Ectopic decidual reaction mimicking inguinal lymphoma on ultrasound

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Abstract

Ectopic decidual reaction has been described in various intraperitoneal locations. We present a case of unusual ectopic decidual reaction in the groin mimicking inguinal lymphoma on ultrasound in a pregnant woman. This case contributes evidence illustrating the variability of the clinical presentation of ectopic decidual reaction.

Keywords: Ectopic decidual reaction, inguinal lymph node, pregnancy, differential diagnosis, ultrasound

Ultrasound 2014; **22**: 179–181. DOI: 10.1177/1742271X14540143

Case report

A 28-year-old woman, gravida 1, para 0, in her 38th week of pregnancy, presented with a lump in the right groin. The patient revealed no other symptoms. Ultrasound (US) of the right groin showed a 2.5-cm hypoechoic, well-demarcated, homogeneous mass located subcutaneously. The mass was vascular on color Doppler examination; thus, a non-vascular mass (i.e. a cyst or a haematoma) could be excluded (Figure 1(a) and (b)). The finding was interpreted as a pathologic lymph node (reactive or malignant). Two US-guided 1.2 mm (18 gauge) Tru-Cut biopsies were taken from the mass under local anaesthetic. Histologic examination revealed decidualized tissue consisting of diffusely arranged polyhedral cells with abundant eosinophilic cytoplasm and round inconspicuous nuclei, some with nucleoli. The findings were characteristic for ectopic decidua. Some tissue was covered with mesothelium visualized by cytokeratin stain, but no lymphatic tissue was present (Figure 2(a) and (b)). Five weeks later, the woman gave birth to a healthy baby boy. A three-month follow-up US scan showed that the mass had shrunk to 1.3 cm. It was not palpable anymore. The patient was managed conservatively, and no further follow-up was required.

Discussion

Ectopic decidua is a phenomenon first described in 1887 by A. Walker.¹ During pregnancy, endometrial stromal cells undergo dramatic alterations and stimulated by estrogens and progesterone, the implantation of the blastocyst influence stromal cell transformation into decidual cells.² Decidua outside the uterine endometrium are classified as ectopic.³ Such ectopic decidua is found in nearly all ovaries

at term⁴ but is also documented in the cervix, lamina propria of the fallopian tubes and more rarely in the peritoneal cavity and appendix. Moreover, there has been ectopic decidua findings on the serosal surfaces of the liver, spleen, renal pelvis, plus para-aortal and pelvic lymph nodes.^{3,5,6} Non-pregnant women presenting ectopic decidua have been documented, but they all had a corpus luteum present in the ovary as a source of progesterone.^{3,5} Ectopic decidua is often an asymptomatic and incidental microscopic finding, though there have been reports of life-threatening events including haemoperitoneum and peritoneal decidual reaction causing obstruction in labour. Reports of malignant change in the ectopic decidual tissue are extremely rare.^{5,7}

The decidualized stromal cells have a distinct appearance histologically. They are large and polygonal containing homogeneous, eosinophilic cytoplasm and round vesicular nuclei.^{7,8} Macroscopically, ectopic decidual reaction can present as nodules easily mistakable for malignancy or tubercles. Therefore, frozen sections are very important in differentiating nodules found during abdominal exploration of a pregnant woman, i.e. to avoid unnecessary procedures.^{3,5}

The aetiology of ectopic decidual reaction is still not fully elucidated. Possible pathogeneses include changes of pre-existing endometriotic sites, failure of migration or entrapment of subcoelomic-derived tissue in the prenatal development, as this tissue can induce decidual cell reaction when stimulated. Finally, lymphatic spread of decidua present a possible mechanism due to the findings of decidual tissue in potential lymphatic space.^{3,7}

To our knowledge, no previous reports have documented ectopic decidual reaction outside the

Figure 1 (a) Ultrasound examination of the right groin displaying a 2.5-cm mass located subcutaneously; (b) color Doppler examination of the mass showing even vascularization

Figure 2 (a) Decidualized stromal tissue (HE $\times 10$); (b) positive staining of the mesothelium (Cytokeratin $\times 20$)

abdominopelvic cavity. The patient presented with a lump containing ectopic decidual reaction in the groin. She had no history of endometriosis. Based upon clinical findings and US, it was interpreted to be a pathologic lymph node, either reactive or malignant, but whether the ectopic decidua was located in a lymph node is unknown, since the biopsy did not contain lymphatic tissue.

Due to the mesothelium covering and the inguinal location, the ectopic decidualized tissue could originate from an inguinal peritoneal herniation, despite the lack of a hernia clinically and ultrasonographically. Furthermore, prenatal failure of migration or entrapment of subcoelomic-derived tissue and lymphatic spread of decidua both present alternative mechanisms for the inguinal ectopic decidual reaction.

Ectopic decidualized lesions should therefore be suspected when assessing pregnant women, particularly when they present a history of endometriosis as this

phenomenon has presented in preexisting endometriotic sites and can present as a diagnostic dilemma due to the possibility of malignancy as a main differential diagnosis.

DECLARATIONS

Competing interests: The authors have no conflicts of interest to declare.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Ethical approval: Written consent was obtained from the patient for publication of the details and images from this case.

Guarantor: C Lorentzen.

Contributorship: CL and TP researched the literature. CL and TL performed the ultrasound examinations. CL wrote

the final version of the manuscript. All authors reviewed and approved the manuscript.

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