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Use of the SeQure® Microcatheter in Bronchial Embolization Procedures*

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CASE PRESENTATION

An 82-year-old woman presented with mild hemoptysis for 72 hours and recurrent pulmonary infections. Chest CT demonstrated bronchiectasis in the right pulmonary base (Figure 1). The patient was hemodynamically stable and had mild heart failure, and there was no other relevant medical history.

Bronchial endoscopy revealed the bleed origin in the upper right lobe due to chronic pulmonary infections, and the decision was made to proceed with bronchial arteriography and embolization for treatment.

PROCEDURAL OVERVIEW

Using a right femoral artery approach, a 5-Fr introducer sheath was placed. With a combination of a 5-Fr MIK-5 catheter (AngioDynamics) and a 0.035-inch hydrophilic guidewire, the intercostobronchial artery was catheterized, and a selective angiogram showed a hyperemic area in the right upper lobe in relation to the suspected area of bleeding (Figure 2). Subsequently, a 2.8-Fr SeQure® microcatheter (Guerbet) was advanced selectively over a 0.016-inch guidewire to the arterial vessel that supplied the right pulmonary lobe. After identifying the suspicious vessel, embolization was performed using a mixture of 350–500-µm Contour™ polyvinyl alcohol particles (Boston Scientific Corporation) with 5 mL of iodinated contrast and 5 mL of saline solution (50:50 dilution). The total volume injected was approximately 10 mL. The embolic material infusion was administered, ensuring that the reflux of contrast did not exceed the proximal radiopaque marker of the microcatheter (Figure 3), to prevent

Figure 1. Chest CT showing bronchial alterations in the upper right lobe.

Figure 2. Selective angiogram of the intercostobronchial trunk demonstrating mild right upper lobe parenchymal blush.

Figure 3. Selective embolization of the right bronchial artery was performed using a 2.8-Fr SeQure® microcatheter. The black arrow shows the proximal radiopaque mark of the microcatheter.

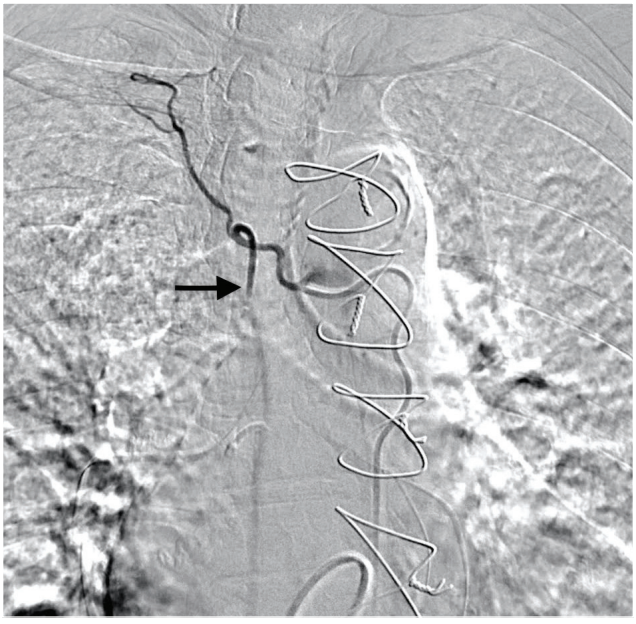

Figure 4. After embolization, there is no further flow into the right bronchial branch (black arrow). Arterial flow into the intercostal branch was preserved.

embolization of undesired arterial territories. A final control angiogram demonstrated total occlusion of the artery that supplied the right bronchial upper lobe (Figure 4).

Immediate control of active bleeding was achieved. The patient was discharged at 72 hours without complications, and she did not report recurrent hemoptysis after 1 month.

DISCUSSION

Bronchial artery embolization is an established procedure in the management of massive and recurrent hemoptysis. The SeQure® microcatheter reduces the risk of nontarget embolization to help maximize selective embolization. ■

*The SeQure® microcatheter is not recommended for use with PVA particles.

Results from case studies are not necessarily predictive of results in other cases. Results in other cases may vary.

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