Ectopic Decidual Reaction: A Case Report

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Introduction

The occurrence of ectopic decidua has been observed most often in the ovaries, uterus, and cervix while peritoneal localisation is rare. Ectopic decidua has been detected in biopsies taken during caesarean sections, elective tubal ligations, appendicectomy and in tubal pregnancies. Histologic studies of deciduosis have been carried out on fragments from the epiploon, appendiceal serosa, tubal serosa, retroperitoneal lymph nodes and various abdominal organs [1]. We report a case of peritoneal deciduosis in a 26 year old asymptomatic woman, discovered during caesarean section mimicking metastatic nodules (incidental finding). The histopathological diagnosis was based on common technique of paraffin embedding and haematoxylin-eosin staining.

Case Report

A 25 year old lady, full term primigravida with severe pregnancy induced hypertension, underwent an emergency lower segment caesarean section for failed induction of labour. After the closure of uterine incision, other intraabdominal organs were inspected for any abnormality. It was seen that the peritoneal surfaces of the posterior wall of the uterus,

broad ligament, pelvic peritoneum, ovaries, sigmoid colon and omentum were studded with numerous whitish papules, varying from 1 to 5 mm. The adjacent peritoneal surfaces were hyperaemic. The ovaries and uterus were normal. A piece of omental tissue was taken for histopathological examination. Her postoperative period was uneventful .

Pathological Findings

Two small pieces measuring 0.5 cm in diameter, white coloured and soft in consistency were received. On microscopic examination, the section showed adipose tissue composed of mature adipocytes. Nests of cells in small islands were seen within the adipocytes. These cells were large with abundant granular cytoplasm, nucleus with open chromatin and inconspicuous nucleoli. These cells were identified as decidual cells. No evidence of inflammation was seen.

Discussion

Gross deciduosis peritonei is a rare lesion. It can involve cul-de-sac, ovaries, pelvic wall, omentum, and the large /small bowel. The intraoperative appearance suggests peritoneal carcinomatosis [2]. Decidual reaction is an exaggeration of the normal response of the endometrium to progesterone. In the absence of pregnancy, ectopic decidual changes have been

Fig. 1 : The decidual cells in small nests with adipocytes in the background(H&E stain-100X).

Fig. 2 : The decidual cells in small nests (H&E stain-400X).

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attributed to the stimulation of appropriate cells by progesterone and progesterone-like substances from the corpus luteum or the adrenal cortex. Ectopic decidua (deciduosis) of the omentum has been classified into: focal deciduosis (97%) and diffuse deciduosis (3%). The involution of the decidua takes place in four to six weeks post partum. The decidual cells on microscopy appear large with abundant cytoplasm and a bland nucleus. With increasing duration of pregnancy, there is vacuolar degeneration and fragmentation of the decidua cells as a manifestation of regressive changes. Complications of decidual transformation like bleeding, suspicion of cancer and adhesions are rare. Cases of mechanical ileus, followed by acute prerenal failure of the kidney caused by decidual transformation of the peritoneum have been reported [3].

Malignant mesothelioma with deciduoid features (MMWDF) is a recently characterised morphologic variant of epithelioid malignant mesothelioma, which is frequently misdiagnosed as peritoneal deciduosis or florid mesothelial hyperplasia. Most of these cases have been reported in young women. Immunohistochemistry shows diffuse immunoreactivity for cytokeratin MNF116, HBME-1, and calretinin in the neoplastic cells, as well as focal positivity for epithelial membrane antigen in a brush border-like pattern. The cause of this lesion is unknown and considering the young age of the patients and the failure to demonstrate hormone receptors in the neoplastic cells, it is unlikely that asbestos exposure or hormonal imbalance plays any role in the development of the disease [4].

Deciduosis is an incidental finding that has not been associated with clinical symptoms. Less frequently, deciduosis is based on a preexisting extragenital endometriosis, visible in a localisation other than strictly submesothelial region, in residuals of cyclic proliferation and bleeding, and in endometrial glandular formations embedded in the decidual cells [5]. A case report of cutaneous deciduosis, potentially mistaken for malignancy, has been reported. The deciduosis cells showed immunohistochemical positivity for vimentin and Ki-1 (CD30). Intracellular sulfated mucin and glycogen were demonstrated [6].

Cases of spindle cell deciduosis have been reported. Multinodular growth of myofibroblastic cells without atypia have been observed, which revealed a positive immunohistochemical reaction to muscle-specific actin and vimentin, and dispersed clusters of mesothelial cells

showing a positive reaction to cytokeratin and vimentin, with moderate atypia and scarce mitotic figures. This fibrosing deciduosis of the omentum with development of a collagenous connective tissue at its surface is described as metaplasia of the hormone-dependent "subcelomic" mesenchyma. As pregnancy associated mesenchymal metaplasias, ectopic decidua, fibrosing deciduosis and leiomyomatosis peritonealis disseminata depend on hormone, they may regress post partum. [7].

Rarely the deciduosis of cervix can develop into large fungating masses, which is difficult to distinguish from carcinoma cervix [8].

Ectopic decidual cells localised in the submesothelial stroma represent a physiological reaction of the pluripotent stromal cells to progestational hormonal stimulation, which is often, a totally reversible phenomenon. All such peritoneal nodules detected incidentally per operatively should be biopsied to rule out any malignancy.

Conflicts of Interest

None identified

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