

## Atypical Endometrial Cells in Post-menopause- Case Report

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### **ABSTRACT**

The presence of endometrial cells is considered an alarming finding in the gynecological smears of women in the second half of the menstrual cycle or women aged  $\geq 45$  years. In the case of post-menopausal women, the presence of atypical endometrial cells may represent endometrial abnormality and requires careful evaluation.

We report a case of a 77 year-old postmenopausal woman, who presented abnormal vaginal bleeding. A cervical/vaginal cytology revealed the presence of abnormal endometrial cells in clusters and this fact was unusual in the woman's clinical context. The cytological result was Atypical Glandular Cells, favor Neoplasia. Based on this result, the patient was submitted to an endometrial curettage. The histological result was carcinosarcoma so a radical hysterectomy was performed.

In spite of the discordance among the cytological and histological results, this case shows the relevance of endometrial studies and allowed the carcinosarcoma diagnosis.

**Key-words:** carcinosarcoma, atypical glandular cells, gynecological cytology, post-menopause, conventional cytology.

## INTRODUCTION

Endometrial cells with common morphology can be observed in the gynaecological smears of women in fertile age, during the first 12 days of the menstrual cycle, or of those who use intrauterine devices (IUD). However, if noticed in postmenopausal women, these cells can indicate a glandular pathology, which can be benign or malign.

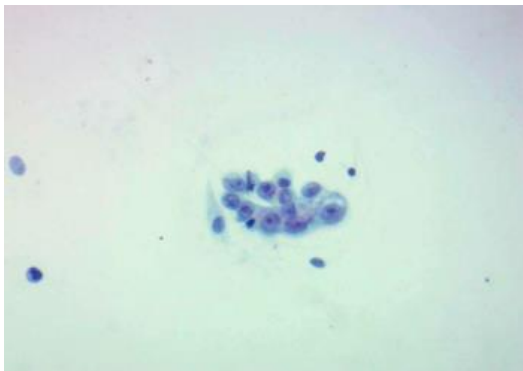
In these situations, complementary exams of endometrial evaluation, such as the endometrial curettage and the pelvic ultrasound, might be recommended<sup>1,2</sup>.

## CASE PRESENTATION

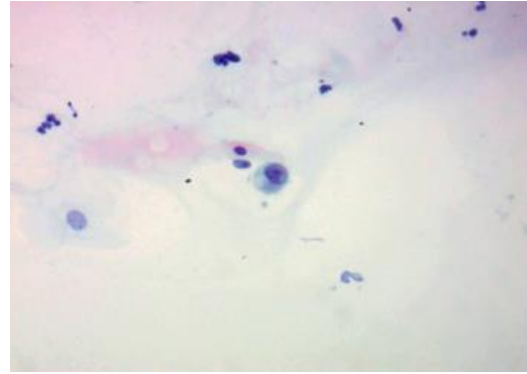
This case reports a 77 year-old woman, in menopause for 20 years, with vaginal bleeding and no other significant alterations revealed by the ultrasound exam. The patient was referred to the Gynecology Department and submitted to a cervicovaginal exam.

The obtained smear exhibited an atrophic pattern, with no evidence of maturation and presence of small cells, isolated or in small clusters, with three dimensional arrangement. These cells presented a cyanophile and vacuolated cytoplasm, with some loss of cellular polarity, nucleus “pushed out” to the edges, small nucleolus and fine, unequally distributed chromatin (**Fig.1** and **Fig.2**).

The cytological result was interpreted as Atypical Glandular Cells (AGC), favor neoplasia.



**Fig.1** – AGC – Cluster of atypical endometrial cells (Conventional cytology, Papanicolaou stain, 400x)



**Fig.2** – AGC – Isolated cell (conventional cytology, Papanicolaou stain, 400x)

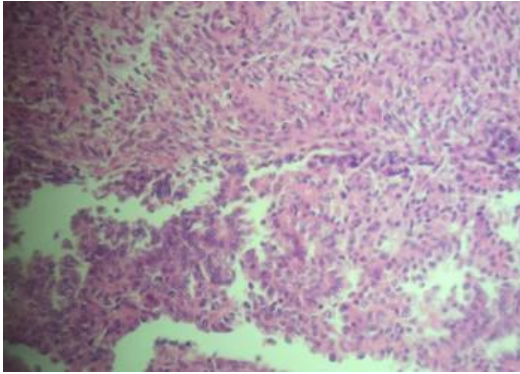
## ANALYSIS AND DISCUSSION

In this case, the alterations in the architecture of the atypical endometrial cells allowed, despite their low representativeness, to reach a cytological result of AGC, not excluding endometrial adenocarcinoma. However, the cytological findings could be interpreted as the expected atrophic pattern in a postmenopausal woman, due to the absence of maturation, presence of a clean background and the low cellular representativeness of the lesion (**Fig.1** and **Fig.2**).

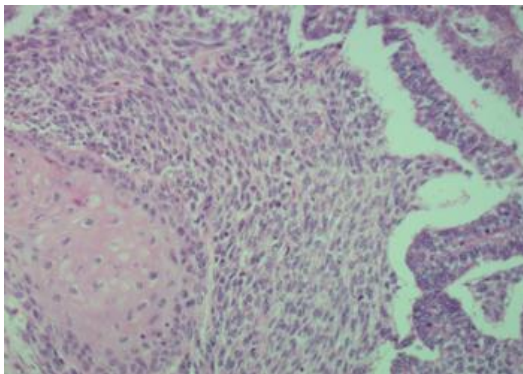
Following the cytological AGC result, the patient was submitted to endometrium biopsy. However, the histological diagnosis wasn't possible since the collected material was essentially mucus.

A uterine curettage was performed, which allowed to observe fragments of the malignant biphasic tumor with areas suggestive of an endometrioid, serous papillary and epidermoid carcinoma, with distinct cells and fusocellular areas, of which differential diagnosis was carcinosarcoma (**Fig.3**).

In this context, the patient was submitted to a radical hysterectomy, with removal of the ileocecal appendix and the adjacent lymph nodes. The histological examination confirmed the previous diagnosis of carcinosarcoma (**Fig.4**).



**Fig.3** – Uterine curettage - Carcinosarcoma (Hematoxylin and Eosin stain, 200x)



**Fig.4** – Hysterectomy specimen - Carcinosarcoma (Hematoxylin and Eosin stain, 200x)

The carcinosarcoma, also known as Malignant Mixed Müllerian Tumor, is a highly aggressive neoplasia, with a strong invasive and metastatic capacity, and, as a result, its prognosis is generally poor<sup>3-6</sup>. Despite having been found in women aged under 40 years old, this pathology is more common in postmenopausal women<sup>5</sup>. It represents less than 5% of all the malignant lesions arising from the uterus, and it is classified as a variant of carcinoma. On the other hand, as far as its histological features are concerned, it presents two variants – a sarcomatous one, and an epithelioid one, both malignant (biphasic neoplasia<sup>3-8</sup>).

The cytology was reviewed by four pathologists and four senior cytotechnicians. Even without information on the histological diagnosis, they all confirmed and agreed upon the AGC result. This result is based on the fact that the sarcomatous component of the

carcinosarcoma is not represented in the cytology sample, and the glandular cells of the epithelium own cytological features that are very similar to the ones of endometrial adenocarcinomas.

Studies on adenocarcinomas conducted among postmenopausal women revealed that this type of lesion is difficult to identify in cytologies, with a large percentage of the diagnoses being Negative for Intraepithelial Lesion or Malignancy (NILM)<sup>5</sup>. This might be due to:

- 1) difficulty in the sample collection and rare exfoliation of these cells;
- 2) low representativeness of the connective tissue component;
- 3) inexperience of the examiner.

## CONCLUSION

In this case, the cytology was not sufficient to make a differential diagnosis of carcinosarcoma. However, despite its low cellular representativeness, the cytology showed the presence of atypical endometrial cells, indicative of endometrial study and consequently the possibility of performing the differential diagnosis of carcinosarcoma.

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