

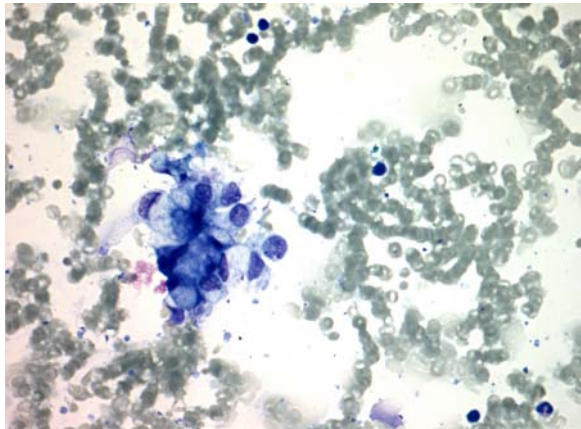
## Gastric Signet-Ring Cell Carcinoma: Unilateral Lower Extremity Lymphoedema as the Presenting Feature



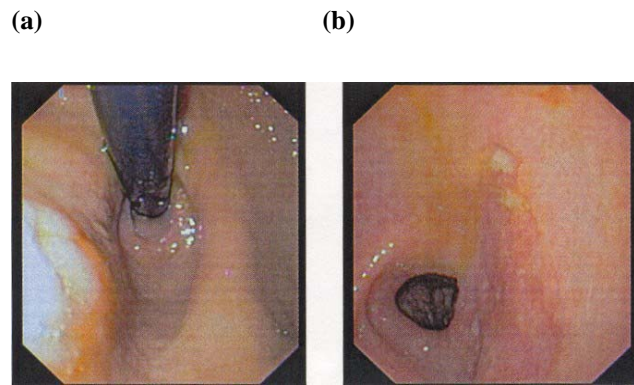
**FIGURE 1.** Mild unilateral non-pitting edema of the entire right leg.



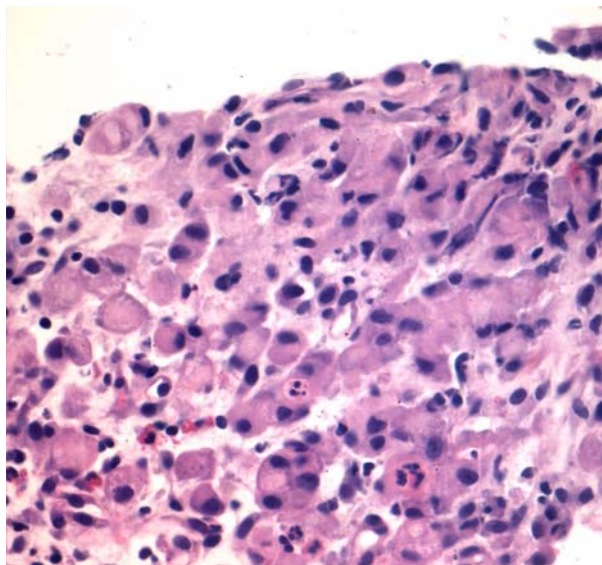
**FIGURE 2.** CT scan of the chest showing left-sided pleural effusion and paratracheal lymphadenopathy



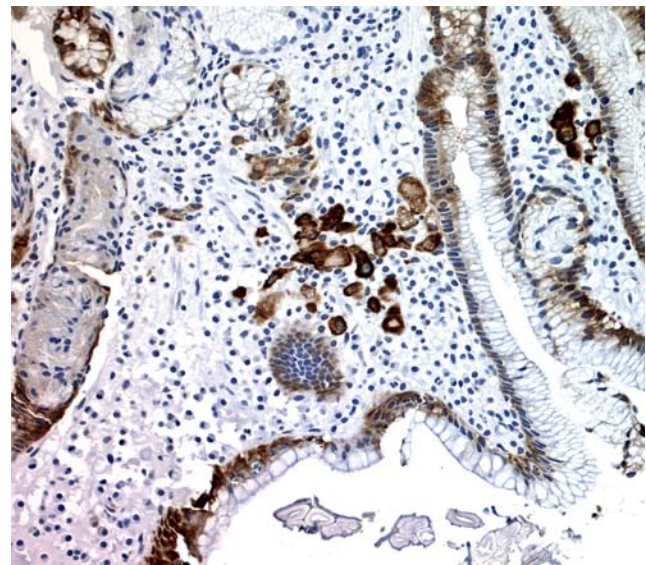
**FIGURE 3.** Fine needle biopsy of a supraclavicular lymph node showing numerous polygonal cells in a multilayered aggregate that possess intracytoplasmic vacuoles. Signet ring cells are created by a large, single vacuole with the enlarged nucleus pushed to the cell periphery. Giemsa stain 400x.



**FIGURE 4.** Upper gastrointestinal endoscopy demonstrating (a) a hiatal hernia unrelated to the leg's edema and (b) the antrum mucosal infiltration and ulceration in the stomach from which biopsies were taken (see Fig. 5).

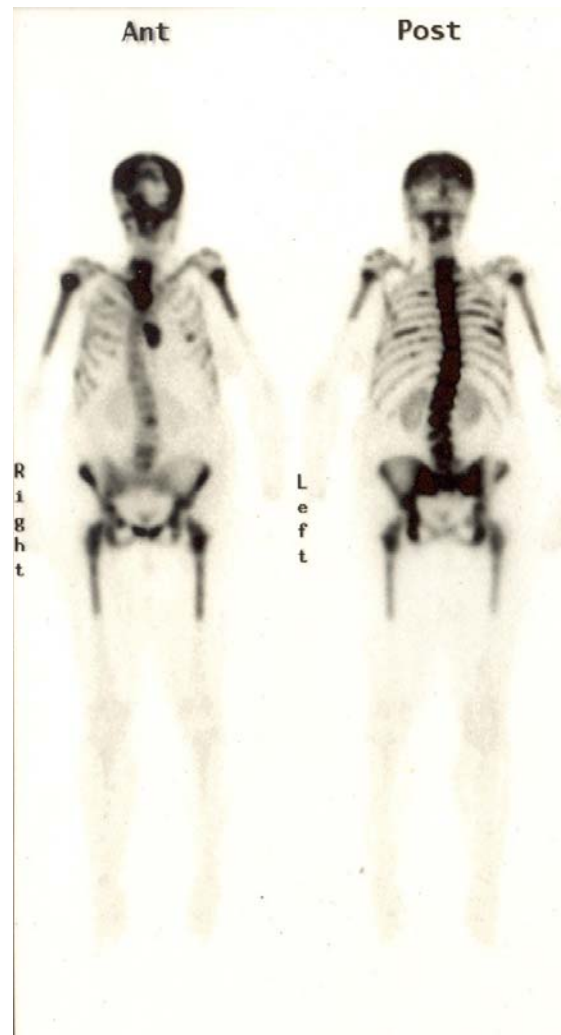


**(a)**



**(b)**

**FIGURE 5.** Histology of gastric mucosal biopsies. (a) Hematoxylin-Eosin (400x) and (b) anti-cytokeratin (200x) stain of some signet ring cells of a diffuse gastric carcinoma.



**FIGURE 6.** Bone scan with Tc-99m MDP showing multiple foci of increased isotope uptake throughout the axial skeleton compatible with bony metastatic disease

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Persistent unilateral non-pitting edema is characteristic of venous insufficiency such as in the postphlebotic syndrome. Other acquired causes may lead to lymphoedema by lymph vessel obstruction

and typically include connective tissue disease, infection, contact dermatitis and malignancy. A case of slow-onset, unilateral lymphoedema of the lower extremity is reported in whom initially no causes of peripheral lymph vessel obstruction or evidence of venous insufficiency were identified by routine laboratory testing, abdominal computerized tomography and ultrasound examination. Endoscopic examination, computerized tomography of the chest and a bone scan revealed gastric signet-ring cell cancer that had metastasized to thoracic lymph nodes and bones. Abdominal, pelvic or inguinal lymph node destruction by metastases is not a requirement for unilateral acquired lymphoedema of the lower extremity to develop in malignancy. Gastric signet-ring cell cancer may lead to non-pitting edema formation typically due to lymph system micro-metastasis. Distant site signet-ring cell malignancy should be included in the differential diagnosis of otherwise unexplained acquired peripheral lymphoedema.

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