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26. A RARE CASE OF INVERTED PAPILLOMA OF THE FEMALE LOWER GENITAL TRACT, WITH POSITIVITY FOR HUMAN PAPILLOMA VIRUS 42

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Background: Inverted papilloma of the lower female genital tract represents a rare entity which appears to be related to infection with low-risk human papillomavirus (HPV) genotype 42.

Aims: To raise awareness of this rare, recently recognised entity.

Methods: The case was derived from the reporting laboratory of the authors. Clinical information was obtained from a database search. The haematoxylin and eosin stained sections and immunohistochemistry were reviewed. The case was subsequently referred for expert opinion.

Results: A 59-year-old woman with a history of breast cancer presented with post-menopausal bleeding. On speculum examination, a 35 mm lesion was identified within the vagina. Microscopy of the lesion revealed bland, squamoid epithelium with an inverted papilloma-like growth pattern and scattered mitoses. On expert review, the features were felt to be in keeping with an inverted transitional papilloma, and HPV testing was recommended. This showed positivity for HPV 42. 18 months later, the patient underwent a repeat biopsy of a polypoidal lesion from the vaginal wall, which was morphologically identical to the first, with no evidence of dedifferentiation or of increased aggressiveness.

Conclusions: This case represents a rare but recognisable, recently described entity. Although the limited published studies suggest that inverted transitional papillomas of the lower female genital tract are benign, the rarity of these neoplasms make biological prediction difficult. This case also reinforces an emerging association with HPV 42.

27. A RARE CASE OF EXTRAMAMMARY PAGET'S DISEASE OF THE VULVA INVOLVING THE CERVIX AND THE UTILITY OF GATA3 IMMUNOHISTOCHEMICAL STAINING

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Background: Extramammary Paget's disease of the vulva (EMPD) is a well-known entity but involvement of the cervix is

rare, with only a few reported cases. Here we describe a case of an 83-year-old female with a background of EMPD. Abnormal glandular cells were identified on routine cervical cytology (CST).

Cervical involvement with EMPD is subtle on histology and was initially missed on the subsequent cervical biopsies. The diagnosis was confirmed on review of the cervical biopsies and confirmed with immunostains, including GATA3.

The patient has been treated with a large loop excision of the transformation zone (LLETZ) of the cervix.

Aims: The aim of this case report is to recognise and document the presence of cervical involvement by EMPD on cytology and histology.

Methods: Liquid based cytology was utilised for the cervical screening test with ThinPrep slides prepared. Subsequent biopsies from the cervix were attained with immunohistochemical studies performed, which was followed by a LLETZ excision.

Results: Examination under anaesthesia (EUA) showed pagetoid change of the vulva extending from the anterior vulva to the perianal area. The cervix and vagina appeared grossly normal. The cervical screening test reported presence of a possible high-grade endocervical glandular lesion with no evidence of a squamous intraepithelial lesion. Three initial cervical biopsies were taken (12 o'clock, 9 o'clock and 6 o'clock), all of which showed squamous ectocervical mucosa with scattered pagetoid groups of atypical cells at the base of the epithelium, containing enlarged, hyperchromatic nuclei with a moderate amount of cytoplasm. Immunohistochemical stains were performed and the atypical cells showed positive staining for CK7 and GATA3, consistent with EMPD in the cervix. The subsequent LLETZ excision also showed EMPD involving the surface squamous epithelium and colonisation of the endocervical glands.

Conclusion: This is a rare case of EMPD involving the cervix. GATA3 immunostaining is noted to be of diagnostic utility in confirming cervical involvement by EMPD.

28. NOVEL FUSION MAGED2-PLAG1 IN ENDOMETRIAL STROMAL SARCOMA

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Background: Uterine sarcomas can be challenging to diagnose by standard techniques because they might have non-specific histomorphologies and immunophenotypes. Recently, molecular analysis has revealed further fusions in endometrial stromal sarcomas such as *ZC3H7B-BCOR* in addition to other established and pathognomonic genetic changes such as *JAZF1-SUZ12* in low-grade endometrial stromal sarcoma (LG-ESS) and *YWHAE-NUTM2* in high grade stromal sarcoma (HG-ESS).

Aims: The study aims to determine if molecular analysis using a NanoString® nCounter® platform or a next-generation sequencing-based anchored multiple PCR technique (Archer® Sarcoma FusionPlex) can reliably identify gene fusion in ESS.

Methods: 10 most recent archival ESS cases were identified. RNA extracted from each case was submitted for the NanoString® testing, which can identify any of 190 sarcoma-associated gene fusions in a single experimental assay. Cases with no fusions detected by this method underwent Archer® Sarcoma FusionPlex sequencing. All identified gene fusions were validated orthogonally by reverse transcriptase-PCR.