

Image Diagnosis: Sister Mary Joseph Nodule

Alka Sharma, MD; Vishal Sharma, MD

Perm J 2014 Spring;18(2):e132

<http://dx.doi.org/10.7812/TPP/13-107>

A 44-year-old man presented to the outpatient department with a 2-month history of upper abdominal discomfort associated with loss of appetite and weight loss (8 kilograms/17.6 pounds). An umbilical nodule was noted on physical examination (Figure 1). He underwent computed tomography of the abdomen for suspicion of abdominal malignancy, which revealed a thickened posterior wall of the stomach (Figure 2A) and an umbilical nodule (Figure 2B). Esophagogastroduodenoscopy confirmed the presence of a polypoidal fleshy lesion arising from the posterior wall of the stomach. Biopsies of the stomach lesion and umbilical nodule were consistent with adenocarcinoma.

The Sister Mary Joseph nodule is a manifestation of umbilical metastasis of malignancy typically arising from the gastrointestinal or genitourinary tract.



Figure 1. Sister Mary Joseph nodule seen at the umbilicus.

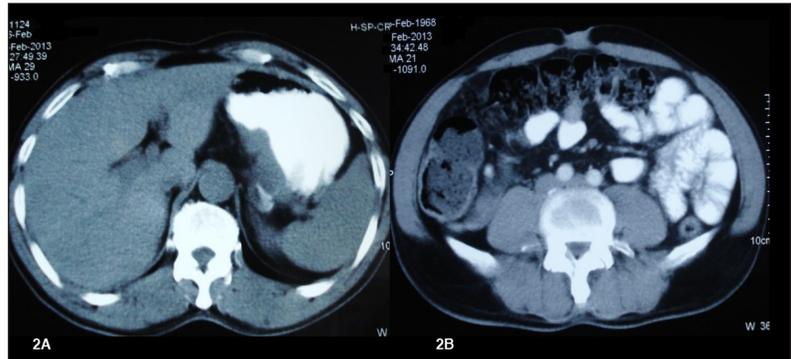


Figure 2. Computed tomography scan of the abdomen showing mural thickening of A) the stomach wall; and B) the umbilical nodule.

The mechanism of tumor spread to the umbilicus may be lymphatic, vascular or contiguous, or via embryologic remnants in the abdominal wall. First described by William Mayo, MD, as “pants button umbilicus,”¹ the eponym was coined by Hamilton Bailey after Sister Mary Joseph Dempsey, who assisted Dr Mayo and first recognized this condition. The presence of this type of umbilical nodule represents advanced metastatic malignancy and indicates a poor prognosis.¹ This nodule has been described with adenocarcinomas of gastric, gallbladder, liver, appendicular, fallopian tube, cervix, urinary bladder, breast, lung, and renal origin. Umbilical nodules have occasionally been described with other histologies.^{1,2} Approximately half of these cases are caused by gastrointestinal malignancies; approximately one-fourth of these are from gynecologic lesions.³ In addition to the presence of a

Sister Mary Joseph nodule, the presence of a left supraclavicular lymph node (Troisier's node or Virchow's node) or a mass palpable on rectal examination (Blumer's shelf) indicate metastatic disease whose origin must be pursued.⁴ ♦

References

1. Powell JL. Powell's pearls: eponyms in medical and surgical history. Sister Joseph's Nodule; Sister Mary Joseph (1856-1939). *J Surg Educ* 2011 Sep-Oct;68(5):442-3. DOI: <http://dx.doi.org/10.1016/j.jsurg.2011.02.009>.
2. Palaniappan M, Jose WM, Mehta A, Kumar K, Pavithran K. Umbilical metastasis: a case series of four Sister Joseph nodules from four different visceral malignancies. *Curr Oncol* 2010 Nov;17(6):78-81. DOI: <http://dx.doi.org/10.3747/co.v17i6.684>.
3. Kar JK, Kar M. Sister Mary Joseph's nodule (SMJN). *J Assoc Physicians India* 2012 Feb;60:114.
4. Layke JC, Lopez PP. Gastric cancer: diagnosis and treatment options. *Am Fam Physician* 2004 Mar 1;69(5):1133-40.