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Diminutive and Immense-Microglandular Hyperplasia Uterine Cervix

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Editorial

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Editorial

Microglandular hyperplasia of cervix emerges as a benign, non neoplastic lesion comprised of glandular proliferation within the endocervix. Additionally designated as microglandular adenosis or microglandular change, the lesion manifests as an incidental discovery upon histological evaluation of the endocervix.

Female subjects within reproductive years are commonly incriminated. Besides, lesion may be concurrent within women associated with hormonal exposure as encountered with pregnancy, postpartum period and subjects on oral contraceptive pills, progesterone therapy or hormone replacement therapy. Notwithstanding, lesion is exceptionally discerned within the postmenopausal phase.

Microglandular hyperplasia of uterine cervix appears reminiscent of cervical or endometrial adenocarcinoma. Therapeutic intervention appears superfluous. Generally, microglandular hyperplasia of uterine cervix is asymptomatic. However, incriminated subjects may represent with contact bleeding [1,2]. Tumefaction appears as solitary or multiple, polypoid tumour masses. Besides, the lesion may arise within an endocervical polyp.

Cytological examination exhibits non specific cellular modifications. Commonly, bi-layered or tri-dimensional clusters and aggregates of benign cuboidal epithelial cells or columnar glandular cells are observed. Neoplastic epithelial cells appear permeated with vacuolated cytoplasm, intracytoplasmic micro-lumina or fenestrations. Epithelial cell clusters appear admixed with foci of immature squamous metaplasia and reserve cells pervaded with scanty cytoplasm and miniature, spherical nuclei. An intermingling of inflammatory cells may be discerned [1,2].

Glandular cells may demonstrate cytological atypia with occurrence of enlarged, hyperchromatic, crowded nuclei delineating smooth nuclear contour, fine nuclear chromatin and multiple nucleoli. Mitotic figures, apoptotic bodies and watery diathesis may be exemplified, reminiscent of high grade squamous intraepithelial lesion (HSIL) [1,2] (Table 1).

Grossly, endocervix appears unremarkable. Microglandular hyperplasia of uterine cervix may manifest with multifocal lesions. Exceptionally, polypoid tumefaction is accompanied by superficial ulceration. Upon microscopy, solitary or multiple, polypoid lesions appear confined to superficial zones of the endocervix. Glandular proliferation is complex and comprised of 'back to back' dissemination of proliferating tubular glands along with cystic dilatation of glands. Glandular articulations exhibit intraluminal mucin. Glandular articulations appear layered by bland, cuboidal, columnar or flattened epithelial cells demonstrating sub-nuclear and supra-nuclear vacuoles and indistinct nucleoli. Intervening stroma appears scanty [3,4].

An admixture of acute and chronic inflammatory exudate comprised of neutrophils, eosinophils, lymphocytes and macrophages may infiltrate circumscribing stroma. Mitotic figures are absent to exceptional and manifest as ≤ 3 per 10 high power fields. Quantifiable reserve cells or immature squamous epithelial cells appear variable and subjacent to endocervical cells [3,4].

Cytological features	HSIL with glandular involvement	Glandular lesion
Architecture	Syncitial clusters	Loss of honeycomb pattern
	Peripheral nuclear flattening	Loss of nuclear polarity
	Central whirling	Nuclear crowding with overlapping
Nuclear features		
Chromatin pattern	Coarse	Fine
Nuclear grooves	Frequently present	Absent
Nucleoli	Absent	Frequently present
Cytoplasmic features		
Cytoplasmic processes	Present	Absent
Vacuolation	Absent	Present

Table 1: Differentiation between HSIL with glandular involvement and glandular lesion [2,3].

Exceptionally, morphological features as atypical microglandular hyperplasia, solid, reticular, trabecular or pseudo-infiltrative pattern of tumour evolution, abundant myxoid or hyalinised intervening stroma, extracellular mucin pools, disseminated signet ring cells or hobnail cells, foci of cytological atypia with nuclear enlargement and prominent nucleoli or elevated mitotic figures may be enunciated. Microglandular hyperplasia of uterine cervix may be accompanied by immature or mature cervical squamous metaplasia [3,4] (Figure 1 & 2).

Neoplastic epithelial cells configuring microglandular hyperplasia of uterine cervix appear immune reactive to oestrogen receptors (ER), progesterone receptors (PR), PAX2, cyclin D1, p63 or CK17. Besides, mucin appears confined within intracytoplasmic vacuoles and glandular lumina.

Neoplastic epithelial cells appear immune non reactive to p16, vimentin or carcinoembryonic antigen (CEA). Ki67 proliferation index is minimal [7,8]. Microglandular hyperplasia of uterine cervix requires segregation from neoplasms such as endometrioid adenocarcinoma, microglandular pattern or microglandular hyperplasia-like endometrioid adenocarcinoma, clear cell carcinoma of cervix, endocervical adenocarcinoma, common subtype or endocervical adenocarcinoma in situ [7,8]. Microglandular hyperplasia of uterine cervix may be appropriately discerned with cogent histological examination of the cervix. Generally, therapeutic intervention with curative intent appears superfluous. Prognostic outcomes are excellent [7,8].

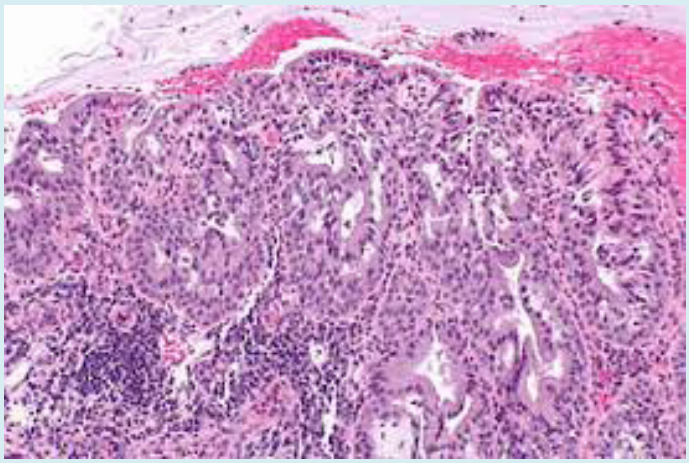

Figure 1: Microglandular hyperplasia demonstrating numerous glandular articulations layered by cuboidal to low columnar epithelium pervaded with vacuolated cytoplasm, uniform nuclei and indistinct nucleoli. Surrounding stroma is fibrotic and infiltrated by acute and chronic inflammatory cells as neutrophils and lymphocytes [5].

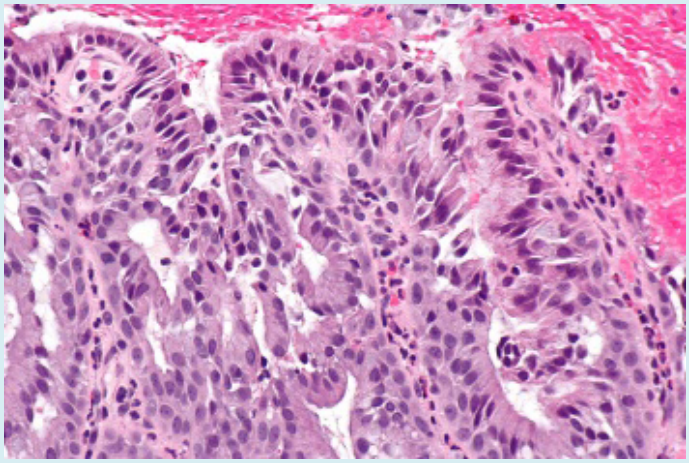

Figure 2: Microglandular hyperplasia delineating numerous glandular configurations layered by cuboidal to low columnar epithelial cells imbued with vacuolated cytoplasm, fine nuclear chromatin and indistinct cytoplasm. Circumscribing stroma is fibrotic, inflamed and infiltrated by acute or chronic inflammatory cells [6].

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