While intravenous drug users occasionally report the breaking of a needle into the skin or subcutaneous tissue, central needle migration remains a rare but potentially devastating complication” Levy et al (2019).

Abstract:

BACKGROUND: Thirteen million people inject drugs globally, making intravenous drug abuse a substantial concern worldwide. While intravenous drug users occasionally report the breaking of a needle into the skin or subcutaneous tissue, central needle migration remains a rare but potentially devastating complication.

CASE REPORT: A 27-year-old man with a history of intravenous drug abuse presented to the emergency department with the sudden onset of left-sided neck pain, chills, and subjective fever with a history of needle breaking in his left neck 3 weeks earlier while using heroin. A computed tomography scan of his chest revealed a needle lodged in the right ventricle with associated mediastinitis and mass effect on the left brachiocephalic vein, and a left internal jugular thrombus. Broad-spectrum antibiotics were initiated. This patient was managed nonsurgically for several reasons and was discharged on hospital day 12 with oral antibiotics.

WHY SHOULD AN EMERGENCY PHYSICIAN BE AWARE OF THIS?: Intravenous drug abusers commonly use cervical veins when their peripheral vasculature has become sclerosed. This puts intravenous drug users at increased risk for intravascular embolization. Due to varied symptomology—chest pain, dyspnea, fever, or asymptomatic—and timelines—days, weeks, or months—after reported needle fragmentation, this remains a complex and likely underdiagnosed condition. Case reports describe serious complications of intracardiac needle embolization, such as cardiac perforation, constrictive pericarditis, septic endocarditis, dysrhythmias, granulomas, venous thrombosis, empyema, acute or delayed spontaneous pneumothorax, osteomyelitis, and valvular damage. In this complicated patient population, clinicians should consider needle retention and relocation in patients who report needle breaking or in those who present with chest pain, dyspnea, or fever among other complaints.
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Sixty-one percent of intravenous drug users fail OPAT treatment
Drug administration via intermittent secondary intravenous infusions
Recidivism in intravenous drug users with infective endocarditis

Reference: