Non-neoplastic glandular structures in bone marrow: a technical artefact

W G McCluggage, R Clarke, H Bharucha

Abstract
A case of non-neoplastic glandular structures embedded in the centre of a bone marrow trephine biopsy is described. This is a hitherto unreported phenomenon. These glandular structures originated from the dermal sweat gland and represented an artefactual lesion produced by the biopsy procedure. The importance of considering the possibility of non-neoplastic glandular structures in bone marrow is stressed, in order to avoid a misdiagnosis of metastatic adenocarcinoma.


Keywords: Bone marrow, non-neoplastic glandular structures.

Case report
A 64 year old woman underwent a bone marrow trephine biopsy during investigation for long-standing hypochromic, microcytic anaemia. A biopsy specimen was taken from the posterior iliac crest using a Jamshedi second generation needle.

Histology of the trephine biopsy specimen showed a mild hyperplasia of erythroid cells in keeping with the history of anaemia. In the centre of the bone marrow several glandular structures, surrounded by adipose tissue and haemopoietic cells, were identified (fig 1). These were composed of cuboidal cells surrounding central lumina. Nuclei were bland with no evidence of pleomorphism or mitotic activity. On high power examination, a second attenuated layer of myoepithelial cells was seen surrounding the cuboidal cells in several of the glandular structures (fig 2). There was no associated stromal desmoplasia. Close to the glandular structures, again within the centre of the marrow, several fragments of skeletal muscle, with identifiable cross striations, were present.

Immunohistochemical staining showed the cells lining glandular lumina to be strongly positive with Cam 5.2 and antibodies directed against epithelial membrane antigen. The myoepithelial cell layer showed positive staining with Cam 5.2 and α-smooth muscle actin.

Discussion
Non-neoplastic glandular epithelial inclusions have been described in several lymph node groups, chiefly pelvic and peri-aortic,1 and axillary nodes2 in women. Non-neoplastic salivary3 and thyroid4 epithelial inclusions may also be found in lymph nodes in the vicinity of these organs in both sexes. The origin of these inclusions has been debated. Pelvic and peri-aortic inclusions are thought to arise from metaplastic proliferation of peritoneal mesothelium which becomes entrapped in nodal structures during embryological development.1 Similarly, salivary and breast inclusions within axillary nodes are thought to arise following entrapment during embryological development.2 Such inclusions are usually found in the subcapsular or cortical areas of nodes, a site where metastatic carcinoma is frequently found. The importance of avoiding a misdiagnosis of metastatic adenocarcinoma has been stressed. Problems may also arise in misinterpreting well differentiated metastatic carcinoma as non-neoplastic glandular inclusions. This is especially true in the case of follicular thyroid inclusions, most of which

Figure 1 Non-neoplastic glandular structures and adjacent skeletal muscle embedded in adipose tissue and haemopoietic cellular elements.
Clear cell adenocarcinoma of the colon

C A Rubio

Abstract
A case of clear cell adenocarcinoma of the colon is reported. The histological examination of both the surgical specimen and of the metastases at necropsy showed columnar or polygonal cells with vesicular nuclei. The cytoplasm was usually clear with multiple, often empty looking vacuoles. From a panel of histochemical and immunohistochemical reactions, carcinoembryonic antigen and tissue polypeptide antigen showed strong positivity. The histochemical and immunohistochemical differential diagnosis with another common clear cell tumour, namely clear cell renal adenocarcinoma, is discussed.

Keywords: Clear cells, adenocarcinoma, colon.