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Fistula, Rectovaginal

- Rectovaginal fistulas are rare and represent a small portion of all anorectal fistulas. Enterovaginal and vesicovaginal fistulas are the most common types of complications after radiotherapy of larger gynecologic neoplasms and after surgery. Women with colovaginal fistulas may present with feces, flatus, or mucus per the vagina.
- Fistulous tract on T2-weighted images or inversion recovery MRI appears as a tract of fluid signal intensity surrounded by lower-signal-intensity granulation tissue and fibrosis. Changes in normal structures in the pelvis are evident on MR images: fascial and muscle edema; thickening of the rectum wall, bladder, and vagina; and fatty infiltration of bone marrow. They depend on the radiation dose and the time elapsed since RT. Increased signal intensity on T2W images usually reflects acute or subacute changes and does not persist indefinitely. Increased signal intensity should not be confused with tumor recurrence.

Fournier Gangrene

- Fournier gangrene is a necrotizing fasciitis of the perineum. It's a urologic emergency with a potentially high mortality rate; it is typically seen in diabetic men aged about 50–70.
- Clinical presentation: Perineal/scrotal pain, swelling, redness, crepitus from soft tissue gas, systemically unwell, fever, and leukocytosis.
- Although the diagnosis of Fournier gangrene is often made clinically, radiologic imaging—particularly CT—can help confirm the diagnosis and to determine disease extent. The CT features of Fournier gangrene include soft tissue thickening and inflammation, demonstrating the asymmetric fascial thickening; any coexisting fluid collection or abscess; fat stranding around the involved structures; and subcutaneous emphysema secondary to gas-forming bacteria.

Fallopian Tube Cancer

- Primary fallopian tube carcinoma is a rare malignancy that originates from the fallopian tube. They account from 1 to 2 % of all gynecological cancers. It typically presents in postmenopausal women aged 60–79. However, fallopian tube carcinoma has been reported in young girls aged 17–19. The most common histological type of PFTC is papillary serous carcinoma, which is histologically identical to serous ovarian adenocarcinoma.

Most patients are asymptomatic and often insidious; when symptomatic, the most common nonspecific symptoms include Latzko's triad consisting of lower abdominal pain, serosanguinous vaginal discharge, and an adnexal mass (reported in 15 % of cases).

- Most of the tumors originate from the ampulla with an Oendoluminal growth that leads to hydrosalpinx. Fallopian tube cancer can be bilateral in 20 % of the cases. The most common histological types are serous and endometrioid carcinoma, with a pattern of growth nodular, papillary, infiltrative, or mass forming.
- The lesion can have the appearance of a small, solid, lobulated mass on CT scan or on MRI. Advanced tumors are difficult to differentiate from ovarian tumors on imaging. The presence of a hydrosalpinx can be a useful feature.
- On CT scan, the lesion has an attenuation equal to that of other soft tissue masses and enhances less than the myometrium.
- On T1 images, the solid tumor portion is usually hypointense; if there is an associated simple hemorrhagic fluid containing hydrosalpinx, this may be of high signal. On T2 images, the solid tumor component is often homogeneously hyperintense. After somministration of gadolinium contrast, T1 images of the solid portion often demonstrate enhancement. MRI seems to be better than CT scan or ultrasound in detecting tumor infiltration of the bladder, vagina, pelvic sidewalls, pelvic fat, and rectum.
- Data from the literature indicate that patients with PFTC have a higher rate of retroperitoneal and distant metastases. Metastases to the para-aortic lymph nodes have been documented in 33 % of the patients with all stages of disease.

Suggested Reading

- Callahan TL, Caughey AB. 2008. Blueprints Obstetrics and Gynecology. Lippincott Williams & Wilkins. ISBN:078178249X.
- Haaga JR, Lanzieri CF and Gilkeson RC. 2003. CT and MR imaging of the whole body. Fourth Edition, Mosby.
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- Pectasides D, Pectasides E and Economopoulos T. 2006. Fallopian Tube Carcinoma: A Review. *Oncologist*.
- Levenson RB, Singh AK and Novelline RA. 2008. Fournier Gangrene: Role of Imaging.
- Kim MY, Rha SE, Oh SN et al. 2009. MR Imaging findings of hydrosalpinx: a comprehensive review. *Radiographics*. 29 (2): 495–507.