“Atypical” tubal metaplasia in endometrial samplings is not associated with an increased risk of developing hyperplasia or carcinoma: a long term clinicopathologic follow-up study of 63 cases

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Background

Tubal (ciliated) metaplasia (TM) of the endometrium and lower uterine segment, characterized by ciliated cells with round vesicular nuclei and eosinophilic cytoplasm, is a well-recognized benign entity, often seen with estrogen-related dysfunctional uterine bleeding (DUB) and anovulatory cycles. However, in some cases, cilated epithelia may exhibit worrisome cytologic features (ATM) and presents a diagnostic dilemma regarding its clinical significance and further workup of the patient. The aim of our study is to evaluate the natural history of ATM and the risk of subsequent endometrial hyperplasia and neoplasia through a long term follow-up of 63 cases.

Methods:

From our institutional archival files (January 2001-August 2008), we identified and reviewed 63 cases with the histologic diagnosis of ATM within benign endometrial biopsies or curettages including: 30 poorly active endometria; 16 atrophic endometria, 2 weakly proliferative endometria, 3 disordered proliferative endometria, 8 proliferative endometria with early breakdown, and 4 endometrial polyps. No concomitant endometrial hyperplasia or malignancy was present. The criteria used for cytologic atypia included: variably-sized and shaped enlarged nuclei; “smudgy” hyperchromatism and prominent nucleoli; only rare mitotic figures; variable amounts of eosinophilic granular cytoplasm, often abundant; and flattened to cuboidal and hobnail configurations. Follow-up information was available in all 63 cases. From the first two months of 2001, 200 cases of benign endometrium from patients with DUB and no cytologic atypia were selected as controls. The Fisher Exact Test was utilized for statistical analysis.

Results:

The median age of patients with ATM was 56 years (range: 24-84 years), whereas the median age of the control group was 54 years (range: 27-85 years). After a median follow-up period of 46 months (range: 0.5-88 months), the ATM group developed 3 cases of simple hyperplasia (SH), one complex atypical hyperplasia (CAH) and one

moderately differentiated endometrioid carcinoma, the latter diagnosed 88 months after the initial biopsy showing only ATM. The control group was followed by 7 cases of non-atypical hyperplasia (4 simple and 3 complex), 1 atypical SH and 3 CAH (median follow-up: 91 months).

	Hyperplasia without atypia	Atypical hyperplasia or carcinoma
ATM Group (n=63)	3 (4.8%)	2 (3.2%)
Control Group (n=200)	7 (3.5%)	4 (2%)
Fisher Exact Test	P=0.44	P=0.44

Conclusion:

Our long term follow-up study (median follow-up period of 46 months) suggests that the entity of ATM *per se* is not a direct precursor to atypical endometrial hyperplasia or endometrioid carcinoma and its presence in endometrial specimens does not portend a greater risk for patients to develop those lesions as compared to the control population. Recognition of ATM in endometrial samplings is important and may prevent unwarranted aggressive clinical management.