

XANTHOGRANULOMATOUS ENDOMETRITIS

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PRECIS

Xanthogranulomatous inflammatory changes of the endometrium are rare and appear to be related to obstructive changes in the endocervical canal. An elderly patient with an advanced squamous carcinoma of the cervix uteri presented with this condition. Other similar cases are discussed in relation to aetiology and pathogenesis.

INTRODUCTION

A rare variety of inflammation of the endometrium occurs in which the endometrial stroma undergoes replacement by inflammatory and foamy cells, and its surface shows a pseudopolyp formation. Another case is described in which this condition was associated with a carcinoma of the cervix uteri.

CASE HISTORY

A 78 year old widow presented with a three month history of slight painless postmenopausal bleeding. She had never been pyrexial. Past medical history included two previous fractures of her wrist, a fracture of her left humerus, and chronic constipation (relieved by picosulphate). The menopause had occurred at the age of 52 and she had been a para 2 + 0.

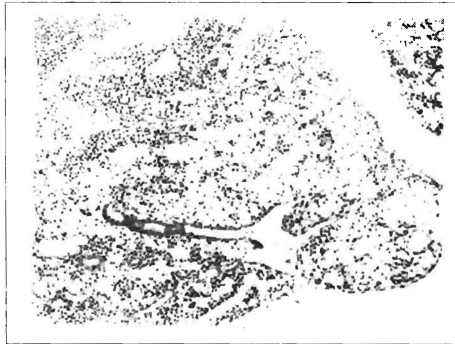
Investigations: Haemoglobin level 11.2 g/dl. (MCV - 85.4 fl; MCH - 30.4 pg; MCHC - 35/dl.) with a normochromic blood film. ESR 66mm. in the first hour. WBC - 12.1 x 10⁶ cells/l. Serum electrolytes: sodium - 137 mmo l/l. potassium - 3.7 mmol/l, chloride - 104 mmol/l, plasma CO₂ - 28 mmol/l and plasma urea - 67 mmol/l. A chest x-ray showed no abnormality.

A cervical smear showed malignant squamous cells (CIN 3). At subsequent colposcopy there was no evidence of invasive carcinoma but the squamo-columnar junction could not be visualised. When a bimanual examination was attempted she became very tense and examination under general anaesthesia had to be carried out.

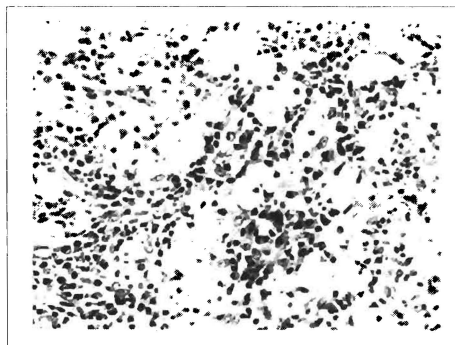
The cervical canal was found to be obliterated with the external os lying flush with the vaginal vault but it showed no ulceration of the os. The uterus was enlarged to a ten weeks sized pregnancy and deviated to the right of the pelvis. The uterine and

cervical canal was elongated to 12.5 cms, and on dilatation, 150 mls of thick, brownish pus was evacuated. Both the endocervical canal and the endometrial cavity were curetted fractionally. The fragments from both sites showed invasive squamous carcinoma with CIS (carcinoma in situ) in the endocervical canal. The few portions of endometrium which could be identified were bathed in pus. Anaerobic cocci and coliform micro-organisms, sensitive to metronidazole, were grown from the pus. A drain was left in situ but little residual pus drained out; the patient remained apyrexial.

A total abdominal hysterectomy and bilateral salpingo-oophorectomy were carried out two weeks later. The uterus weighed 50 grams and showed a pyometra. A tumour was found to be infiltrating the whole thickness of the endocervix as far as the parametrium and also extending into the lower uterine segment, over a 7 cm diameter area. It had produced a marked stenosis of the endocervical canal. Histology confirmed a squamous carcinoma of moderate differentiation and with focal keratinisation.



I x 80 Haematoxylin and Eosin Pseudopolyp formation of the endometrium due to the accumulation of acute and chronic inflammatory cells within its stroma.



II x 360 Haematoxylin and Eosin "Foamy" histiocytic cells within the endometrial stroma associated with other chronic inflammatory cells.

There was invasion of lymphatics, perineural spaces and small blood vessels.

The uterine lining was very ragged and haemorrhagic, and small, well circumscribed abscesses were identified within the endometrium and the immediately adjacent parts of the myometrium. Histology (Figures 1 and 2) showed that the main feature of the inflammatory infiltrate was an accumulation of large foamy macrophages admixed with large numbers of histiocytes, lymphocytes and plasma cells. A few micro-abscesses consisting of polymorphonuclear neutrophils were also seen. There were also ill-formed giant cells with multiple central nuclei and some lipid within the cytoplasm, resembling Touton giant cells. No Langhans' type giant cells, epithelioid cell congeries or granulomas were present. No bacteria and no acid-alcohol fast bacilli were identified on specially stained preparations. There was no extracellular calcification or intracytoplasmic Michaelis-Gutman bodies. The appearances were those of a xanthogranulomatous endometritis.

Post-operative recovery was uneventful apart from a mild wound infection and a urinary tract infection, both due to *Esch. coli*; both responded to antibiotics.

Because of the marked sepsis which was present, no further treatment was given and the patient survived surgery by nine months when she died at home with no autopsy being requested.

DISCUSSION

Xanthogranulomatous changes of the endometrium are rare and only four cases have been described previously (Table 1). The nomenclature used to describe this pathological condition in the literature has varied: the adjectives "pseudogranulomatous" (4) have all been used. The pathological features that were described in all the cases documented, including the one being presented, are an increased thickness of the endometrium throughout the uterine

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cavity and an extensive replacement of its stroma by an admixture of plasma cells, histiocytes (most of which show the accumulation of lipid within their cytoplasm), giant cells (of both the Touton and foreign body type), lymphocytes and a few residual aggregates of polymorphonuclear neutrophils.

TABLE 1

XANTHOGNULOMATOUS ENDOMETRITIS			
Case	Age	Association	Lit. Reference
1	80	'cause uncertain'	Kohn & Reif, 1967
2	65	post-Manchester repair	Barua et al, 1978
3	77	'atrophic lower vagina and absorbed cervix'	Buckley & Fox, 1980
4	59	post-radiotherapy recurrence of squamous Ca. of cervix	(ibid)
5	78	stenosing Ca. of uterine cervix	current case

A similar histological response is also encountered in the renal parenchyma in association with upper pelvicalyceal obstructive uropathy. In the latter situation the lesion may be mistakenly diagnosed as a primary clear cell carcinoma of the kidney (5,6). A similar confusion with the "clear cell" variant of the mesonephroid carcinoma of the endometrium or of the endocervix may also occur (7, 8). The regular monotonous mitotic activity enables an easy differentiation between the two conditions. A similar lesion has been described in chronic pulmonary infections in diabetics (9).

In the urinary system and elsewhere another degenerative condition which may show similar histological features is the condition of malakoplakia; this lesion may be found in such other sites as the gall bladder and gastro-intestinal tract. It is thought to be due to an unusual response of macrophages to recurrent bacterial infections. The additional histological feature in malakoplakia is the presence of intracellular Michaelis-Gutman bodies, which stain positively both for iron and for calcium. These intracytoplasmic inclusions were not seen in our present case, and were not described in similar cases reported previously; however, malakoplakia of the endometrium has been described as a possible cause of postmenopausal bleeding (10).

The pathogenetic mechanism for xanthogranulomatous endometritis also appears to be the presence of obstruction to the uterine canal with ensuing recurrent coliform, and possibly micro-aerophilic and anaerobic, infection of the endometrial cavity and the accumulation of macrophages. These phagocytic cells contain within them abundant phagolysosomes rich in

lipid, which constitutes one of the end-products of bacterial cell-wall metabolism.

"Foam cells" are also known to be present within the stromas of carcinomas of the endometrium (11), in occasional endocervical and endometrial polyps (12) and hyperplastic endometria (13), and occasionally also in normal proliferative phase endometrium (14). The lipids which are found within these cells are also thought to be by-products of tissue necrosis and the breakdown of blood cells. Fechner et al (15) have shown in ultrastructural studies that these cells are derived directly from endometrial stromal cells, and intermediate forms between foam cells and stromal cells could be identified.

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