

A Rare Case Report On Tunnel Clusters in Cervix

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Abstract: A tunnel cluster, more formally tunnel cluster of the cervix and cervical tunnel cluster, is a benign group of dilated endocervical glands in the cervix. It is significant only in that it can be confused for a malignancy^[1]The clinical and histologic features of cystic endocervical tunnel clusters (CETC) are not well known. Unwary pathologists have sometimes mistaken CETC for endocervical adenocarcinoma or interpreted them as "adenomatous hyperplasia."mistaken CETC for endocervical adenocarcinoma or interpreted them as "adenomatous hyperplasia." The present study describes a case of 50 years old female who presented with heavy menstrual bleeding. A biopsy was performed and the result of histopathological examination indicated multiple dilated endocervical glands focally.

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I. Introduction

They were first described by Fluhmann in 1961.^[2]Tunnel clusters (TCs) are benign, pseudoneoplastic glandular lesions of the cervix. All of the lesions were incidental findings, and none was associated with a gross abnormality. Microscopically, all were characterized by a lobulated proliferation of predominantly small-caliber, nondilated, closely packed glands frequently arranged around a central primary or secondary endocervical cleft.^[3] There are two main types- (1) Dilated glands with a scalloped contour filled with mucin (2) Multiple small acini and tubules lined by columnar or cuboidal cells. Most were well circumscribed, but irregular borders created a pseudoinvasive appearance.^[4]

II. Case Report

A 50 year old woman came to Department of Gynaecology, Rajindra Hospital, Government Medical College, Patiala due to a complaint of heavy menstrual bleeding. On ultrasonographic examination, multiple intra-mural and sub-serosal leiomyomas were reported. The patient then underwent hysterectomy and specimen was sent to Department of Pathology, Rajindra Hospital, Government Medical College, Patiala. The specimen was fixed in 10% formalin solution and subsequently embedded in paraffin wax. Sections were made and stained with H & E.

Gross Features

A distorted specimen of uterus with unilateral tube and ovary with the tube measuring 6 cms in length and ovary measuring 4x3x1 cms. The uterine surface is bosselated with multiple sub serosal fibroids seen. On cutting, multiple whitish firm areas appreciated. The cervical lips appear to be distorted with multiple tiny cysts.

Histopathological Features

Cervix- Section shows stratified squamous epithelium which shows no remarkable pathology. Endocervical tissue shows foci of tunnel cluster which are well circumscribed cystically dilated endocervical glands lying back to back due to inspissated endocervical secretions.
Endometrium- Endometrial glands and stroma are in proliferative phase.
Myometrium- multiple leiomyomas with secondary change.
Unilateral tube and ovary- unremarkable.

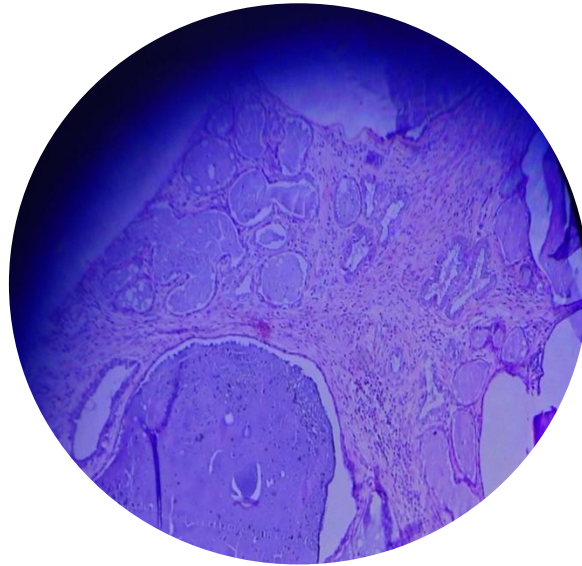


Figure A- Tunnel cluster in the endocervical tissue

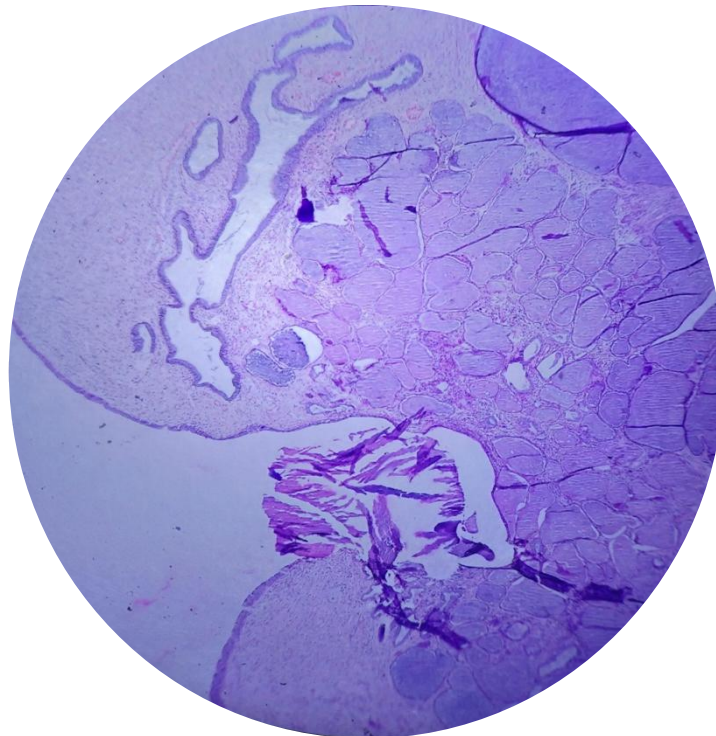


Figure B- Tunnel cluster in the endocervical tissue along with endocervical glands

III. Discussion

The tunnel clusters result from a proliferation of endocervical glands that have side channels growing out from them.^[5] They lie close to the endocervical canal and may extend deep into cervical wall. Usually well demarcated, but may have pseudoinvasive appearance.^[8] There is no stromal desmoplasia. They are of two main types: (A) Small, non cystic tubules that resemble mucosal folds cut in various planes, may have florid glandular proliferation and mild nuclear atypia but are lobular with minimal mitotic activity. (B) Cystic tubules arranged in lobular units, often multifocal upto 2mm in diameter individually, lined by bland cells with no mitosis, minimal nuclear atypia. Diagnosed mainly on H & E stained histopathological examination of the specimen. Negative stains include Intracytoplasmic CEA, KI-67 (or low).^[6] Differential diagnosis include Minimal Deviation Adenocarcinoma, which can be distinguished by the absence of lobular architecture and presence of moderate or marked nuclear atypia.

IV. Conclusion

Tunnel clusters are a benign incidental finding with no gross abnormality.^[7]

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