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Primary vaginal leiomyosarcoma, a rare tumour: case report and review

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Primary vaginal leiomyosarcomas (pvLMS) are rare, recurrent tumours accounting for ca. 2% of all vaginal cancers. The etiology is still unknown, the prognosis is poor and there is no consensus guideline on its management. Diagnosis is usually made during the 5th decade due to the presence of a vaginal mass or nodule [1-2]. Current medical literature reports about 200 cases (PubMed®); only 3 studies have considered the ultrastructure [2-4]. Herein a pvLMS is presented and discussed. A nodular, 25 x 23 x 28 mm-mass, infiltrating the urethra but not the rectovaginal septum, was widely excised from the superior vaginal wall of a 58-year-old previously hysterectomized woman. Macroscopic images and MRI were performed. Iliac lymph nodes and HMB-45 were negative. The sample was fixed and prepared for light microscopy, transmission (TEM) and scanning (SEM) electron microscopy. Semithin sections showed a storiform pattern of spindle shaped cells with blunt-ended nuclei. Cells arranged in interwoven fascicles within a dense and richly vascularised stroma (neoangiogenesis). Some atypic mitotic figures and focal necrosis were seen. SEM evidenced a dense collagenous stroma with numerous microvessels. TEM showed neoplastic and pleomorphic cells with complex cytoplasm projections containing paranuclear crowds of dilated mitochondria, free ribosomes and a well-developed rough endoplasmic reticulum. Nuclei were large, mostly hyperchromatic, usually indented, with prominent nucleoli and nucleolonema. The dense intercellular space contained dense bundles of collagen fibers. A high and reactive endothelium lined blood vessels. After 4 follow-ups, the patient is fine and without recurrence. Best outcomes occur when the tumour is small, localized, and can be removed surgically with wide, clear margins, as it was for this case. As there are different kinds of LMS, biopsy followed by immunohistochemistry and electron microscopy still represents a good diagnostic choice.

References

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Keywords

Leiomyosarcoma, vagina, electron microscopy, light microscopy, cancer, clinical anatomy