

Pure uterine lipoma – a paradoxical rarity

Čistý děložní lipom – paradoxní vzácnost

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Summary: Pure uterine lipomas are extremely rare benign uterine tumors. This paper presents the case of a 68-year-old patient with symptomatic leiomyoma-like fundus formation on ultrasound. A hysterectomy was performed with anterior vaginal plastic surgery as a treatment option for concomitant cystocele grade II. Histological diagnosis of pure uterine lipoma with S-100 positive immunohistochemical staining was confirmed. This case shows us that uterine lipoma clinically and diagnostically mimics myoma very well. We believe that surgery as a therapeutical approach is justified in symptomatic patients.

Key words: pure uterine lipoma – gynecological surgery – postmenopause

Souhrn: Čisté děložní lipomy jsou extrémně vzácné benigní děložní nádory. Tato práce prezentuje případ 68leté pacientky se symptomatickou myomatózní formací ve fundu děložním potvrzenou na ultrazvuku. Hysterektomie byla provedena spolu s přední poševní plastikou jako možnost léčby pro souběžnou cystokélu II. stupně. Byla potvrzena histologická diagnóza čistého děložního lipomu s S-100 pozitivním imunohistochemickým barvením. Tento případ nám ukazuje, že lipom dělohy klinicky i diagnosticky velmi dobře imituje myom. Domníváme se, že chirurgický zákrok jako terapeutický přístup je oprávněný u symptomatických pacientek.

Klíčová slova: čistý děložní lipom – gynekologická chirurgie – postmenopauza

Introduction

Although lipomas are considered the most common soft tissue tumors, the presence of adipose tissue in the uterus is an exception [1]. Pure uterine lipomas are extremely rare, with only a few cases described in the literature. These tumors often mimic uterine leiomyomas in clinical presentation, ranging from asymptomatic patients to those presented with vaginal bleeding, urinary urgency, abdominal pain, and abdominal distension [1–3]. In most cases, postmenopausal women are affected and are distributed intramurally [1–3]. In this paper, we present the case of a postmenopausal patient with a postoperative confirmed diagnosis of pure uterine lipoma.

Own observation

A 68-year-old patient in postmenopause for 18 years was incidentally diag-

nosed with a fundal tumor suspected of a leiomyoma on ultrasound examination at her annual check-up a few years ago. The tumor was regularly monitored and stationary upon examination. However, the patient developed pelvic pressure symptoms and stage II cystocele in the last 18 months, and surgical treatment was indicated. The obstetric-gynecological history was unremarkable, with two normal vaginal births and short-term use of hormone replacement therapy during perimenopause. Furthermore, the patient had been treated for chronic obstructive pulmonary disease and hypertension for a long time. Preoperatively, ultrasound verified severe hyperechoic, peripherally calcified intramural formation measuring 5 × 4 × 4 cm without pathological Doppler flow findings.

Laparoscopically-assisted vaginal hysterectomy with bilateral salpingo-oophorectomy and anterior vaginal plastic surgery were indicated. The surgery went smoothly, and the patient was discharged on day six postoperatively in good general condition. A uterus measuring 90 × 40 × 30 mm with adnexa was submitted for pathohistological analysis. The ovaries and fallopian tubes were morphologically neat and age-appropriate. The histological finding of the exocervix was orderly, while the epithelium of the endocervix showed signs of focal squamous metaplasia with a thin endometrium and somewhat dilated tubular glands. The cross-section showed a yellowish intramural, well-bound node measuring 40 × 40 mm, which macroscopically corresponded to lipoma (Fig. 1).



Fig. 1. Uterine lipoma in cross-section.
Obr. 1. Lipom dělohy v příčném řezu.

A tumor made of mature adipocytes with S-100-positive immunohistochemistry was shown microscopically (Fig. 2).

Discussion

Uterine adipose tissue tumors consist in part or whole of adipocytes [4]. The literature indicates an incidence of 0.03% to 0.2% [3]. Mixed forms include lipoleiomyoma, lipofibroma, and fibrolipomyoma, depending on the proportion and redistribution of adipose, muscle, and connective tissue. Pure uterine lipomas are extremely rare tumors and are much rarer than other variants of mixed tumors [1,5]. Although there are no clearly defined criteria for differences between individual tumors within a group, pure lipomas are de facto encapsulated adipose tissue. It is distributed peripherally if smooth muscle tissue is present [2,6], while a thin fibrovascular barrier within the tumor is possible and acceptable [6,7]. Although several proposed cellular mechanisms exist for developing this group of tumors, histogenesis is still considered an enigma, given the unexpected occurrence of adipocytes in the uterine wall. Potential mechanisms include misplaced embryonic cells, metaplasia of muscle cells or fibroblasts in the adipocytes, and perivascular migration of adipocytes in the myometrium [8]. Immunohistochemical analysis of the sample can approximate the type of tumor and exclude the malignant form. It also serves

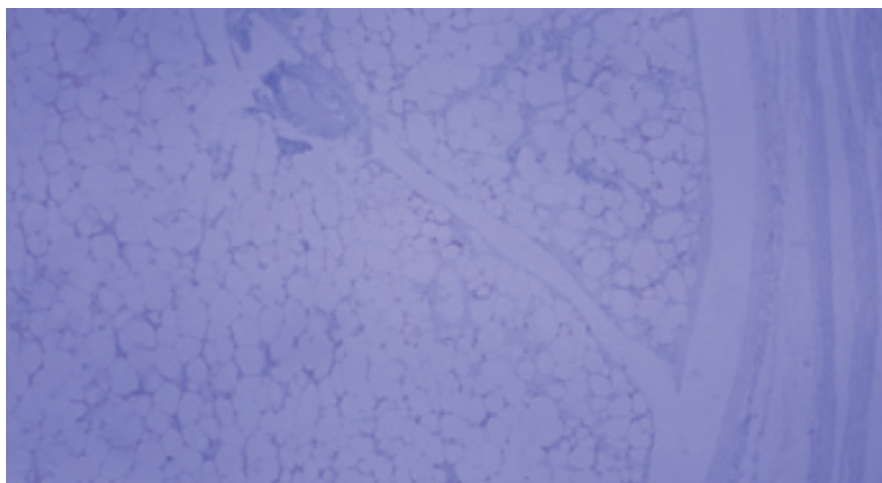


Fig. 2. Mature adipocytes immunohistochemically labeled with S-100 (40×).
Obr. 2. Zralé adipocyty imunohistochemicky značené S-100 (40×).

valuable information, potentially indicating the tumor's embryological origin. Desmin and smooth muscle actin (SMA) are markers of smooth muscle tissue, HMB-45 and Melan-A are positive in angiomyolipomas, S-100 is a marker of adipocytes, and MDM2 is positive in liposarcomas [6]. On ultrasound, lipomas are well-demarcated hyperechoic avascular tumors. If peripheral smooth muscle tissue is present, it is seen as a hypoechoic margin [2]. Wijesuriya et al reported a uterine lipoma measuring 2.5 cm, diagnostically imaged by ultrasound, computed tomography (CT), and magnetic resonance imaging (MRI). The obtained results favored MRI as an imaging method that can distinguish lipoma from leiomyoma reliably. This paper believes that in this way, lipoma could be diagnosed preoperatively, and according to the authors, unnecessary surgery would be avoided [2]. However, the literature agrees more about the need for surgical treatment and subsequent pathohistological diagnosis to exclude other pathologies, especially malignant ones [6,7]. Chan et al presented a pure intramural corporeal posterior wall lipoma case in a postmenopausal patient who initially presented with an abdominal mass. Hysterectomy and bilateral salpingo-oophorectomy were

performed, and a 150 × 140 × 125 mm lipoma was removed. On immunohistochemical analysis, tumor tissue was positive for desmin and SMA perivascularly, while MDM2, HMB 45, and Melan-A were negative with a very low Ki-67 proliferation index [6]. Patwardhan et al [3] documented a similar case of pure uterine lipoma measuring 2.5 × 2 × 1.4 cm incidentally found in a postmenopausal patient who underwent hysterectomy due to a cystocele and rectocele. Immunohistochemical S-100 staining was positive, while SMA and desmin were negative in contrast to the case described by Chan et al [6]. Unlike the previously described intramural lipomas, Aggarwal et al described two polypoid lipomas measuring 4 × 1 cm and 2.7 × 2 cm removed hysteroscopically. In the latter 70-year-old patient, hysteroscopy was indicated for endometrial thickening of 20 mm [1].

Conclusion

This case shows us that uterine lipoma clinically and diagnostically mimics myoma very well. Therefore, imaging diagnosis of a tumor is not reliable. However, most tumors, especially if symptomatic, are treated surgically. Since it is most common in postmenopausal women, we believe that hysterectomy

as a therapeutical approach is justified in symptomatic cases.

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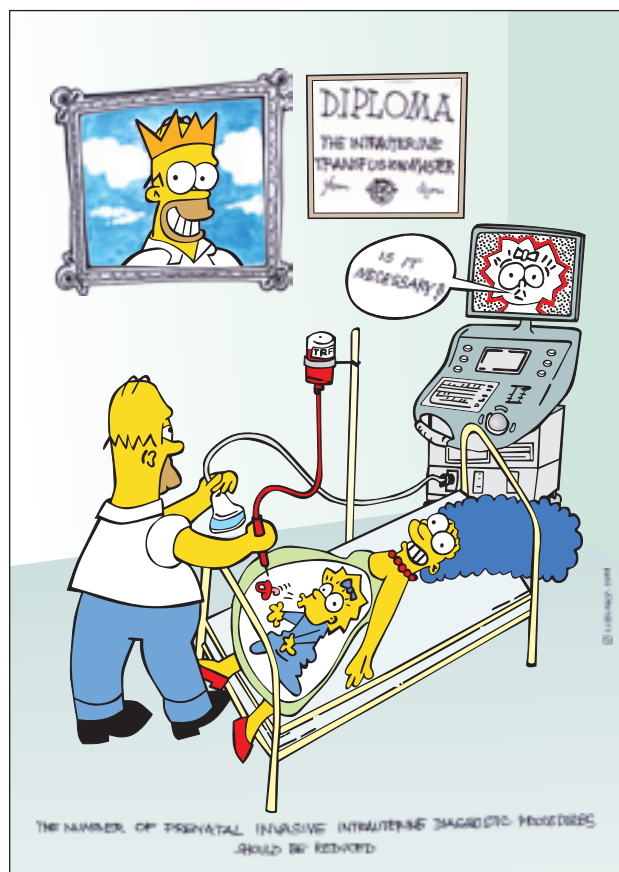
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