Pedunculated Leiomyoma with Sarcomatous Changes (Leiomyosarcoma)

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Figure 1
Figure 2
Figure 3
Findings: A large intra-uterine irregular margin prolapsed pedunculated mass attached to the uterine fundus via broad pedicle, extends down reaching to the upper vagina and the myometrium invaded in the lower part with loss of the characteristic cervical low signal smooth muscle (Fig. A), the mass displacing the urinary bladder anteriorly as well as the rectum posteriorly but still preserved fat planes between them and the outer myometrial layer. The lesion displaying heterogeneous high signal intensity at T2WI (Fig. A) and T2FS (Fig. B), with a small rounded left para-central more high signal intensity area, while in the T1WI (Fig. C) the lesion displaying heterogeneous low signal intensity and high signal intensity within the same left para-central area denoting methemoglobin from subacute hemorrhage. Minimal heterogeneous enhancement noted at the sagittal post contrast T1 WI (Fig. D).

Diagnosis: Pedunculated leiomyoma with sarcomatous changes (leiomyosarcoma).

Discussion: Leiomyomas are the most common uterine neoplasm and are composed of smooth muscle with varying amounts of fibrous connective tissue. As leiomyomas enlarge, they may outgrow their blood supply, resulting in various types of degeneration: hyaline or myxoid degeneration, calcification, cystic degeneration, and red degeneration. Leiomyomas are classified as submucosal, intramural, or subserosal (1-3). Leiomyosarcomas account for one third of uterine sarcomas. Leiomyosarcomas may arise either de novo from uterine musculature or the connective tissue of uterine blood vessels or in a preexisting leiomyoma. The incidence of sarcomatous change in benign uterine leiomyomas is reported to be 0.1-0.8% (4).
Leiomyosarcoma usually presents as a massive uterine enlargement with irregular central zones of low attenuation, suggesting extensive necrosis and hemorrhage. The pattern of tumor spread is to the myometrium, pelvic blood vessels and lymphatics, contiguous pelvic structures, abdomen, and then distantly, most often to the lungs. Although it has been suggested that an irregular margin of a uterine leiomyoma on MRI is suggestive of sarcomatous transformation, the specificity of this finding has not been established (5).

**References:**

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