

Uterine leiomyoma with amianthoid-like fibers

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SUMMARY

A rare case of a gynecologic type leiomyoma with amianthoid-like fibers is presented. The 6 cm tumor was found in the uterus of a 46-year-old woman. Histologically, it contained a cellular spindle cell population with numerous eosinophilic amianthoid-like fibers. The morphology closely resembled that of palisaded "amianthoid" myofibroblastoma. Immunohistochemically, the lesion showed a smooth muscle phenotype with expression of h-caldesmon, desmin, alpha smooth-muscle actin, and with negativity for CD10 and the S100 protein. The finding of amianthoid-like fibers expands the morphologic spectrum of leiomyomas. It represents one of the overlapping features between leiomyoma and palisaded myofibroblastoma.

Keywords: uterus – amianthoid-like fibers – gynecologic-type leiomyoma – palisaded myofibroblastoma

Leiomyóm maternice s amianthoid-like vláknami

SÚHRN

Prezentovaný je leiomyóm gynekologického typu s obsahom amianthoid-like vlákní. Šlo o 6-centimetrový tumor maternice u 46-ročnej ženy. Histologicky obsahoval celulárnu populáciu hladkosvalových buniek, v ktorej boli početné eozinofilné amianthoid-like vlákna. Morfológicky tumor napodobňoval palisádovaný "amiantoidný" myofibroblastóm. Immunofenotyp tumoru bol hladkosvalový, s expresiou h-caldesmonu, desminu, alfa hladkosvalového aktínu a s negativitou CD10 a S100 proteínu. Nález amianthoid-like vlákní rozširuje morfológické spektrum leiomyómov a demonštruje fenotypické prekryvanie leiomyómu a palisádovaného myofibroblastómu.

Kľúčové slová: maternica – amianthoid-like vlákna – leiomyóm gynekologického typu – palisádovaný myofibroblastóm

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So called amianthoid-like fibers are thick mats of acellular collagen surrounded by spindle cell proliferation (1–3). They strongly resemble amianthoid fibers histologically. However, they lack defining ultrastructural features of these fibers, and therefore it is more appropriate to label them with the adjective "amianthoid-like" (4). In surgical pathology practice, they are known as the main feature of palisaded (amianthoid) myofibroblastoma (1,2). They are believed to be an atypical extracellular collagen product of myofibroblasts. We would like to present briefly a uterine leiomyoma that contained numerous amianthoid-like fibers inside a spindle cell proliferation, creating a strong resemblance to the pattern of palisaded myofibroblastoma. This case demonstrates phenotypical similarity and a possible histogenetic relationship between gynecologic-type leiomyoma and palisaded myofibroblastoma.

MATERIAL AND METHODS

The tissue was fixed in 4% formalin and processed routinely. The sections were stained with hematoxylin and eosin. For immunohistochemistry, the following primary antibodies were used: alpha-

smooth muscle actin (clone 1A4), h-caldesmon (clone h-CD), desmin (clone D33), melanosome (clone HMB45), S100 (polyclonal), estrogen receptor (clone 1D5), progesterone receptor (clone PgR636) (all from DAKO, Glostrup, Denmark), CD10 (clone 56C6, Novocastra, Newcastle, UK), and CD34 (clone Qbend/10, NeoMarkers, Westinghouse, CA, USA).

Immunostaining was performed according to standard protocols using an avidin-biotin complex labeled with peroxidase or alkaline phosphatase. Microwave antigen pretreatment was used for immunoreactions with h-caldesmon, CD10, CD34, estrogen receptor, and progesterone receptor. Appropriate positive and negative controls were applied.

CASE REPORT

A 46-year-old para 3 gravida 3 woman underwent laparoscopic-assisted vaginal hysterectomy for uterus myomatosis. She was followed up with diagnoses of leiomyoma uteri, hyperprolactinemia and dysmenorrhoe during the 5 years before this operation. In the past, she took hormonal contraception and gestagens, but stopped using them six years ago because they caused her headaches and depression. Further, her previous medical history includes paroxysmal atrial fibrillation, an appendectomy and a cholecystectomy.

Grossly, a 6 cm tumor was found in the right lateral wall of the uterine corpus. It was round and well circumscribed, but in comparison with common fibroids, it was softer in consistency and more yellowish in color (therefore, the endometrial stromal nodule was suggested by gross examination).

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