HISTOLOGICAL AND IMMUNOHISTOCHEMICAL STUDY OF 2 CASES OF DEEP SOFT TISSUE LEIOMYOMA

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Introduction

Deep leiomyomas are benign neoplasms, which are rarely encountered, with location other than the gynecological tract. These neoplasms exhibit smooth muscle differentiation and can be located in the deep soft tissue, retroperitoneum, mesentery, omentum, within the abdominal cavity and have an increased prevalence in women.

Keywords: Deep leiomyoma, soft tissue leiomyoma

Purpose

The aim of our study is to provide useful information on some aspects of the immunohistochemical profile underlying this specific type of tumor.

Material and methods

Our study involved 2 cases of postmenopausal women with clinical diagnosis of retroperitoneal tumor. We examined paraffin-embedded tissue sections cut at 3μm and stained with hematoxylin-eosin. A large panel of immunohistochemical markers were used including the following: Anti-PCK, EMA, S100, Vim, ER, PR, Melanosome, HMB45, Ki67, Desmin, SMA, CD34, Caldesmon.

References: 1. <https://www.hindawi.com/journals/sarcoma/2018/2071394/>; 2. <https://www.pathologyoutlines.com/topic/softtissueleiomyomadeep.html>; 3. BoSTT app; 4. https://surgpatheria.stanford.edu/softsmoothmuscle/soft_tissue_leiomyoma/ 5. <https://pubmed.ncbi.nlm.nih.gov/11688572/> 6. <https://www.nature.com/articles/modpathol2013178.pdf?origin=ppub>

Results

Histologically, they are classic leiomyomas, similar to those encountered in the gynecological tract. LM are composed of spindle cells with smooth muscle morphology: oval nuclei, frequently with blunt ends (cigar-shaped), perinuclear clear vacuoles and fibrillary eosinophilic cytoplasm.

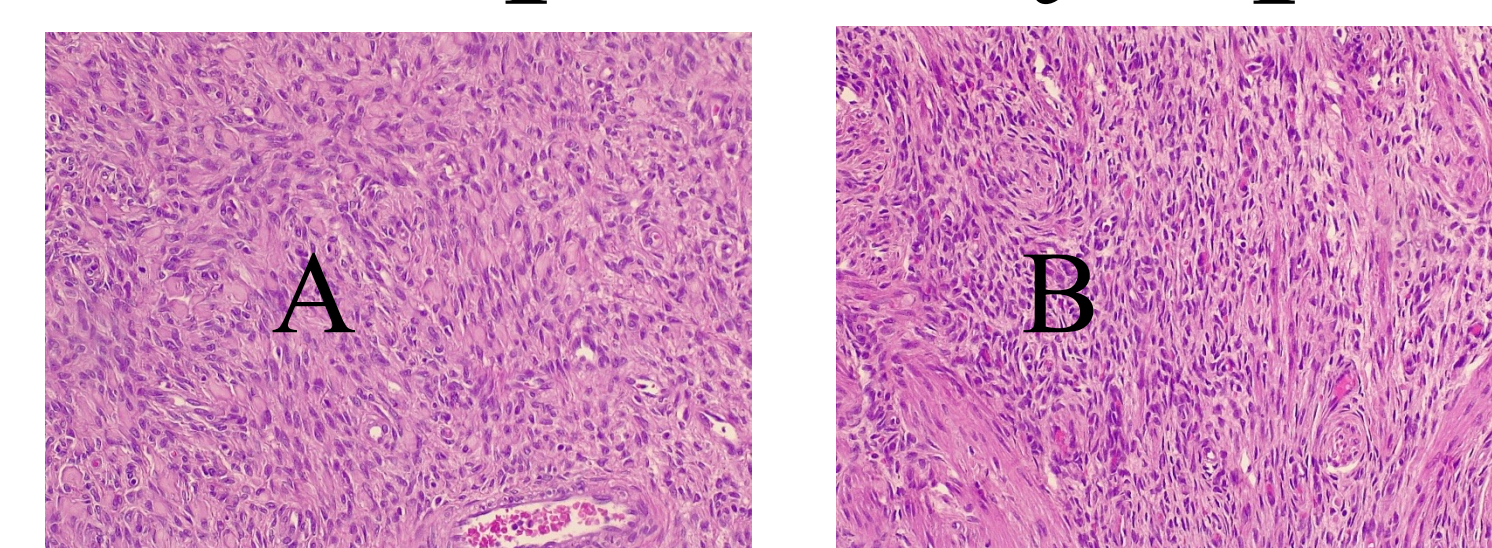


Figure 1

The cells are arranged in intersecting fascicles.

Immunohistochemically:

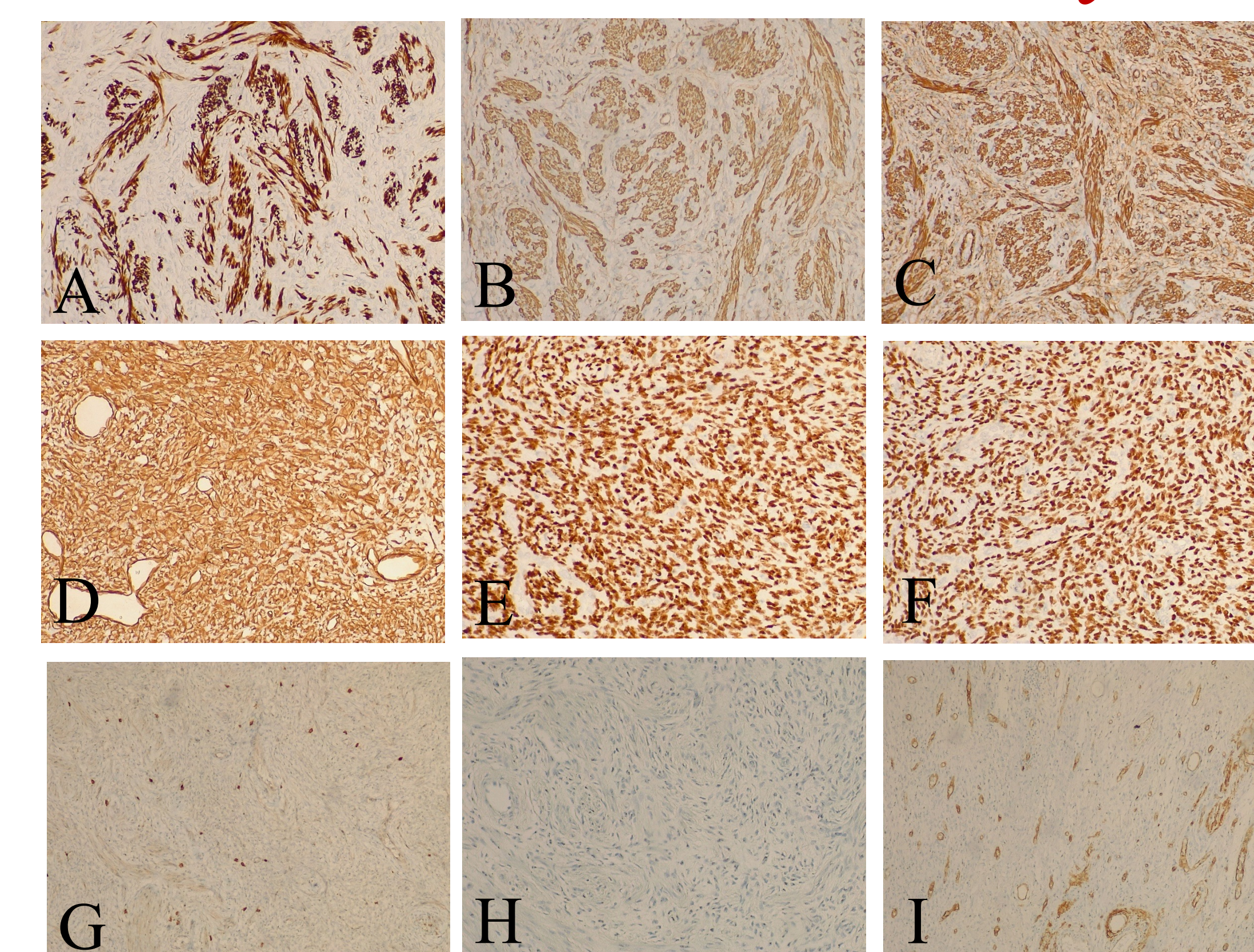


Figure 2

Immunohistochemistry of a benign deep soft tissue leiomyoma with retroperitoneal location: the tumor cells are strongly and diffusely positive for smooth muscle actin (A), Desmin (B), Caldesmon (C) and Vimentine (D) and negative for S100 (H), CD 34 (I) and PCK, EMA, Melanosome, HMB45 (not shown). The ER (E) and PR (F) show very intense reactions.

Conclusions

Deep leiomyomas occur preferentially in women during the perimenopausal period, and most commonly have a retroperitoneal location. These tumors are commonly positive for estrogen and progesterone.