

ECTOPIC DECIDUA FOUND AS A SUBCUTANEOUS TUMOR MASS IN THE LOWER ANTERIOR ABDOMINAL WALL OF A PREGNANT WOMAN

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Abstract: A case of ectopic decidua found as a subcutaneous mass in the lower anterior abdominal wall without symptoms in a 24-year-old Japanese pregnant female (gravida 1, para 1 by caesarean section) is described. The tumor, 2 cm in diameter, was removed at a second delivery by caesarean section. Microscopically, multiple nodules in adipose tissue were all composed of large polygonal cells. These cells were positively stained with periodic-acid-Schiff (PAS), vimentin and keratin but not S-100 protein and carcinoembryonic antigen (CEA).

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Key words : ectopic decidua, subcutaneous tumor, abdominal wall

INTRODUCTION

It is a well-known physiological phenomenon that under the progesterational influence of the corpus luteum during pregnancy, the endometrial stroma undergoes a marked decidual change. Ectopic, extrauterine development of a decidual reaction can occur in association with pregnancy¹⁾. This being first described by Walker in 1887²⁾ followed by Schmorl in 1897³⁾. Various sites have been reported, and systematic studies of accumulated cases have shown the greater omentum¹⁾ and appendix⁴⁾ to be frequently involved.

A survey of references to Japanese cases of ectopic decidua however, revealed only 2 cases, one in the appendix⁵⁾ and the other in the inguinal herniation sac⁶⁾ for over the last 10 years. Further, no reports are available of ectopic decidua found as a subcutaneous tumorlike mass. Here, we briefly reports a rare case of such an ectopic decidua which may give information on the characteristic histological appearances and differential diagnosis of benign and malignant lesions.

CLINICAL SUMMARY

A 24-years-old, gravida 1, para 1 by caesarean section, Japanese woman was admitted to Yamatotakada City Hospital in June, 1997, for delivery. She had no past or particuler family history. In a previous pregnancy, she had twin baby by caesarean section in july, 1994. She had been notified of a subcutaneous mass in the lower anterior abdominal wall at 6 months of pregnancy and consulted a gynecologist and this was diagnosed as a benign subcutaneous lesion was extirpated. At the operation the tumor (2 cm in diameter) was located under the scar of the previous caesarean section without adhesion. Both ovaries were confirmed to have no

particular changes.

MATERIALS AND METHODS

The resected tissue fragments were fixed in 10 % buffered formalin, routinely processed, and embedded in paraffin. Sections (4 μ m thick) were prepared and stained with hematoxylin and eosin (HE) and PAS stain for light microscopic examination.

Immunohistochemical studies were performed on formalin-fixed and paraffin-embedded tissue employing the antibodies for vimentin (mouse monoclonal, DAKO, Tokyo), keratin (rabbit polyclonal, DAKO, Tokyo), S-100 protein (rabbit polyclonal, DAKO, Tokyo), and CEA (rabbit polyclonal, KYOWA, Tokyo). Peroxidase labeled anti-rabbit or mouse IgG antibodies and Diaminobenzidine were used for immunohistochemical staining with light hematoxyline counterstaining of cells.

PATHOLOGICAL FINDINGS

Macroscopically, the lesion was whitish-yellow in colour with a smooth surface and demonstrated a cobblestone appearance on transverse sectioning. Microscopically, multiple nodules in adipose tissue were all composed of large polygonal cells with abundant eosinophilic cytoplasm, resembling endometrial decidual cells (Fig. 1). In addition, each nodule had cystic or slit-like spaces lined by flattened cells, some of which were ciliated. The histological appearance suggested an ectopic decidual reaction (Fig. 2). Immunohistochemically, the large polygonal cells were stained positively for vimentin (Fig. 3) and the flat cells lining the cyst wall were positive for keratin (Fig.4), and S-100 protein and CEA were negative.

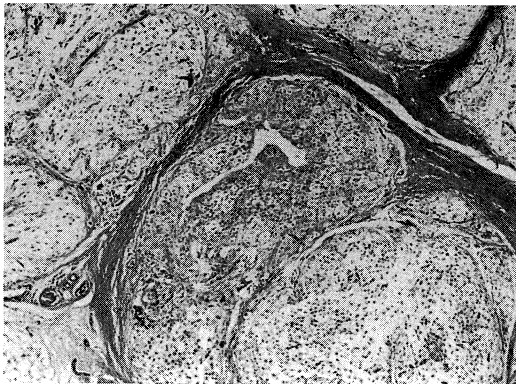


Fig. 1. H & E



Fig. 2. H & E

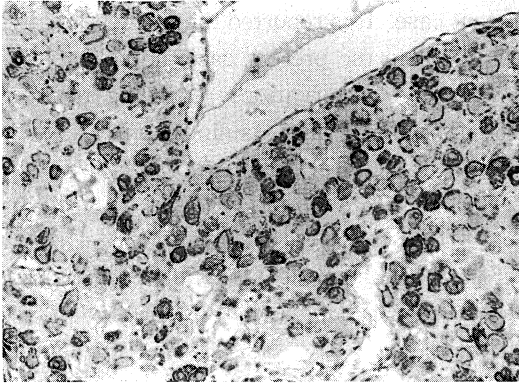


Fig. 3. Staining for vimentin

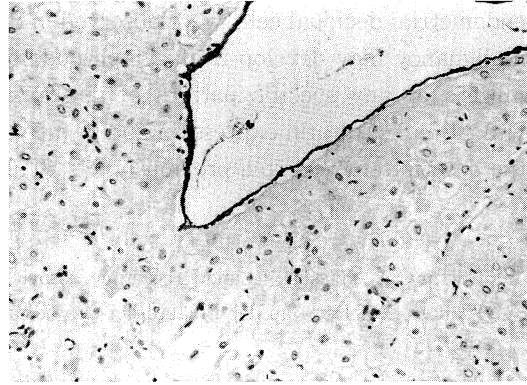


Fig. 4. Staining for keratin

DISCUSSION

Ectopic decidua has been reported in the ovary⁷⁻⁹), cervix⁸), serosal surface of the uterus¹⁰), peritoneum¹¹⁻¹²), appendix⁴⁻⁵), omentum¹³), liver¹³), spleen¹³), fallopian tubes¹⁴), renal pelvis¹⁵) and pelvic lymph nodes¹⁶⁻¹⁸) with or without symptoms such as abdominal pain, intra-abdominal bleeding and abortion. In most cases, a decidual reaction is an exaggeration of the normal response of the endometrium to progesterone¹⁹). Its aetiology and significance are unknown. The possibility of hormonally induced metaplastic changes in the subcoelomic pluripotent mesenchyme and in areas of inflammation and previous endometric deposits of the peritoneum has been suggested but not substantiated²⁰). In the absence of pregnancy, ectopic decidual changes have been attributed to stimulation of receptor-bearing cells by progesterone or progesterone-like substances from the adrenal cortex, organizing corpus luteum, or as a response to local trauma in a sensitized stroma²¹⁻²³). In the present case, ectopic decidua was recognized as a subcutaneous lesion during pregnancy. Further, this case had a history of twin baby delivery by caesarean section and the location near the scar suggest that endometric deposition occurred in the subcutaneous tissue during the caesarean section and this reacted to the progestational influence of the second pregnancy.

Microscopically, large polygonal cells with abundant eosinophilic cytoplasm, resembling

Table 1. Results of the immunohistochemical investigation

	reported cases ^{1,4,25)}	our case
Vimentin	+	+
Keratin	+	+
S-100 protein	-	-
CEA	-	-
Actin	+	not done
Desmin	+	not done
Progesterone receptor	+	not done

staining : + no staining : -

endometrial decidual cells were observed in the present case. It is reported that, exceptionally, malignancy may develop from lymph node decidua²⁴⁾ but in the present case, no cell atypia, mitosis or any specific pattern of cell arrangement were observations regarding positive vimentin and keratin expression and negative S-100 protein and CEA staining are in line with the descriptions reported previously^{1,4,25)} (Table 1).

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