

# Umbilical Nodule - An Indicator Of Intraabdominal Malignancy

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## Abstract

Umbilical metastasis is one of many characteristic signs of extensive neoplastic disease. It suggests advanced distant metastasis and is associated with poor prognosis; mean survival is approximately 10-12 months, although long-term survival has been reported, but only in the presence of a solitary metastatic umbilicus nodule. Umbilical nodules are a sign of poor prognosis but if they are related to benign conditions the prognosis varies. We had a patient with an umbilical nodule in whom a carcinoma of the stomach was found on investigation. He was operated and started on chemotherapy after 3 weeks once the wound was healed. He was on regular follow-up for the last 3 months and is doing well.

## INTRODUCTION

Umbilical or cutaneous metastasis is relatively uncommon in clinical practice but when it is there one should be very careful because aggressive treatment is required for the patients. Sometimes it occurs after the treatment of the primary tumor when it is thought to be cured. Sometimes umbilical nodules are associated with benign conditions; in these patients prognosis is excellent.

Most cutaneous metastases occur in a body region near the primary tumor. The most common presentation of cutaneous metastases is nodules. The nodules are often non-painful, round or oval, firm, mobile, and rubbery in texture. They are usually flesh-colored, although they may also be of other colors (e.g., from flesh-colored to brown or blue-black)<sup>14</sup>. They vary in size from barely perceptible lesions to large tumors. In this article, we have summarized the topic "umbilical nodule as an indicator of intra-abdominal malignancy".

## CASE REPORT

A 64-year-old male patient came with the history of an umbilical nodule of 6 months duration. It was insidious in onset and painful and it gradually increased to the size of 3 x 3cm and later ulcerated with serosanguineous discharge. He gave a history of vomiting 2-3 hours after ingestion. The vomit contained freshly eaten food particles and was non-bilious and non-foul-smelling. Jaundice, weight loss and history of passing blood in stool were absent.

His general physical examination was normal. The nodule was 3 x 3cm in size in the umbilicus, ulcerated with the margins everted, and there was a central area of necrosis present. The rest of the abdominal examination was normal. Respiratory, cardiac and CNS examinations were normal

## Figure 1

Picture 1: showing the umbilical nodule after excision



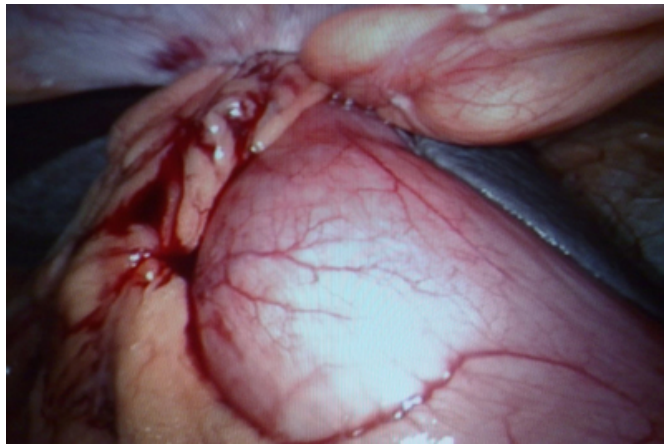
He had blood investigations (HEMOGRAM, TUMOR MARKERS, RFT, LFT AND ELECROLYTES), USG of the ABDOMEN and CHEST X-RAY which were within normal limits. A CT scan of abdomen was done and showed pyloric thickening but the rest of the abdomen was normal.

Finally, excision biopsy of the nodule was done and histopathology revealed an adenocarcinoma metastasis.

Upper GI scopy showed ulceration of the pyloric end of the stomach and biopsy taken from this area again yielded adenocarcinoma. Diagnostic laparoscopy was done and showed infiltration of the falciform ligament.

### Figure 2

Picture 2: showing a laparoscopic view of infiltration of the falciform ligament



Finally, a gastro-jejunostomy was done and the patient was started on chemotherapy with 5-FU and LEUKOVORIN<sub>6</sub>. He tolerated this well and is under regular follow-up.

### DISCUSSION

Sister Mary Joseph's nodule was first noticed by Sister Mary Joseph, a head nurse of William Mayo<sub>2</sub>. It is a marker of intraabdominal malignancy which spreads by either peritoneum<sub>11</sub> (most commonly) or by the venous or lymphatic route<sub>3</sub>. Hematogenous spread through the arterial and venous system is another postulated method by which metastasis occurs, with the persistence of the paraumbilical veins being a possible conduit for metastatic spread. Lymphatic spread to the umbilical region is also a probable method of metastasis, considering that 4 sets of lymphatics pass from the umbilical region. Sometimes direct extension of the primary can also result in umbilical nodules. In particular, metastases from pancreatic cancer are believed to cause Sister Joseph's nodule<sub>8</sub> in this manner, because pancreatic cancer rapidly invades the lymphatic system. Lastly, direct extension along the ligaments of embryonic origin is a presumed mode of metastatic spread, including the round ligament of the liver, the urachus, the vitellointestinal duct remnant, and the obliterated vitelline artery. This method may be important in metastatic tumors of the small intestine.

Although umbilical nodules are often associated with malignancy, around 57% of them are associated with benign conditions, most commonly with dermal nevi, fibro-epithelial papillomas, epithelial inclusion cysts, seborrheic keratoses, dermatofibromas and polyps<sub>7,9,10</sub>. Congenital malformation can also cause this, like an omphalomesenteric duct, as well as keloid formations, endometriosis and umbilical hernias. In malignant diseases, this is most commonly seen in gastric malignancies but was also shown to be associated with ovarian, bowel, gall bladder and pancreatic carcinomas<sub>4</sub>; the primary tumor can be a melanoma, basal cell carcinoma, squamous cell carcinoma, myosarcoma or adenocarcinoma. Most of the time when this is noted it is very late for curative surgery for the patient and he/she is left only with palliative surgery, radiation and chemo therapy<sub>5</sub>.

Diagnosis is made by FNAC or BIOPSY of the nodule and search for the primary site of origin. Doing a curative procedure is very rarely successful, only if this is the only metastasis and the patient tolerates the chemotherapy well or if there is a benign condition.

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