

## Mesonephric adenocarcinoma of the uterine cervix: A case report and review of the literature

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### Abstract

Mesonephric adenocarcinoma is a rare neoplasm of uterine cervix. It originates from the mesonephric ductus remnant or mesonephric hyperplasia area. There have been few such cases reported. Our case was 64 years of age and her tumour held the whole endocervical wall. It was around 5cm in diameter, and had exophytic component as well. Bilateral pelvic and paraaortic lymph nodes were negative for metastasis.

**Keywords:** Mesonephric adenocarcinoma, Uterine cervix.

### Introduction

Mesonephric adenocarcinoma is a rare tumour which originates from mesonephric remnant. Hyperplasia of mesonephric remnant is rare and development of hyperplasia from these areas is much rarer.<sup>1</sup>

Contrary to endocervical type adenocarcinoma, it has no relation with human papilloma virus (HPV) infection.<sup>2-4</sup> Its diagnosis can be mistaken with other adenocarcinoma morphologically. However, immunohistochemical (IHC) assessment may be required. In addition, it may have a better prognosis than mullerian counterparts.<sup>5</sup>

Here we present a case who was 64 years of age and her tumour held the whole endocervical wall. It was around 5cm in diameter, and had exophytic component as well.

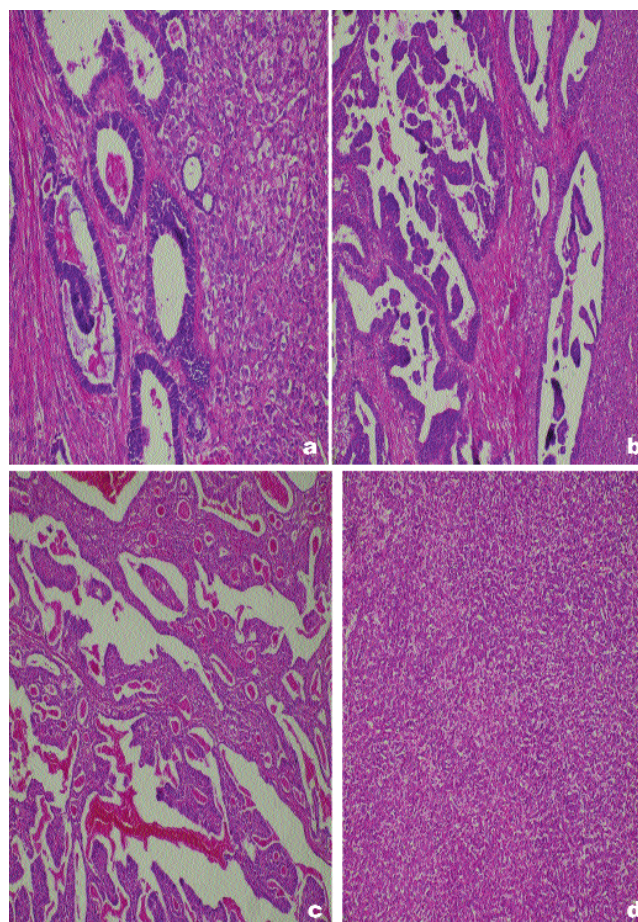
### Case Report

A postmenopausal woman aged 64 years presented to Gynaecology Unit in March 2014, with lower abdominal pain and vaginal bleeding. She had a history of type 2 diabetes mellitus (T2DM), hypothyroidism and had been under medical treatment for ten years.

Probe curettage was done and it was observed that cervix had a big bulge. Pathological workup reported serous papillary adenocarcinoma. On an emergency basis, total hysterectomy, bilateral salpingo-oophorectomy, bilateral

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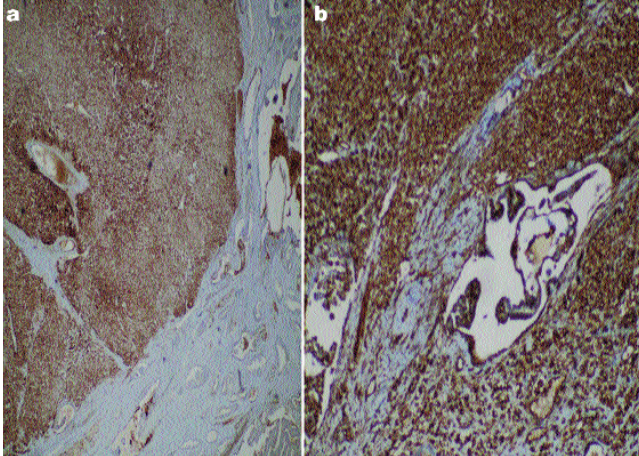
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**Figure-1:** a) Clear cell features and endometrioid glands. b) Solid and serous papillary appearance. c) Densely packed small tubular glands and containing eosinophilic secretions. d) Solid features.

pelvic and paraaortic lymphadenectomy were conducted. There was no invasion or adjacent organ adhesion observed.

Paraffin-embedded blocks were sectioned for haematoxylin and eosin (H&E) and IHC staining. Immunostaining was performed using an automated staining machine (BenchMark GX, Ventana). Oestrogen receptor (ER), progesterone receptor (PR), endometrial adenocarcinoma (EMA), vimentin, calretinin antibodies, and CD-10 antigen, Carcinoembryonic antigen (CEA), Ki-67 and HPV antigens were explored.



**Figure-2:** a) Diffuse positivity for vimentin. b) Strong focal immunoreactivity for CD10 antigen.

Macroscopically, a heterogeneous tumour was observed in the uterine channel and cervical channel, and a mass measuring dominant 5x5x4 cm on postero-lateral walls and 2x2x1.5 cm on pelvic side of the cervix was noted which was suggestive of disease corresponding to International Federation of Gynecology and Obstetrics (FIGO) stage 1B2.

Microscopically, mesonephric hyperplasia area, which is composed of tubular structures, had colloid-like secretions, EMA, complex papillary structures, vast solid structure and clear cell areas (Figure-1). Distinctive type and mitotic figures were determined in tumour cells (15 x10 high power fields [HPF]).

On IHC examination, tumour cells were found to be diffusely positive for vimentin (Figure-2a), EMA, focally strong positive for CD-10 (Figure-2b), calretinin, Ki-67, and negative for ER, PR, CEA and HPV. Bilateral pelvic and paraortic lymph nodes were negative for metastasis

## Discussion

Mesonephric adenocarcinoma is a rare tumour which originates from the mesonephric ductus of cervix. It has been reported rather rarely in literature. One study<sup>6</sup> observed it in 5 different morphologies: ductal, tubular, solid, retiform and sex-cord like pattern. We observed tubular, ductal, solid, clear cell and serous papillary structures.

IHC assessment can be helpful in differentiating it from Mullerian counterpart. One study<sup>7</sup> suggested CEA and vimentin differentiating diagnosis and found CEA (-) and Vimentine (+) in mesonephric cervical adenocarcinoma. CD10 luminal positivity confirms mesonephric origin.<sup>8-10</sup> Moreover, mesonephric adenocarcinoma expresses calretinin.<sup>5,9,10</sup>

It is generally accompanied by HPV infection in cervical squamous carcinoma and cervical adenocarcinoma.<sup>3</sup> It has no relation with HPV infection in mesonephric adenocarcinoma.<sup>2-4</sup> We observed vimentin and EMA diffuse positive, and CEA negative in our case. CD 10 focally luminal was positive, and so was calretinin. HPV was negative. Cervical adenocarcinomas were positive for ER and PR; and mesonephric adenocarcinomas were negative for ER and PR in some studies.<sup>1,8,9</sup> We observed ER and PR negative in our case. Sarcomatous component was not observed in our case.

Since pathologists simply help to arrive at a diagnosis, and the treatment process is then taken over by the oncologist in such cases, we, therefore, could not trace the patient for follow-up.

## Conclusion

Mixture morphology is the difficulty of correct diagnosis in small biopsy specimen. Pathologists should consider this tumour that shows various different morphologies.

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