Combination chemotherapy with two courses of MOPP (mustine-oncovin-premdione and procarbazine) and three of ABVD (adriamycin-bleomycin-vincristine-dacarbazine) was begun. After an interruption of three months an inguinal lymph node relapsed and an additional course of MOPP and ABVD was administered.

Because of anorexia, vomiting, fever, icterus, hypercalcaemia and anaemia, the patient was referred to our hospital one and a half months later. Progression of abdominal lymphoma was noted on computed tomography and ultrasonography. Liver and bone biopsy specimens showed reactive histiocytosis and a haemophagocytic syndrome in association with malignant lymphoma, mostly closely resembling a T cell type. Lennert's lymphoma was diagnosed. SACE activity was 1004 U/l. The patient received one further course of chemotherapy. After some complications, the patient died of cardiac arrest. The SACE activity was 423 U/l.

Lennert's lymphoma is a haematological malignancy characterised by the presence of a high content of epitheloid histocytes, T cells, and rare Reed-Sternberg-like cells. In a study of sarcoidosis, Gaucher's disease, and other granulomatous disorders Lieberman et al found that three out of 11 patients with Lennert's lymphoma had raised SACE activities.

Reported cases of histiocytic medullary reticulosis have been associated with increased SACE activity. Grönhagen-Riska et al assumed that the increase in SACE activity reflected the monocytic line having reached the macrophage or histiocytic stage. Dereme et al reported two patients with non-Hodgkin's lymphoma who showed increased SACE activities. These authors suggested a direct role for SACE in the metabolism of vitamin D.

Lennert's lymphoma is possibly associated with an increase in SACE activity due to epitheloid proliferation. This can be helpful in differentiating Lennert's lymphoma from other malignancies. Tumour activity can also be evaluated by this marker during and after treatment.

**References**


**Infiltrative myeloid metaplasia: an unusual cause of gastric outlet obstruction**

Myeloid metaplasia, histologically characterised by the simultaneous presence of all three bone marrow elements, is frequently found in myeloproliferative disorders. It is usually asymptomatic but may, on rare occasions, behave as a space occupying lesion or an aggressive infiltrate. In a population of 110 patients with myelofibrosis, aggressive infiltrates of myeloid metaplasia were found in six patients. Infiltrative myeloid metaplasia has been reported in kidneys, ureters, breasts, small bowel, lungs, liver and spleen. We describe the first reported case (as far as we are aware) of gastric outlet obstruction caused by infiltrative myeloid metaplasia affecting the prepyloric region of the stomach.

In 1978 a 58 year old man was found to have essential thrombocythaemia (platelet count 790 x 10^9/l). His platelet count was successfully controlled by treatment. By 1980 he had become anaemic (haemoglobin concentration 10-9 g/dl) with a normal white cell count and peripheral blood film showed features suggestive of myelofibrosis.

By 1982 acute myeloblastic leukaemia had supervened (peripheral white cell count 24 x 10^9/l with 27% blasts). With chemotherapy there was some improvement in his blood picture but he now developed intractable vomiting unrelated to chemotherapy and associated with abdominal distension. A barium meal showed no gastric...
abnormality. He died after a brief septicaemic illness.

Post mortem examination showed hepatosplenomegaly and generalised lymphadenopathy. The entire pre-pyloric region of the stomach was diffusely thickened, indurated, and yellow, but the pyloric lumen was not grossly narrowed.

Histological examination of the pre-pyloric area showed a heavy and diffuse polymorphous infiltrate within the submucosa and muscularis externa. The infiltrate was composed predominantly of myeloid cells at all stages of maturation, the commonest single cell type being myelocytes. There were also occasional bizarre megakaryocytes (figure) and erythroid nests (inset). The appearances were therefore those of myeloid metaplasia. The affected part of the stomach contained no distinguishable submucosa or myenteric ganglion cells. As no gross pyloric narrowing was seen at barium meal or at necropsy it is presumed that infiltration by haemopoietic cells of the pre-pyloric and pyloric smooth muscle led to a functional gastric outlet obstruction. Similar foci of myeloid metaplasia were evident in the liver, spleen, renal parenchyma and lymph nodes. Histological examination of the bone marrow showed the typical changes of myelofibrosis, but with an excess of primitive cells (10–15%). Residual leukaemia was thus clearly present in the bone marrow, but the gastric infiltrate composed of haemopoietic cells showing trilineage differentiation by definition represented myeloid metaplasia rather than a leukaemic infiltrate. The aggressive behaviour of the pre-pyloric myeloid metaplasia seen in this patient is in keeping with current views of the neoplastic nature of myeloproliferative disorders; its apparent rarity may well be related to lack of recognition. Infiltrative myeloid metaplasia should therefore be considered as a possible cause of unexplained symptoms in patients with myeloproliferative disorders, particularly as the lesion may be radiosensitive.1,4

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API-20NE and Sensititre Autoidentification systems for identifying Pseudomonas spp

Pseudomonas species are the most common non-enteric Gram negative rods associated with infection, and of these, Pseudomonas aeruginosa is most often implicated.1,2 Many clinical laboratories often undertake the identification of these organisms as a prelude to epidemiological studies, and in previous comparative studies the API 20NE system has yielded the highest rate of correct identifications and fewer incorrect identifications than other comparable systems.5

The Sensititre Autoidentification system (Sensititre Ltd) is based on fluorospectrophotometry and provides a fully automated method for the identification of Enterobacteriaceae, oxidase positive fermentative rods, and non-fermentative Gram negative rods. The identification of Enterobacteriaceae by the API 20E and Sensititre systems has recently been compared.4

The table gives the results of the identification of 140 isolates by the two systems. Species identification was obtained with 102 (73%) isolates with both systems. The API 20NE system yielded an identification of Ps aeruginosa for 95 isolates: the Sensititre system identified 43 isolates as Ps aeruginosa and 56 isolates as Ps putida.

The identification of Ps aeruginosa by the Sensititre system was confirmed by a similar identification for most isolates by the API 20NE system. Those isolates identified as Ps putida by the Sensititre system were predominantly identified as Ps aeruginosa or Ps putida by the API 20NE system. Ps alcaligenes was not identified by either system.

Table Identification of 140 isolates of Pseudomonas sp with API 20NE and Sensititre Autoidentification systems

<table>
<thead>
<tr>
<th>Organism</th>
<th>API-20NE</th>
<th>Sensititre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species identification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ps aeruginosa</td>
<td>95 (68)</td>
<td>43 (32)</td>
</tr>
<tr>
<td>Ps putida</td>
<td>0</td>
<td>56 (40)</td>
</tr>
<tr>
<td>Ps fluorescens</td>
<td>2 (2)</td>
<td>0</td>
</tr>
<tr>
<td>Ps stutzeri</td>
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<td>2</td>
</tr>
<tr>
<td>Ps maltophilia</td>
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<td>2</td>
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<tr>
<td>Ps alcaligenes</td>
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<td>1</td>
</tr>
<tr>
<td>Genus identification only:</td>
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<td></td>
</tr>
<tr>
<td>Pseudomonas sp</td>
<td>38 (27)</td>
<td>38 (27)</td>
</tr>
</tbody>
</table>
Infiltrative myeloid metaplasia: an unusual cause of gastric outlet obstruction.
S M Ismail and K Myers

doi: 10.1136/jcp.42.10.1112-b

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