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A CASE REPORT OF RARE CASE OF ENDOMETRIAL STROMAL NODULE	
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<b>ABSTRACT</b> The endometrial stromal nodule is a very rare benign stromal tumour of uterus presented as a well circumscribed nodule with smooth non-invasive margins. Microscopically consists of round to oval cells similar to normal stromal cells. ESN (Endometrial stromal nodule) is differentiated from low grade endometrial sarcoma by exclusion of infiltration of margins. We diagnosed this case microscopically in a 45 yrs old female with history of menorrhagia and lower abdominal discomfort. Clinical diagnosis was fibroid uterus.	

KEYWORDS : endometrial stromal nodule, low grade endometrial stromal sarcoma.

**INTRODUCTION** : Endometrial stromal tumors are very rare mesenchymal tumors of uterus 1 and according to recent WHO classification, classified into three groups including benign Endometrial stromal tumors(ESN), low grade Endometrial sarcoma(LGESS) and undifferentiated endometrial sarcoma (UES)1-4. Benign ESN is a rare subtype called stromal nodule it is cytologically similar to low grade stromal sarcoma but it is distinguish by its well circumscribed, expansile margins and it is clinically benign. In this study we diagnosed a patient with stromal nodule who underwent a PAN hysterectomy and we concluded as ESN, a rare disease to be carefully differentiated from other stromal sarcomas which can influence the final diagnosis<sup>2-4</sup>.

**CASE REPORT** "A forty five yrs old lady presented with menorrhagia and lower abdominal discomfort, her complete blood count was normal. Thyroid harmone level was within normal limit. Abdominal ultrasound showed a well circumscribed hetrogenous mass in uterine cavity and it was considered to be a submucosal fibroid. She was admitted to L.L.R. Hospital, Surgery Department. A total abdominal hysteretctomy was done with both sided salpingoophrectomy and specimen was sent to our Pathology department in G.S.V.M. Medical College, Kanpur for histopathological examination.

On gross examination – Uterus and cervix measure 10 x 6 x 4 cm. On cutting, uterine cavity was occupied by the well circumscribed polypoidal mass measureing 5 x 4 cm, soft to firm in consistency, cut surface was homogenous, yellow in colour and buldges out from the margins. Myometrium was compressed. Microscopic examination on H & E – consists of round to oval cells with small darkly stained nuclei and fine granular chromatin with inconspicuous nucleoli with scanty to moderate amount of cytoplasm. Cytoplasmic borders of these cells were ill defined. There was fair number of evenly distributed blood vessels. Mitotic figures were infrequent. Borders of this mass was non-infiltrating and expansile and it compressed endometrium as well as myometrium. Based on gross and histopthological findings a diagnosis of endometrial stromal nodule (ESN) was made. Immunohistochemically the diagnosis of endometrial stromal nodule was confirmed by positive CD10 marker in this case.



FIGURE – 1 & 2 gross picture of hystrectomy specimen showing a well circumscribed, intramural yellowish white nodule





FIG. 3 Microscopic (H&Ex10x)

Fig 4: (H&E x 40x)

Showing sharp demarcation from myometrium and Epithelial like stromal cells grow in sheets with scanty cytoplasm.





FIG. 5 & 6 (IHC X 10X & 40X) Diffuse Immunoreactivity for CD 10 marker

**DISCUSSION :** Endometrial stromal tumours are rare and amongst the least common neoplasm of uterine corpus with annual incidence of about 2/million women1-4. They can be benign or malignant. Benign endometrial stromal nodule is a most rare subtype that accounts for about 1/4th of the endometrial stromal lesions. 5-7. Diagnosis of ESN is most instance established on microscopy. Grossly they are well circumscribed ranges from <1 cm to >20 cm in diameter average is 5-6 cm. In our case it was 5 x 4 cm in size, polypoidal mass protruding into uterine cavity. Some of these are located entirely within uterine cavity or others are submucosal. Nearly half of all located within myometrium with no connection to the endometrium. ESN have fleshy yellow or tan cut surface, tend to buldge out above the surrounding myometrium. Cystic changes, necrosis and haemorrhage are very rare. While low grade endometrium sarcoma, microscopically similar to ESN however it infiltrates the myometrium, i.e. >3 mm from the boundry of the nodule or into blood vessels8-9. This is not possible to diagnose it as an endometrial stromal tumour on endometrial biopsy or curettage. Because sarcomas are more common than ESN, it is usually necessary for the patients to have hysterectomy for diagnosis purpose to provide adequate visualization of periphery of the tumour3,10.

ESN occurs primary in peri or post menopausal women, median age is 50 years. The clinical presentation is non-specific, patient may present with vaginal bleeding to produce anaemia, abdominal pain or discomfort or may be asymptomatic. Our patient presented with lower abdominal pain and vaginal bleeding. Preoperative diagnosis was fibroid and adenaxal mass 5,6,8,. Because majority of the patients are beyond child bearing age so hysterectomy is usually required and essential to permit the evaluation of margins to distinguish the ESN from low grade stromal sarcoma. However, in contrast to stromal sarcoma, ESN patient remains asymptomatic and no recurrenc e noted after hysterectomy.9,11

Microscopically ESN have expansile, non-infiltrating margins that compress the surrounding endometrium and myometrium. Rarely finger like protrusions of tumour push into the adjacent myometrium or small satellite nodules are present in the immediate adjacent myometrium. As long as these protrusions are satellite nodues don't extent >3 mm from the main nodule and there is no vascular invasion in these tumours are still regarded as a benign stromal nodule7.

ESN consist of cells that closely resemble to normal endometrial stromal cells. These tumours cells have uniform, small darkly stained round to oval nuclei with fine granular chromatin and inconspicuous nucleoli. Cytoplasm is scanty to moderate with poorly defined cell borders. Mitotic figures are <5/10 HPF. Smooth muscle differentiation and sex cord differention are also occur in ESN. If smooth muscle differentiation is >30% than they are classified as stromal – smooth muscle tumour10-12.

Immunoreactivity for desmin is focal and weak positive. CD 10 is a good marker for endometrial stromal cell and it is positive nearly in all stromal nodules. Endometrial stromal nodule with focal sex cord like differentiation tend to relapse and metastasise11. The main differential diagnosis of ESN are low grade endometrial stromal sarcoma and highly cellular leiomyoma. Smooth muscle tumors are positive for actin, myosin, desmin and caldesmin and weak or focal positive for CD 10 while ESN are strong and diffuse positive for CD10, while focal or weak positive or negative for smooth muscle markers. ESN and LGESS are differentiated by microscopy in hysterectomy specimen by excluding invasion of >3mm 9-12.

Conclsion: We diagnosed a rare case of endometrial stromal nodule by gross and microscopic examination and confirmed by immunohistochemistry i.e. CD10 positivity. It is important to differentiate ESN from LGES because of benign and malignant behavior respectively and different modes of treatment.

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