

Soft-tissue case 39. Diagnosis

Air within the uterus and bladder

Radiolucent areas can be seen within the uterus (Fig. 1, thin arrow) and bladder (Fig. 1, thick arrow). Air appearing within these organs is commonly due to its introduction during procedures such as hysteroscopy or cystoscopy. Rarely, infections by gas-forming organisms, especially in diabetic patients, may cause radiolucent areas in either organ on CT scans.¹ However, the simultaneous appearance of air in the uterus and bladder suggests the presence of an underlying fistula caused by a malignant lesion of either organ.² Furthermore, malignant disease or inflammation of the nearby colon, suggested by the intestinal symptoms, may also fistulate into both organs simultaneously. Investigations include direct visualization of the 3 organs, with biopsy of abnormal areas where appropriate. If a malignant tumour is found, en bloc resection may be required to prevent leaving residual disease.

This patient also described pneu-

maturia on direct questioning. Subsequent colonoscopic examination and biopsy confirmed the presence of adenocarcinoma of the sigmoid colon invading the bladder and uterus. At laparotomy, extensive pelvic invasion precluded a curative resection, and a palliative defunctioning colostomy was performed.

References

1. Joseph RC, Amendola MA, Artze ME, Casillas J, Jafri SZ, Dickson PR, et al. Genitourinary tract gas: imaging evaluation. *Radiographics* 1996;16:295-308.
2. Gross BH, Jafri SZ, Glazer GM. Significance of intrauterine gas demonstrated by computed tomography. *J Comput Assist Tomogr* 1983;7:842-5.

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FIG. 1. A pelvic computed tomography scan demonstrates air within the bladder anteriorly (thick arrow) and the uterus posteriorly (thin arrow). Air can also be seen in the rectum.