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**Figure 1.** Linear hyperpigmented neck lesion in a 39-year-old intravenous drug user.



**Figure 2.** Tender, erythematous and focally fluctuant neck lesion in a 48-year-old intravenous drug user. Used with permission of Edward T. Dickinson, MD, Department of Emergency Medicine, Hospital of the University of Pennsylvania, University of Pennsylvania School of Medicine, Philadelphia, PA.

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### Case 1

A 39-year-old man presented complaining of a chronic right-sided “sore-throat.” The patient’s medical history was significant for intravenous drug use. His physical examination was remarkable for a normal temperature and a normal oropharynx on inspection. He gestured to the right anterior-lateral portion of his neck along a hyperpigmented linear skin lesion as the area of maximal discomfort (Figure 1). A soft-tissue radiograph was obtained, which revealed a single fine linear metallic foreign body overlying the right first rib.

### Case 2

A 48-year-old man presented complaining of progressive painful swelling of the right side of his neck. The patient’s medical history was significant for intravenous drug use. Vital signs revealed a pulse rate of 116 beats/min and a temperature of 101.6 °F (38.6°C). His physical examination was remarkable for a large, swollen, erythematous, tender, and fluctuant area overlying the right anterior neck and supraclavicular region (Figure 2). Computed tomographic scan of the neck revealed diffuse inflammatory changes, a focal abscess, and retained needle fragments.

*For the diagnosis and teaching points, see page 210.  
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### DIAGNOSIS:

#### Case 1

*Chronic neck pain from a retained needle as a result of intravenous drug use.*

#### Case 2

*Acute neck abscess and cellulitis with retained needle fragments as a result of intravenous drug use.* Patients who have been long-term intravenous drug users must often resort to neck vasculature for injection, which is technically a much more difficult and awkward procedure than extremity injections and for this reason may pose a greater risk for needle breakage.

Numerous skin and soft-tissue complications, including cellulitis and abscesses, have resulted from intravenous drug use. Other complications include vascular aneurysms, thrombosis, endocarditis, osteomyelitis, hepatitis, and HIV. However, broken needles remain an underreported complication. In one sample of intravenous drug users, 20% reported at least 1 incidence of needle breakage during use, with 40% of those broken needles not being recovered.<sup>1</sup> These needles may migrate locally or possibly embolize to the central circulation, inflicting vascular damage.<sup>2</sup> These sharp foreign bodies pose particular risk of bodily fluid transmission and possibly of hepatitis and HIV to health care providers performing procedures such as incision and drainage of abscesses<sup>3</sup> and during autopsies.<sup>4</sup> Caution should be maintained when performing these procedures, and intravenous drug use and abscesses should be evaluated with radiograph before digital exploration or incision and drainage.

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### DIAGNOSIS:

*Infected urachal cyst.* The patient was taken to the operating room, where 40 mL of purulent material was removed and a Penrose drain placed; cultures revealed infection with *Proteus mirabilis* susceptible to ampicillin. The patient was treated with antibiotics and discharged after 5 days with the drain in place. The patient was doing well at 3-week follow-up, and the drain was removed. Surgical excision of the cyst is planned.

Urachal cysts result from a persistence of the embryologic urachus, a structure that connects the urinary bladder with the allantois (the precursor of a mature umbilical cord). Urachal cysts are the most common type of the 4 types of urachal remnants and are present in 1 in 5,000 births.<sup>1</sup> Diagnosis is often delayed until infection develops; the most common organism is *Staphylococcus aureus*, but many others have been reported.<sup>2</sup> Either CT or ultrasonography may be used to confirm the diagnosis.<sup>3</sup> The treatment of infected cysts is primarily surgical and should proceed in stages: an initial drainage procedure combined with antibiotic therapy, followed by a complete excision of the cyst at a later date.<sup>4,5</sup>

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