HISTOPATHOLOGIC ASPECTS IN MICROGLANDULAR HYPERPLASIA OF ENDOCERVIX

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Summary. In This study we analysed 373 cases of microglandular hyperplasia of endocervix belonging to patients from the III–VII decades of life. Most of the lesions had the typic aspect of proliferation of small glandular lumen lined by endocervix type epithelium, with or without areas of basal proliferation or immature squamous metaplasia. In 8 cases the growing patterns were peculiar, with mucinous or florid aspects, three of the cases rising differential diagnosis problems with cervical carcinoma.

Key words: mycroglandular hyperplasia of endocervix, histopathology.

INTRODUCTION

Mycroglandular hyperplasia of endocervix is a localized, non-neoplastic proliferation of the glandular epithelium of endocervix, which, occasionally, can be misinterpreted like a pre-malign or malign neoplasm of the endocervix. This lesion is classified in the group of tumor-like lesions of the uterine cervix, together with papillary endocervicitis, profound glands and Naboth cysts, mesonephric hyperplasia, diffuse laminar hyperplasia, metaplasia, endometriosis, reactive atypie, Aria-Stella reaction [1–4].

All these lesions present architectural and/or cytologic anomalies, which, apparently, do not differ by some varieties of cervical adenocarcinoma or precursor lesions of adenocarcinoma.

The lesion is common enough at young women, linked by oral contraceptives consumption, pregnancy, or postpartum, reflecting the progesterone influence. It is considered that 3% of the women that consume oral contraceptives will develop microglandular hyperplasia. Also, lesion was noted to postmenopausal women that followed oestro-progestative substitution therapy [2, 5–7].

Other epidemiological studies sustain that in almost half of the cases lesions are not associated with oral contraception or other hormonal perturbations [8]. In the majority of cases the lesion is incidentally discover by clinician, with the aspect of a unique or multiple, plate, or polipous, sesile or pediculated, friable, erosive formations with diameter of maximum 2 cm.

MATERIAL AND METHODS

This retrospective study is made on 373 cases selected in an interval of 5 years (1999–2004). The studied material came from the Gynaecology Clinic of the Emergency Hospital from Craiova, being represented by hysterectomy, col amputation pieces and cervical biopsies. The pieces were processed in the Pathology Lab of the same hospital by usual technique of paraffin inclusion and Haematoxylin-Eosin staining.

RESULTS

The 373 studied cases represented 24% from the 5 years gynecologic pathology. Lesions belonged to patients from the III–VII decades of life, with maximum incidence in the V decade of life. Microscopically, the lesions were unique or multiple, but with limited character. We noted a proliferation of glandular lumen with small size, situated close together, frequent back to back, lined by epithelia resembling with the endocervix epithelium. In 365 of the 373 studied cases, the aspect was typical, without diagnosis problems. Mono-layered cubic or columnar epithelia lined the glandular spaces. The cytoplasm was eosinophilic, abundant, fin vacuolated, optic empty vacuoles were under or below nucleus situated. The nuclei had uniform aspect and sizes, with uniform distributed chromatin, and reduced or absent mitotic activity. Glandular lumina was filled with, pale eosinophilic or basophilic homogeneous material, sometimes containing some polimorphonuclears. In the adjacent stroma were present areas of oedema, hyalinization and acute or chronic inflammatory infiltrate, composed by polimorphonuclears, lymphocytes and plasmocytes (Figure 1).

Together with the common aspects, we noted some inconstant morphological changes that increased the complexity of lesions. In 22 cases, the typical microglandular hyperplasia was associated with aspects of hyperplasia of reserves and in 58 of cases with immature squamous metaplasia. In areas with hyperplasia of reserve, the glandular lumen was lined by pseudo-layered cubic or columnar epithelia with round-ovoid nuclei and reduced cytoplasm (Figures 2 and 3). As the reserve cells matured to the squamous cell, cytoplasm was progressively more eosinophilic, resulting the aspect of immature squamous metaplasia.

The immature metaplastic squamous cells were layered disposed, with preserved polarity, reduced cytoplasm, low eosinophilic and uniform nuclei. Sometimes mitosis was present since the superficial epithelial layers, but rare and always typical. Inconstantly, at the surface of the areas of squamous metaplasia was present a layer of mucous secreting epithelial cells (Figures 4 and 5).

In 6 cases the pattern of proliferation was mucinous. In the glandular lumen, lined by columnar, mucinous, frequent pseudo-layered disposed cells, we noted the presence of small groups of detached cells floating in a mucous secretion.

Only in one case the mucinous cells had the hobnail aspect, generating diagnosis difficulties with mucinous cervical adenocarcinoma or a clear cell carcinoma (Figures 6 and 7).

In two cases the proliferation was very intense, with aspects of florid lesions. The proliferated glands were more numerous than in precedent forms, with unregulated, apparent infiltrating aspect. There were areas lined by mucinous, pseudo-layered, or layered epithelia, together with small areas of immature, squamous metaplasia. Together with these were present small areas of hyperchromatic and pleomorphic nuclei, but with few mitoses (Figures 8 and 9). As consequence of the complex lesional aspect, the problem of differential diagnosis with a cervical mucinous adenocarcinoma was taken in consideration.

DISCUSSIONS

Microglandular endocervical hyperplasia is considered a complex, benign proliferation of the cervical glands epithelium. It is estimated that the lesion is present in 30% on hysterectomy pieces, affecting predominantly patients belonging to III-VI decades of life [7, 9]. In our study, 24% of the hysterectomy, cervix amputation pieces and cervical biopsy fragments presented this lesion. The patients were from the III–VI decades of life, with maximum incidence in 35-45 years interval. Histopathological, majority of analysed cases had typical, easy to recognize aspects. Between the more frequent morphologic changes associated with lesions we mention the reserve hyperplasia and the immature squamous hyperplasia, noted in 80 of the studied cases (21.4%). Both changes represent preceding phases of the endocervical squamous metaplasia, frequent mentioned in association with microglandular hyperplasia explained by some commune ethiologic factors [1, 2, 5, 10]. Sometimes, the cytological and architectural pattern of microglandular hyperplasia may raise problems of differential diagnosis with malign endocervical lesions. In this sense, in literature are mentioned frequent peculiar forms of the lesion, such as reticular, trabecular, solid, florid, pseudo-infiltrative forms, or forms with abundant stromal hyalinization, signet-ring cells form, or hobnail forms [11, 12]. They are also mentioned cases with nuclear pleomorphism and nuclear hyperchromasia, but with a low rate of mitosis, 1 mitosis/field with 10-objective [12]. In our study, only three of the cases were with diagnostic problems. In one case the growing pattern was mucinous and in the other two cases was pseudo-inffiltrative florid. The differentiation between microglandular hyperplasia and clear cell carcinoma is based on architectural and cytological changes. Clear cell carcinoma had a papillary pattern of growing, without squamous metaplasia and contains big cells with hobnailed, hyperchromatic nuclei with frequent mitoses. Mucinous cervical adenocarcinoma may grow in association with microglandular hyperplasia, but glandular atypia, atypical mitosis and stromal invasion orient diagnosis to a malign lesion.

CONCLUSIONS

The importance of the microglandular hyperplasia resides in high frequency of this lesion, especially in the reproductive period of life, the possibility that, even simple lesions, to progress to aggravated forms with pseudo-infiltrating pattern of grow, or florid aspect and the sporadic presence of cellular, or even architectural anomalies. In the presence of an increase proliferating index, in the advanced forms, papillary, pseudo-infiltrating, with cellular or architectural atypia may be considered pre-malign states.

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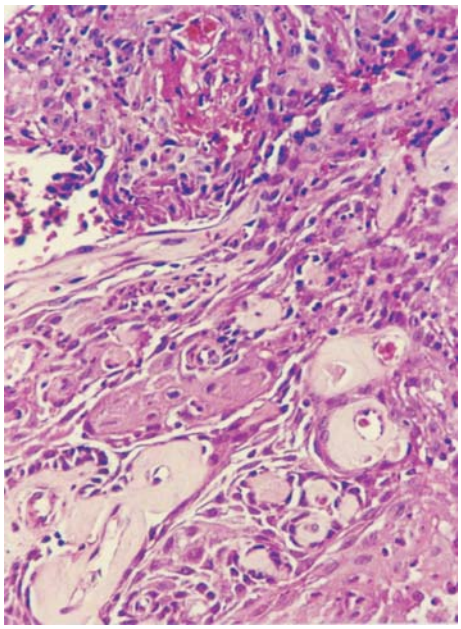

Figure 1 – Typical cervical microglandular hyperplasia (HE, ob. ×10)

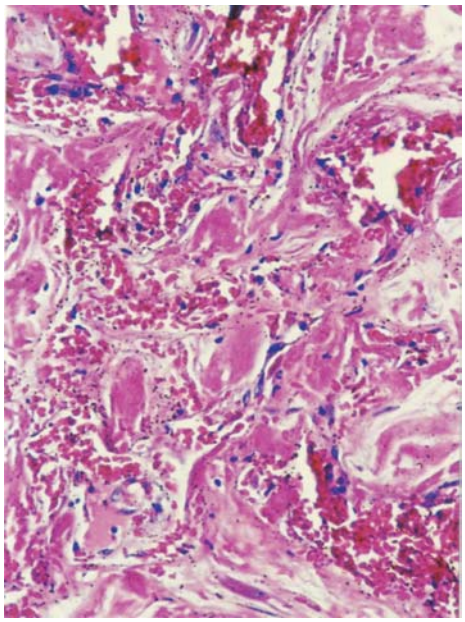

Figure 2 – Endocervical microglandular hyperplasia associate with basal hyperplasia (HE, ob. ×6)

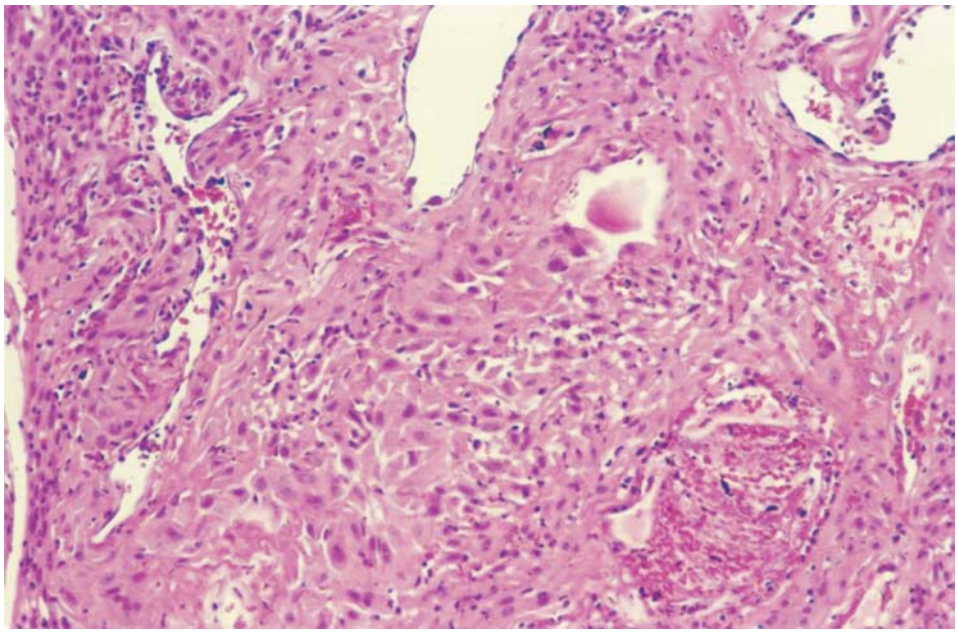

Figure 3 – Endocervical microglandular hyperplasia associate with basal hyperplasia (HE, ob. ×10)

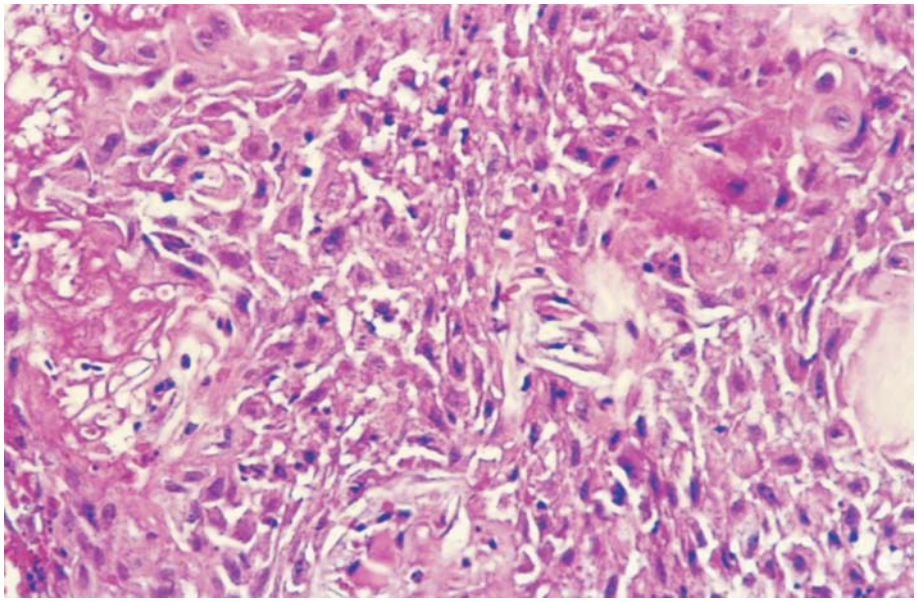

Figure 4 – Endocervical microglandular hyperplasia associate with immature squamous metaplasia (HE, ob. ×6)

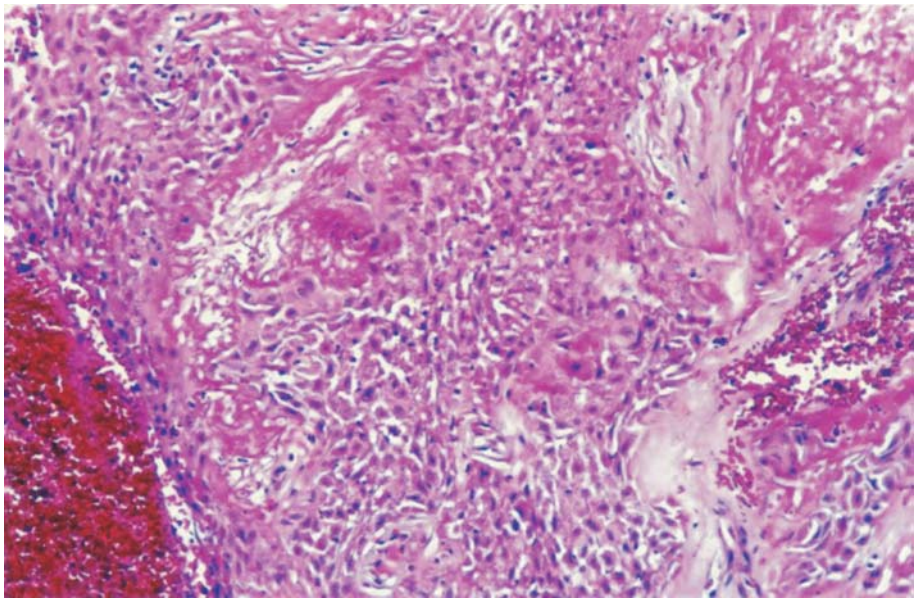

Figure 5 – Endocervical microglandular hyperplasia associate with immature squamous metaplasia (HE, ob. ×10)

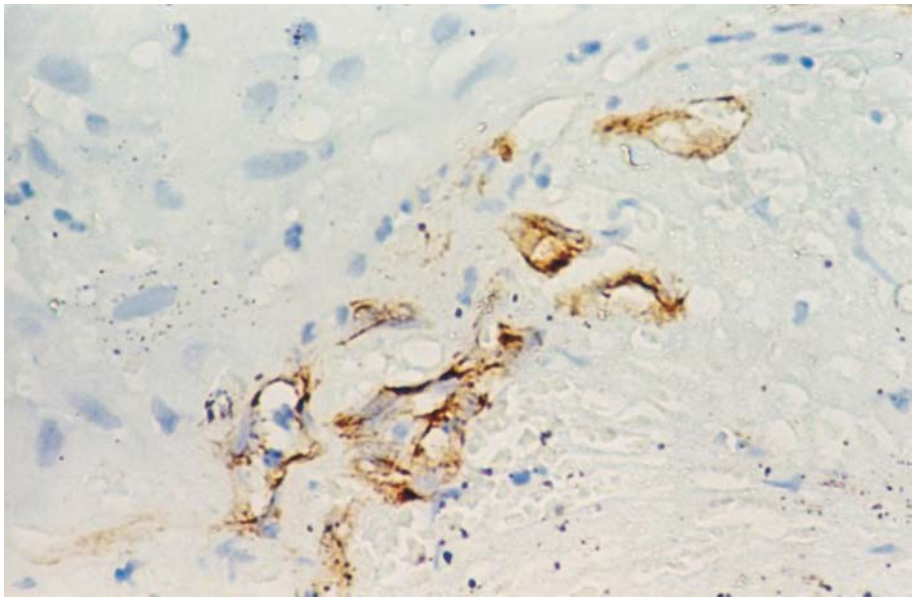

Figure 6 – Endocervical microglandular hyperplasia, mucinous pattern (HE, ob. ×6)

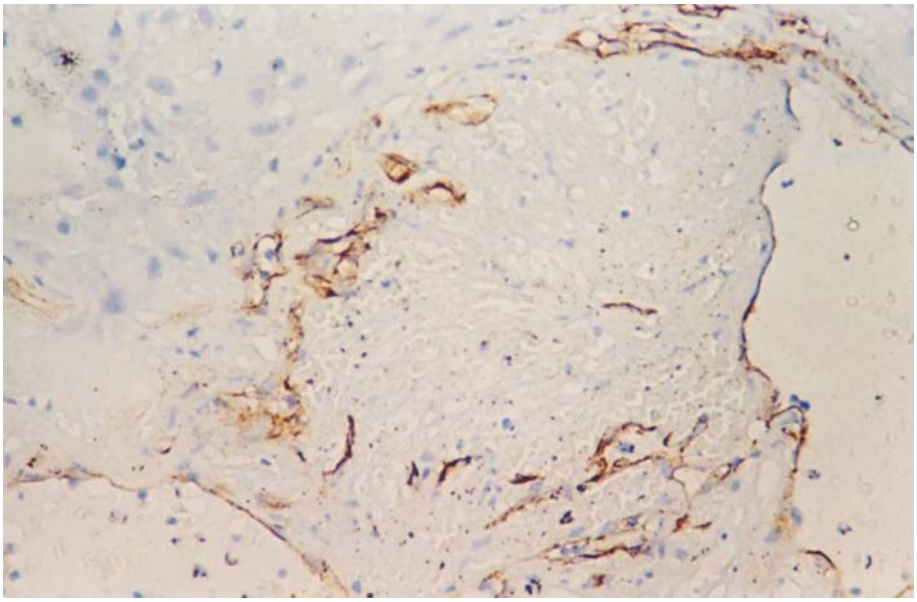

Figure 7 – Endocervical microglandular hyperplasia, mucinous pattern (HE, ob. ×10)

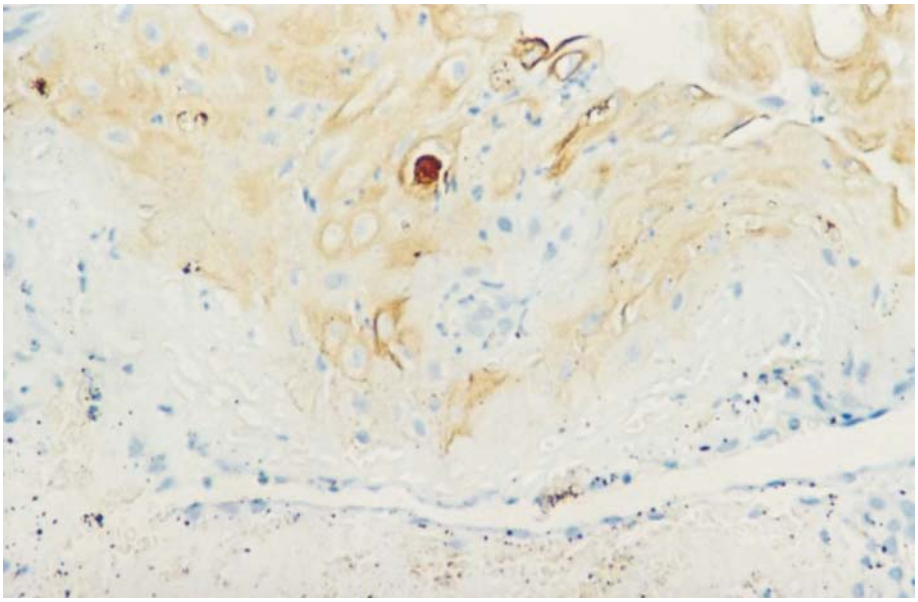

Figure 8 – Florid endocervical microglandular hyperplasia (HE, ob. ×6)

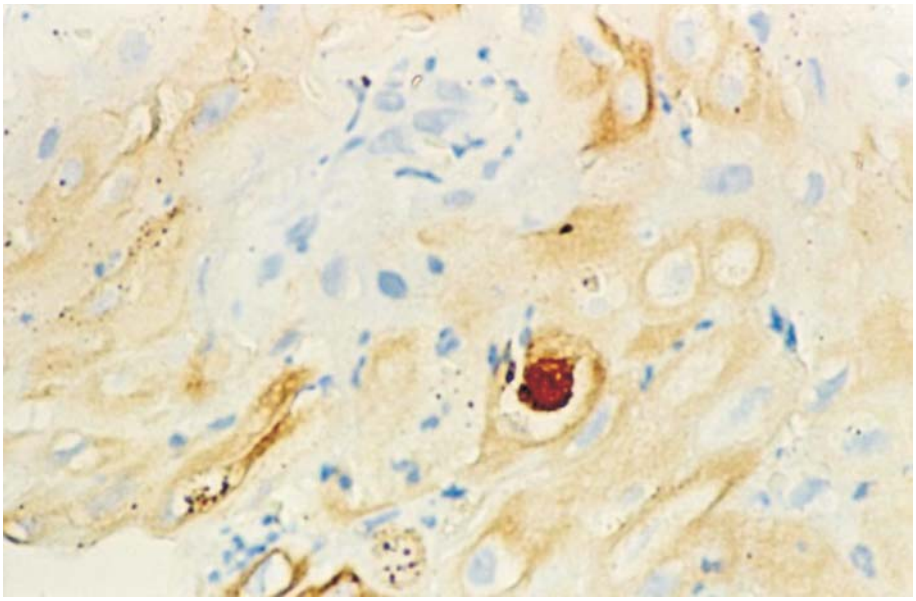

Figure 9 – Florid endocervical microglandular hyperplasia (HE, ob. ×10)