



Sister Mary Joseph's Nodule Revealing Advanced Metastatic Ovarian Neoplasia: A Case Report

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Article History

Received: 20-02-2026

Accepted: 25-04-2026

Published: 02-05-2026



Abstract:

Sister Mary Joseph's nodule (SMJN) is an umbilical metastasis originating from an intra-abdominal or pelvic malignancy. Although uncommon, it is a highly suggestive clinical sign of advanced neoplastic disease and is associated with a poor prognosis. We report the case of a 47-year-old woman with no significant medical history who presented to the emergency department with a painful inflammatory peri-umbilical mass. Clinical history revealed a rapid deterioration of general condition with cachexia and progressive bedridden status over the preceding two months. Physical examination showed a violaceous umbilical mass with surrounding inflammatory changes and minimal serous discharge. Contrast-enhanced thoraco-abdomino-pelvic computed tomography demonstrated a pelvic mass suggestive of ovarian malignancy associated with multiple metastatic lesions involving the liver, spleen, lungs, peritoneum, and abdominal wall. Despite supportive management, the patient's condition rapidly deteriorated, and she died 48 hours after admission.

Keywords: Sister Mary Joseph's Nodule, Umbilical Metastasis, Ovarian Cancer, Peritoneal Carcinomatosis, Case Report.

Case Report

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INTRODUCTION

Sister Mary Joseph's nodule (SMJN) is a metastatic umbilical lesion usually associated with advanced intra-abdominal or pelvic malignancies. The condition was first described by Sister Mary Joseph Dempsey in the early twentieth century and remains a rare but clinically significant manifestation of gastrointestinal and gynecological cancers. The most common primary tumors associated with SMJN are gastric, colorectal, pancreatic, and ovarian adenocarcinomas.

The presence of an umbilical metastasis generally reflects extensive tumor dissemination and is associated with limited survival. We report the case of a patient whose Sister Mary Joseph's nodule revealed terminal-stage metastatic ovarian cancer.

Case Presentation

A 47-year-old woman with no significant past medical or surgical history presented to the emergency department because of a peri-umbilical mass.

The patient's symptoms had started approximately two months before admission and were characterized by a rapid decline in general health, marked weight loss, profound asthenia, and progressive confinement to bed. No vaginal bleeding or specific gastrointestinal symptoms were reported.

Physical examination revealed a cachectic patient with a violaceous umbilical mass measuring several centimeters in diameter. The lesion was surrounded by inflammatory skin changes and was associated with minimal serous discharge.

Citation: Hamza El Hamdani *et al.*, (2026 May). Sister Mary Joseph's Nodule Revealing Advanced Metastatic Ovarian Neoplasia: A Case Report. *ISR J Surg*, 2(5), 70-72.

Contrast-enhanced thoraco-abdomino-pelvic computed tomography demonstrated: A pelvic mass highly suggestive of ovarian malignancy; Multiple hepatic metastases; Splenic metastatic lesions; Pulmonary metastases; Peritoneal carcinomatosis; secondary abdominal wall involvement.

Overall radiological findings were consistent with widely disseminated metastatic ovarian cancer. Given the extensive tumor burden and the severe deterioration in the patient's clinical condition, the outcome was rapidly unfavorable, and the patient died two days after admission.



Figure: Clinical photograph showing a violaceous peri-umbilical mass consistent with a Sister Mary Joseph's nodule

DISCUSSION

Sister Mary Joseph's nodule is an uncommon clinical finding, reported in approximately 1–3% of abdominopelvic malignancies. Several mechanisms have been proposed to explain umbilical metastatic spread, including direct peritoneal extension, lymphatic dissemination, hematogenous spread, and migration along embryological remnants connected to the umbilicus.

Among women, ovarian carcinoma represents one of the leading gynecological causes of SMJN. In most cases, this lesion is associated with advanced metastatic disease and may represent either the initial manifestation of an occult malignancy or a sign of disease recurrence.

Diagnosis relies primarily on clinical examination supplemented by thoraco-abdomino-pelvic imaging. Histopathological confirmation through biopsy of the umbilical

lesion is generally recommended to establish the diagnosis and determine the origin of the primary tumor.

The prognosis remains poor. Reported median survival ranges from approximately 2 to 11 months depending on the primary malignancy, disease extent, and therapeutic options available. In our patient, extensive metastatic dissemination combined with profound cachexia accounted for the rapidly fatal outcome.

CONCLUSION

Sister Mary Joseph's nodule is a rare but highly suggestive clinical sign of advanced intra-abdominal malignancy. Its recognition should prompt immediate diagnostic investigation to identify the primary tumor and assess disease extent. This case illustrates the particularly poor prognosis associated with ovarian cancer presenting with widespread metastatic dissemination and umbilical involvement.

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