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CASE REPORT OF: AN UNUSUAL CASE OF CONCURRENT UTERINE AND GASTRIC LEIOMYOSARCOMA ?METASTATIC OR SYNCHRONOUS.

Radiodiagnosis

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ABSTRACT

Leiomyosarcoma of uterus is an uncommon aggressive neoplasm, commonly metastasising to the lungs, peritoneal cavity, liver and retroperitoneum. We present a case of a 62 year-old woman who underwent a hysterectomy for a suspected leiomyoma, which turned out to be a leiomyosarcoma on histopathology. A staging post-operative PET-CT revealed nodular pelvic peritoneal deposits along with an eccentric polypoidal lesion along the greater curvature of the stomach. The latter was submucosal on an upper gastrointestinal endoscopy, the biopsy of which was suggestive of a leiomyosarcoma. To the best of our knowledge, synchronous uterine and gastric leiomyosarcoma or a uterine leiomyosarcoma with gastric metastases is a rare occurrence.

KEYWORDS

INTRODUCTION:

Uterine sarcomas are rare neoplasms, with leiomyosarcoma being the most common type. They are typically aggressive tumours with a tendency to metastasise to the lungs, peritoneum, liver and retroperitoneum. Few case reports of metastases to the small bowel and kidneys have been reported in literature.

We present a case of likely stomach wall metastases from a proven uterine leiomyosarcoma which is an unusual entity, and has not yet been reported in radiology literature.

These tumours are chemo-sensitive and hence early diagnosis using a staging PET-CT is crucial for better prognosis.

CASE REPORT:

A 62 year old lady underwent hysterectomy and bilateral salphingo-oophorectomy for a suspected leiomyoma of the uterus. However, histopathological examination was suggestive of a leiomyosarcoma.

She was hence referred for a staging PET-CT to exclude metastases. FDG/PET-CT was performed on a Philips TOF machine with administration of oral and intravenous iodinated contrast. The examination revealed few FDG-avid inhomogenously enhancing nodular pelvic peritoneal deposits[Figure C] and an FDG-avid enhancing eccentric nodular lesion along the greater curvature of the gastric body which was suspicious for a gastrointestinal stromal tumour.[Figure A] An upper gastrointestinal endoscopy was however suggested which revealed a submucosal lesion along the greater curvature of the stomach, the histopathology of which was suggestive of a leiomyosarcoma. A follow-up PET-CT following 3 cycles of chemotherapy revealed significant resolution of the FDG avidity and moderate regression in the size of the peritoneal deposits as well as the gastric lesion. [Figure B]

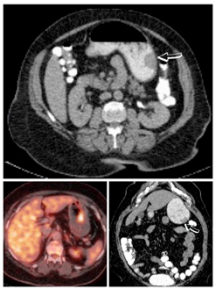

Figure A: Fused PET-CT axial and coronal images revealing an FDG avid nodular soft tissue along the greater curvature of the stomach.

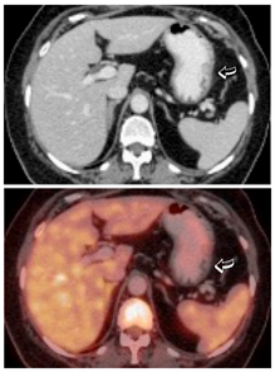

Figure B: Post Chemotherapy fused PET-CT images shows significant regression in size as well as FDG avidity of the nodular soft tissue after chemotherapy.

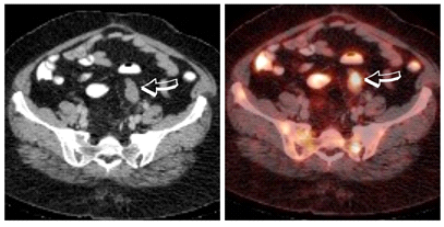

Figure C: Fused PET-CT image at the level of pelvis revealing nodular FDG-avid pelvic peritoneal deposits which also showed regression in size after chemotherapy (Figure not shown).

DISCUSSION:

Uterine sarcomas are rare heterogenous group of neoplasms of mesenchymal origin, accounting for about 8% of all uterine malignancies. Leiomyosarcoma is the most common histologic variant originating from the smooth muscle in the myometrium, either as de novo or secondary to malignant transformation of a leiomyoma. [1]

Clinically these patients are usually above 40 years of age and present with symptoms similar to leiomyomas such as per vaginal bleeding,

abdominal or pelvic pain or a rapidly growing pelvic mass which may present as a lump.

Ultrasound is the initial and usually the only imaging tool in these patients, with most of them diagnosed as leiomyomas of the uterus. Pre-operative distinction therefore becomes difficult between benign leimoyomas and malignant leiomyosarcomas. [2]

Magnetic Resonance Imaging (MRI) features may however help to differentiate benign leiomyomas from sarcomas. The latter are characterised by a larger size and rapid growth with irregular tumour margins. Also the presence of T2 hyperintense foci within the growth suggestive of areas of necrosis and heterogenous postcontrast enhancement should raise a diagnostic possibility of malignancy. Recently, diffusion weighted imaging is also increasingly used to differentiate benign from malignant uterine lesions. [1],[3]

The role of PET-CT is primarily to detect metastases in case of a histologically proven leiomyosarcoma. These aggressive tumours metastasise to the peritoneal cavity, lymph nodes, bones, lungs, liver and rarely to the kidneys, pancreas and small bowel. [4],[5] On PET-CT imaging they reveal moderate to intense tracer uptake and are enhancing on administration of iodinated intravenous contrast. [6] Uterine leiomyosarcoma with metastases to the stomach is an extremely rare manifestation. Secondary deposits in bowel are classically submucosal in location, however histology provides the definite diagnosis in the form of cellular atypia and immunohistochemistry characteristics.

Uterine leiomyosarcomas are treated with hysterectomy and bilateral salphingo-oophorectomy along with pelvic nodal and peritoneal dissection. In cases of advanced or metastatic disease, systemic chemotherapy is considered the mainstay of treatment following surgery. Adequate timely response evaluation is done using imaging modalities such as ultrasound or PET-CT.

CONCLUSION:

In conclusion, stomach wall metastases from a uterine leiomyosarcoma is rare. Early diagnosis and systemic chemotherapy helps in increased survival and better prognosis.

REFERENCES:

1. Santos, Pedro, and Teresa Margarida Cunha. "Uterine Sarcomas: Clinical Presentation and MRI Features." Diagnostic and Interventional Radiology 21.1 (2015): 4–9.
2. Uterine Sarcomas: Then and Now. Shaan H. Shah, Jyothi P. Jagannathan, Katherine Krajewski, Kevin N. O'Regan, Suzanne George, and Nikhil H. Ramaiya. American Journal of Roentgenology 2012 199:1, 213-223
3. Tamai K, Koyama T, Saga T, Morisawa N, Fujimoto K, Mikami Y, Togashi K. The utility of diffusion-weighted MR imaging for differentiating uterine sarcomas from benign leiomyomas. Eur Radiol. 2008 Apr;18(4):723-30.
4. Tirumani, S. H., Deaver, P., Shinagare, A. B., Tirumani, H., Hornick, J. L., George, S., & Ramaiya, N. H. (2014). Metastatic pattern of uterine leiomyosarcoma: retrospective analysis of the predictors and outcome in 113 patients. Journal of Gynecologic Oncology, 25(4), 306–312.
5. Ben-Ishay O, Shmulevsky P, Brauner E, Vladowsy E, Kluger Y. Mucosal small bowel metastases from uterine leiomyosarcoma. Isr Med Assoc J. 2010 May;12(5):309-10.
6. Punt, S. E. W., Eary, J. F., O'Sullivan, J., & Conrad, E. U. (2009). Fluorodeoxyglucose positron emission tomography in leiomyosarcoma: imaging characteristics. Nuclear Medicine Communications, 30(7), 546–549.