Umbilical Nodule, An Uncommon Presentation of Gastric Malignancy

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Abstract

Sister Mary Joseph Nodule refers to an umbilical nodule resulting from metastasis from an intra-abdominal malignancy, either pelvic (common in females), or gastrointestinal system (common in males). We report a case of Sister Mary Joseph Nodule in a lady which resulted from gastric malignancy.

Introduction

Abdomen is said to be a Pandora’s Box, and some inconspicuous presentations may lead to diagnoses of some very grave situations. Hence a good clinical examination is essential to get a clue of the disease process. Such a case is being presented here, where the only clue to a diagnosis was a small nodule.

Case Report

A fifty four year old, post menopausal female presented with progressively enlarging nodule involving the lower part of abdomen associated with generalized weakness over last two months. On examination, she had moderate degree of pallor. She didn’t have any cyanosis, clubbing, or lymphadenopathy. Examination of oral cavity was unremarkable, and abdominal examination revealed a palpable, non-tender nodule over the abdominal wall just below the umbilicus (Figure 1). Other systemic examinations were essentially normal. Her laboratory examinations revealed Hb 5.2g/dl, microcytic hypochromic anemia, TLC 5,800/mm\textsuperscript{3}, N:\textsubscript{L} 58, M:\textsubscript{E} 3, serum urea 26meq/l, serum creatinine 0.8meq/l. Liver function tests revealed total bilirubin 0.9 mg/dl, AST 33 mg/dl, ALT 28 mg/dl, total protein 8.4 mg/dl, serum albumin 4.8 mg/dl, serum globulin 3.6 mg/dl, alkaline phosphatase 186 mg/dl. No abnormalities were seen on urine and stool examination. Chest X-ray did not show any significant findings. Alpha-fetoprotein, carcinoembryonic antigen, CA 125 and CA 19-9 were all within normal limits. Ultrasound of abdomen was normal, and FNAC of the nodule revealed metastatic adenocarcinoma (Figure 2). To search for the primary focus, she underwent an upper gastrointestinal endoscopy, which revealed giant gastric ulcer involving the antrum and pylorus of stomach. The endoscopic biopsy reports revealed adenocarcinoma of stomach (Figure 3). Hence a diagnosis of adenocarcinoma of stomach with Sister Mary Joseph’s nodule was made and she was advised a CT Scan of abdomen, but the patient refused any further investigations and left the hospital against medical advice.

Discussion

Sister Mary Joseph (1856–1939), who was superintendent nurse at St. Mary’s Hospital in Rochester, US (at present, the Mayo Clinic), observed that patients with intraabdominal and/or pelvic malignancy occasionally have an umbilical nodule indicating umbilical metastasis. Consequently, in 1949, the English surgeon Hamilton Bailey, in his famous textbook

Fig. 1: Showing nodule in proximity to umbilicus.

Fig. 2: FNAC from infraumbilical nodule showing cytopathological features of metastatic adenocarcinoma.

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“Demonstrations of physical signs in clinical surgery”, acknowledged her observation, and coined the term “Sister Mary Joseph’s nodule” for umbilical metastasis. Presently, it has been accepted widely as a marker of intraabdominal malignancy which is presumed to have spread by either peritoneum (most commonly) or by the venous or lymphatic route. It is estimated that 1% to 3% of abdomino-pelvic tumors metastasize to the umbilicus.

The histologic nature of metastatic umbilical tumors usually reveals adenocarcinoma; however, there have also been reports of umbilical metastases from sarcoma, mesothelioma, and melanoma. In 14-33% cases, umbilical metastases lead to the diagnosis of previously occult neoplasms, whereas in 40% patients with a known neoplasm the nodule is an early sign of relapse.

In men, gastrointestinal tract is the most common location of the primary neoplasm that metastasizes to the umbilicus, whereas in women gynecological neoplasms particularly ovarian cancer is the most common primary site.

The sign of Sister Mary Joseph Nodule has been extensively described in literatures. Its occurrence is uncommon and as a first sign of malignancy is rare. The evaluation of an umbilical mass should be directed by suspicion of it being a metastatic deposit keeping in mind its potential to be either a primary malignant umbilical lesion or a benign disease. Stomach malignancy, as a primary source of umbilical nodule, has been observed in only 23% cases, and even less so in case of females. Unfortunately, this sign is a reflection of a poor prognosis due to widespread internal malignancy and most patients have a life expectancy of less than one year. Fortunately, it is a rare sign, and its occasional appearance in a patient makes us remember the basics of medicine, that clinical examination still holds its own place in this era of myriad investigations.

References