anaplastic tumour components in such tumours arising in the ovary.⁶ As in the ovary, mural nodules within retroperitoneal mucinous neoplasms can also show sarcoma-like, true sarcomatous or carcinosarcomatous histological appearances.⁴ In the present case, the anaplastic carcinoma component did not form a discrete nodule but rather showed multifocal distribution within areas of conventional mucinous adenocarcinoma.

The anaplastic carcinoma presented here showed loss of SMARCA4 expression similar to one of the three retroperitoneal mucinous carcinomas studied by Chaudet *et al.*³ That tumour arose in a 69-year-old and showed pleomorphic morphology. There was also co-loss of SMARCA2 in the anaplastic component (not investigated in the current case) with retained SMARCB1 and ARID1A expression. Interestingly, some of the ovarian anaplastic carcinomas in that series demonstrated rhabdoid appearances, a morphological feature associated with SWI/SNF deficiency in a variety of tumours.

In summary, we report a second example of SMARCA4-deficient anaplastic carcinoma arising within a retroperitoneal mucinous adenocarcinoma. We believe that this case lends support to the proposal by Chaudet and colleagues that SWI/SNF complex inactivation may be a key factor in the development of morphological anaplasia in these tumours, and more generally of 'dedifferentiation' within a range of gynaecological and gynaecological-related neoplasms.⁷

Conflicts of interest and sources of funding: The authors state that there are no conflicts of interest to disclose.

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DOI: <https://doi.org/10.1016/j.pathol.2021.06.118>

Ductal-type mesonephric duct/remnant hyperplasia: distinguished from lobular or diffuse mesonephric hyperplasia by the presence of a myoepithelial cell layer and micropapillary tufting

Sir,

Mesonephric (Wolffian) ducts regress during normal female development. Their remnants may be found incidentally within the cervix, adnexa, vagina and uterus.^{1,2} These remnants may in turn appear hyperplastic, and three forms of mesonephric duct hyperplasia have been recognised: lobular, diffuse and ductal-type.^{2,3} The lobular and diffuse types have been well characterised in large case series.^{1,2} However, ductal-type mesonephric remnant hyperplasia is still poorly characterised, with only two cases described in Ferry and Scully's 1990 series of 49 cases of mesonephric duct hyperplasia.² This ductal type is characterised by a bilayered ductular proliferation with inner luminal cylindrical cells and outer flattened myoepithelial cells. We herein report the histopathological and immunophenotypic findings of two cases of ductal-type mesonephric remnant hyperplasia of the female genital tract.

Case 1 (Fig. 1) was a consultation biopsy specimen of a vaginal polypoid lesion from a 92-year-old otherwise asymptomatic woman, measuring 8×7×4 mm. Microscopic examination revealed a normal vaginal non-keratinising squamous mucosa, with a stromal glandular proliferation arrayed in lobules. Large, dilated ducts filled with proteinaceous secretions were mainly present in the centre of the lesion, with smaller non-dilated ducts arrayed in the periphery. The lesional stroma was hypercellular when compared to the adjacent stroma. The ducts consisted of two distinct cell layers. Small, flattened outer myoepithelial cells encircled an inner layer of larger cuboidal to cylindrical, non-ciliated, bland luminal cells. The cytoplasm of these inner ductular epithelial cells was moderately abundant, pale and eosinophilic. Mitoses were absent and nucleoli were small. Some ducts showed micropapillary inward tufting towards the duct lumen. The immunophenotype of this ductal lesion demonstrated both inner epithelial and outer myoepithelial cells, with some overlapping markers (Table 1). EMA was found to be expressed only in the luminal cells, whilst p40 and p63 were exclusive to the myoepithelial cell layer.

Case 2 (Fig. 2) was a 24-year-old non-smoking G1P1 woman, with a history of recurring high-grade squamous intraepithelial lesions (HSIL) for the previous 2 years. Her loop electrosurgical excision procedure (LEEP) specimen demonstrated a low-grade squamous intraepithelial lesion, endocervical gland hyperplasia, and an incidental focus of dilated relatively deep stromal glands measuring 6 mm in greatest diameter. These dilated, microcystic glandular foci were composed of at least two cell layers. The outer myoepithelial layer demonstrated small, cuboidal, hyperchromatic cells, some with flattened nuclei. The inner luminal layer was formed by cylindrical, pseudostratified, at times ciliated, cells. Apical mucin was absent. Some ducts showed inward micropapillary tufting, and proteinaceous secretion materials. The immunophenotype of this ductal

Fig. 1 (A) Biopsy specimen of a polypoid vaginal lesion in a 92-year-old woman, showing a stromal glandular proliferation arrayed in lobules (H&E). (B) Large, dilated ducts filled with proteinaceous secretions were mainly present in the centre of the lesion, with smaller non-dilated ducts arrayed in the periphery (H&E). (C) The ducts were composed of an inner luminal and outer myoepithelial cell layer. Micropapillary luminal tufting was noted (H&E).

lesion demonstrated both inner luminal/epithelial and outer myoepithelial cells, with some overlapping markers (Table 1).

The ductal type of mesonephric remnant/duct hyperplasia (MH) may be currently underdiagnosed, but is also

potentially uncommon or rare, as only two cases of this type have been described.² It may be distinguished from the two other types of MH. Lobular mesonephric duct hyperplasia is described as clusters of small tubules often filled with a dense eosinophilic secretion that is periodic acid–Schiff (PAS)

Table 1 Immunohistochemical phenotype of mesonephric remnant hyperplasia, ductal-type

Immunohistochemistry		Case 1	Case 2
Positive, luminal alone		EMA Calretinin	EMA PR (rare cells) BRST2 (rare cells)
Positive, abluminal alone		P40, p63	P40, p63
Positive, luminal and abluminal		Bcl-2 CD10 PAX8 GATA3 CK7 PAX2 AR	Bcl-2 CD10 PAX8 GATA3 CK7 PAX2 AR
Negative		ER, PR, WT1, PSA, SMMS-1, S100, NKX3.1, TTF-1, p16 (patchy), p53 (wild-type), BRST2, mammaglobin	Calretinin, ER, WT1, PSA, P501S, SMMS-1, CK20, calponin, S100, NKX3.1, TTF-1, p16, p53 (wild-type), inhibin, synaptophysin, mammaglobin

Fig. 2 (A) Loop electrosurgical excision procedure (LEEP) of a 24-year-old woman demonstrating an incidental 6 mm lesion composed of dilated ducts filled with proteinaceous secretions (H&E). (B) The ducts were composed of an inner luminal and outer myoepithelial cell layer (H&E). (C) Focal micropapillary infolding in the lumen could be observed (H&E). (D) The inner luminal cells expressed EMA and (E) Bcl-2, whilst the outer myoepithelial cells expressed p40 and (F) p63.

positive. The tubules are covered with bland non-ciliated cuboidal cells. Diffuse mesonephric hyperplasia is formed by uniformly-spaced but nonetheless crowded tubules without frank confluent growth.⁴ Eosinophilic PAS-positive secretions may also be observed.⁴

In contrast, the third type of MH, the ductal type, has been described as a 'prominent duct with papillary tufting and minimal proliferation of tubules'.² We additionally describe the presence of a second, myoepithelial layer with a myoepithelial cell cytomorphology and immunophenotype. Luminal ciliae may be focally present, but apical mucin is absent, and contrary to lobular or diffuse MH, densely eosinophilic secretions are absent, rather replaced by proteinaceous secretions present in certain tubules only. Luminal

cells demonstrate a cylindrical instead of cuboidal cytology, and mitoses, atypia and nucleoli are inconspicuous.

Ductal-type mesonephric remnant hyperplasia may be distinguished from mesonephric carcinoma by its absence of confluent, solid or spindled growth, cytological atypia and frequent mitoses.³ Endometrial adenocarcinoma invading the cervical stroma could be a diagnostic consideration, as it can demonstrate quite bland glands with only a mild stromal reaction.⁴ However, mucinous and squamous differentiation are absent in all types of MH. Endocervical carcinoma *in situ*, HPV-associated or HPV-independent, could be considered in differential diagnosis. HPV-associated endocervical adenocarcinoma *in situ* should be readily distinguished by the presence of luminal mitoses, apoptotic bodies, cytological

atypia, hyperchromasia and nuclear stratification. HPV-independent endocervical adenocarcinoma *in situ* (AIS), such as well-differentiated gastric-type endocervical adenocarcinoma, could mimic this type of MH. However, gastric-type endocervical AIS would display mucinous differentiation, a single cell layer and the gland architecture would not be lobulated. Desmoplasia should be absent in MH but may be encountered in gastric-type AIS. Immunohistochemistry should prove contributory in this distinction as MUC6 and p53 positivity and PAX2, CD10 and GATA3 negativity would favour gastric-type AIS over ductal-type MH.^{5,6} Benign misplaced Skene's glands, such as the tubulosquamous polyp of the vagina or cervix, could mimic the bilayered aspect of ductal-type MH, but may be distinguished by absence of micropapillary tufting and presence of squamous differentiation.⁷

We contrasted the immunophenotype of our two cases of ductal-type MH with other histopathological types of MH (lobular and diffuse). Lobular or diffuse MH typically shows expression of EMA, CD10 (luminal), PAX2, PAX8, Bcl-2, AR, calretinin, GATA3 and at times TTF-1.^{6,8–10} Calretinin and TTF-1 may aid in distinguishing ductal-type MH as they were not expressed in both our cases. Additionally, the presence of a myoepithelial outer cell layer in ductal-type MH expressing myoepithelial markers is a characteristic finding. The absence of expression of prostatic differentiation markers (PSA, P501S and NKX3.1) allowed us to rule out misplaced Skene's glands.

Further supporting that ductal-type MH, as with lobular or diffuse-type MH, is derived from the mesonephric epithelium, is that it may have been described analogously in males. In a series by Chen *et al.* studying 10 cases of MH in the prostate or periprostatic tissue, four cases were reported as demonstrating a pattern of glands with 'papillary infoldings or micropapillary tufts' (their so-called 'Pattern 4').¹¹ PAX8 was positive in all instances, and p63-positive myoepithelial cells were present in the periphery.

To conclude, ductal-type mesonephric duct/remnant hyperplasia is an uncommon, and likely underdiagnosed, finding that may occur in the cervical or vaginal stroma. It is characterised by dilated ducts, with clefted contours, micropapillary tufting and the presence of an outer myoepithelial cell layer.

Conflicts of interest and sources of funding: The authors state that there are no conflicts of interest to disclose.

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DOI: <https://doi.org/10.1016/j.pathol.2021.05.095>

Localised biphasic mesothelioma with prominent myxoid stroma

Sir,

Localised malignant mesothelioma (LMM) is an uncommon and poorly recognised neoplasm. We report an autopsy case of a patient with LMM of the biphasic myxoid type arising from the visceral pleura. This type of LMM has never been reported to date, and we present this exceptionally unusual, interesting tumour in detail.

An 81-year-old man had a pleural effusion on the right side and a tumour in the right chest wall measuring 11.3×4.6 cm with focal calcification on computed tomography (CT) scan. One month later, a CT scan revealed the mass had grown to 13.6×4.6 cm. The patient's dyspnoea progressed severely, and he was transferred to the National Hospital Organization Hakodate Hospital for an assessment to determine whether the mass could be surgically treated. Continuous drainage was performed for the large uncontrollable accumulation of pleural effusion throughout the entire period of hospital admission. Three months later, the patient died of renal failure and arrhythmia due to hyperkalaemia without surgery. An autopsy was performed 1 hour and 20 minutes after death. Gross examination of the tumour revealed a jelly-like, soft, translucent, polypoid mass that measured 17×16×6 cm and arose from the right pleura of the lung (Fig. 1). The tumour was localised in the pleural cavity without infiltration or metastasis to any other organs. Histologically, the cellularity was different from low to high cellular areas with abundant stromal mucinous substances in the background (Fig. 2A). The tumour cells had monotonous spindle-shaped nuclei with unclear cytoplasmic borders (Fig. 2B). Nuclear atypia was remarkable in limited