Case Report

Lipofibroma of the uterine cervix: a rare benign tumor with brief review of literature

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Abstract

Lipomas of the uterus are rare and cervix presentation is very rare. Approximately 200 cases have been reported in the literature and the incidence ranges between 0.03% to 0.2%. The lesion has lately been discussed interestingly due to its diagnostic confusion with sarcomas on radiographic examination and also due to their disputed histogenesis. We report a case of 36year old woman presenting with non-specific lower abdominal pain and vaginal discharge who underwent hysterectomy for abnormal pap smear result and an ultrasound diagnosis of a large cyst in the posterior lip of the cervix. Histopathology revealed intramural lipofibroma of the cervix.

Key words: Adipose Tissue, Lipofibroma, Uterine Cervix

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Introduction

Lipoma of uterus is an uncommon benign mesenchymal neoplasm. They usually develop in post-menopausal women. Pure lipomas of the uterus are very rare [1]. Most reported cases are of mixed types such as lipoleiomyoma, lipofibroma, angiomyolipoma etc [2]. The diagnosis of pure lipomas can be made by radiological examination. But mixed lipomas produce mixed echogenic presentations which lead to many differential diagnoses and make histopathological study mandatory to rule out liposarcomas.

Case Report

A 36 year old woman presented to the hospital with lower abdominal pain and vaginal discharge. On routine physical and abdominal examination no abnormality was detected. Per speculum examination reveals bulky posterior lip of cervix. Abdominal ultrasonography revealed a 41×27 mm hyperechoic mass in the posterior lip of cervix and diagnosed the probability of a cyst.

Papsmear and cervix biopsy examination revealed chronic cervicitis with mild dysplasia. Abdominal hysterectomy with left salphingo ophorectomy was done.

Hysterectomy specimen showed cervical hypertrophy on external surface and on cut section a well circumscribed intramural mass with greywhite and yellow areas has been noted (Fig.1). On histopathological examination of the tumor mature benign adipocytes arranged in nests and sheets admixed with fibrocollagenous stroma were noted (Fig.2, 3,4). The final diagnosis was lipofibroma of uterine cervix. Uterus showed proliferative phase of endometrium and myometrium was normal, adnexae showed normal looking ovary and fallopian tube.

Discussion

Lipomas in uterus are rare. They are usually seen in the uterine corpus and are of mixed type. Uterine cervix presentation is very rare and only a few cases have been reported in the literature. The incidence of lipomas in uterus is 0.03% to 0.2% [3]. Till date less than 200 lipomas have been diagnosed in the uterus [4] . Most of them have been incidental findings and many of them were radiologically diagnosed as leiomyomas of mixed type.

Though modern imaging techniques like Magnetic Resonance Imaging and Computed Tomography scan have been able to distinguish the fat content of the lipomas by using fat saturation methods, yet due to the frequent presentation of mixed lipomas , it raised the suspicion of sarcomas and teratomas which made

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histopathological diagnosis conclusive to rule out malignancy [5].

Fig 1: Gross picture of lipofibroma of the uterine cervix

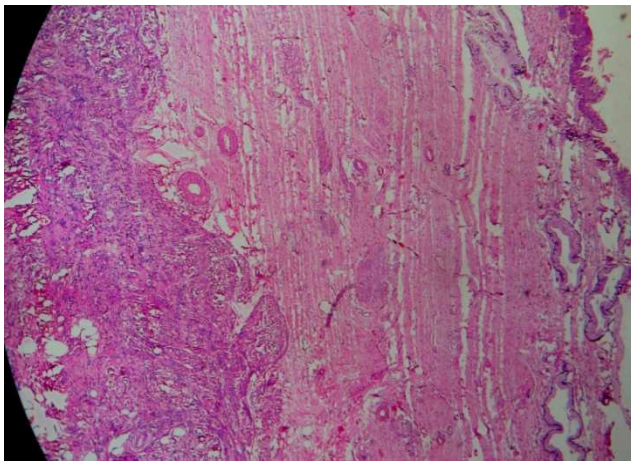

Fig 2: H&E (4X). Microscopic picture of lipofibroma showing mature adipocytes admixed with fibrous tissue

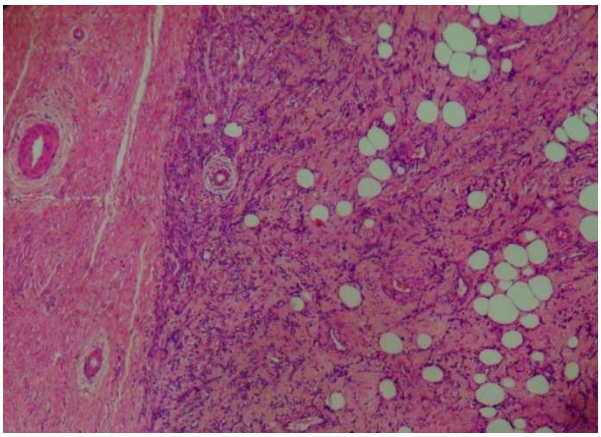

Fig 3: H&E (10X). Mature adipocytes admixed with fibrous tissue and periphery showing smooth muscle cells

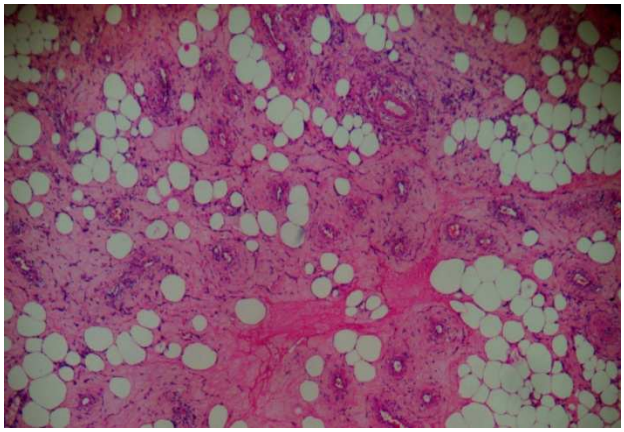

Fig 4: H&E (40X). Focal areas showing mature adipocytes admixed with dense fibrous stroma and few blood vessels

Uterine lipomas were first reported by Lobstein in 1816 [6]. They were later subdivided into three types as pure lipomas, mixed lipomas and liposarcomas. They are seen in post-menopausal women of 50-70 years of age and clinically present with complaints similar to leiomyoma depending on the location. They present as intramural mass in uterine fundus and submucosal and subserosal presentation are very rare. The average size of the lesion varies between 5 to 10 cms and is accompanied usually with leiomyomas in uterus. Microscopically pure lipomas are composed of mature adipocytes with smooth muscle cells confined to the periphery of the tumor. Mixed lipomas show adult type fat intermixed with smooth muscle cells arranged as fascicles or scattered myocytes or with fibrous tissue seen as delicate and dense hyalinised stroma. Occasionally, blood vessels may be prominent. Few mast cells and eosinophils may also be seen [7].

The histogenesis of uterine lipomas has been studied and debated since its discovery. Many proposed theories and advanced techniques have been used to study their origin. The proposed mechanisms are lipoblastic differentiation of misplaced embryonal nests or primitive mesenchymal tissue, pluripotent cell migration, perivascular extension of peritoneal or retroperitoneal fat, lipid metaplasia of stromal cells, metabolic disorders in estrogen deficiency states in post-menopausal women etc [8,4].

In a study done by Mignogna et al, the lipomatous tissue was reactive to S-100, vimentin, actin and desmin, but the studies of Elif ulker et al and Tereda et al show S-100 positivity and smooth muscle actin and desmin negativity[9,10]. Tereda et al, in his study found positivity for even estrogen and progesterone receptors suggesting that the lipomatous change is not degenerative type but the adipose tissue were actively proliferating and related to female genital organ specific fat tissue [11] .

Derrick et al supports the viewpoint that uterine lipomas associated with leiomyomas could be hamartomas or

choristomas , like renal angiomyolipomas having an association with choristomas in other organs .

Many differential diagnosis exist for lipoma of the pelvis such as benign cystic teratoma, malignant degeneration of cystic teratoma, non-teratomatous lipomatous ovarian tumor, liposarcoma, lipoblastic lymphadenopathy etc [8].

Conclusion

Uterine lipomas are a benign, mixed, mesenchymal neoplasm. Radiologicallydiagnosed lesion need histopathological examination to rule out malignancy especially in the post menopausal women. The histogenesis of these tumors need a complete evaluation like that of leiomyomas. Thus by increasing awareness among pathologists many unusual morphological variants of these uterine lipomas may be discovered which may aid in understanding their histogenesis.

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