S10. IMMUNOHISTOCHEMICAL DETERMINATION OF OESTROGEN AND PROGESTERONE RECEPTOR POSITIVITY IN UTERINE ADENOSARCOMA

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Introduction: Uterine adenosarcoma (UAS), first described by Clement and Scully, is characterised by a benign, sometimes atypical, epithelial component and by a sarcomatous stromal component [1]. Although this rare tumour has generally been regarded as being of low grade malignancy, a subgroup with sarcomatous overgrowth follows a more aggressive clinical course [2,3].
Given the paucity of data regarding hormone dependency, it was the purpose of this study to screen for the presence of oestrogen and progesterone receptors (ER and PR).
Patients and methods: One-hundred-and-five centres were asked to screen their files for UAS. All sent biopsies were submitted for central pathological review. Both macroscopic and microscopic criteria were used to establish a diagnosis. Sarcomatous overgrowth was defined when the sarcomatous component occupied more than 25% of the total tumour volume. An immunohistochemical ER and PR determination was performed.
Results: Twenty-eight primary UAS were stained. Sarcomatous overgrowth could be observed in 8, whereas 1 cervical adenosarcoma was included. Furthermore, 2 cases of recurrent UAS, one only consisting of endometrial stromal sarcoma, were stained. UAS lacking sarcomatous overgrowth showed ER positivity in 17/20 (85%) and 16/20 (80%) in the epithelial and sarcomatous components, respectively. PR positivity was observed in 13/20 (65%) and 12/20 (60%) in the epithelial and sarcomatous components, respectively. In 18/20 (90%) of the cases either the ER or PR stained positive in the sarcomatous component. UAS with sarcomatous overgrowth showed ER positivity in 4/8 (50%) and 0/8 (0%) in the epithelial and sarcomatous component, respectively. PR positivity was observed in 2/8 (25%) and 1/8 (13%) in the epithelial and sarcomatous component, respectively. The stromal component of both recurrent cases stained moderately positive for ER, whereas PR was considered negative.
Discussion: The observation that the sarcomatous component of UAS without sarcomatous overgrowth frequently expresses hormone receptors might be of substrated clinical importance.
Firstly, this finding puts the currently used aggressive treatment modalities including chemotherapy and radiotherapy in perspective and we hypothesise hormonal agents may play a major role in the treatment of an apparent hormone-sensitive disease. In order to decrease recurrence rates and increase disease-free survival in completely or incompletely resected advanced stage UAS, we suggest to administer serially agents that are known to act either by the ER or PR, including progestins, aromatase inhibitors, gonadotrophin-releasing hormone (GNRH) analogues and fulvestrant. These agents might also be beneficial in the recurrent setting. However, the observation that UAS with sarcomatous overgrowth rarely express hormone receptors suggests hormonal treatment to be of little value in this subset of patients.
Secondly, the current results question the safety of ovarian conservation and suggest both ovaries should be removed during surgery. Thirdly, the tendency of UAS to recur in combination with hormone receptor-positivity, suggests to withhold hormone replacement therapy in women dealing with UAS.

References

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