

See Article page 240.



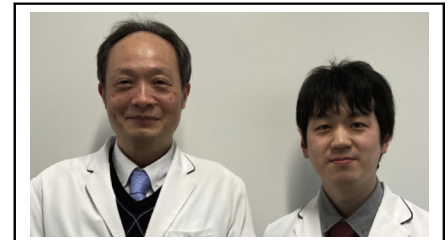
Commentary: Less is more in thoracic surgery

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Tricard and colleagues¹ reported a novel and useful minimally invasive procedure for the retrieval of lung contraceptive implant emboli. They successfully used a thoracoscopic lung-sparing approach through the parenchyma.

A subdermal contraceptive implant, such as Nexplanon (MSD), is a long-acting hormonal device used worldwide for young women who do not want to become pregnant. Nexplanon is a single-rod, progestogen-only implant measuring 4 cm in length and 2 mm in diameter. As it is nonbiodegradable and radiopaque, the precise location of the implant can be radiographically verified. Common side effects include frequent bleeding, headache, weight gain, acne, and breast pain. In contrast, migration into the pulmonary artery is a rare complication. Although implant migration is mostly asymptomatic, it can have serious consequences related to the vascular location of the migrated device.

The first reported case of implant migration into the pulmonary artery was published in 2014.² Since then, numerous other reports about migration into the vasculature and other sites have been reported, a study from France was recently conducted, and several recommendations were made to reduce the risk of migration.³ In this national study, 26 cases of Nexplanon migration into the pulmonary vasculature were identified in France. Information on removal (or not) was available for 24 cases. Removal was performed by endovascular procedure in 9 cases and by invasive surgical procedure in 6 cases. Surgical procedures were performed either thoracoscopically or thoracotomically. Of note, the



Toyofumi Fengshi Chen-Yoshikawa, MD, PhD (left), and Shoji Okado, MD, (right)

CENTRAL MESSAGE

Thoracoscopic lung-sparing approach through the parenchyma for the retrieval of lung contraceptive implant emboli is a novel and useful surgical option for distal migration in vasculature.

implant was left in situ in 9 cases, either because the removal procedure failed or because removal was considered too risky.

Some authors suggest that migration is a consequence of direct insertion into the vein, explaining the occurrence of hematoma after insertion and a nonpalpable implant.^{3,4} Early diagnosis of migration is important because a less-invasive alternative approach can be more successful.³ However, in most cases, patients are asymptomatic. Therefore, it takes a long time to arrive to a diagnosis. In addition, the incidence of this complication may have been underestimated. A delay between migration and diagnosis induces fibrosis around the implant, which makes removal more difficult, indicating a more invasive approach. In this patient, pulmonary angiography revealed that the subsegmental artery in S8 was occluded near its origin. Because of the long interval between the placement of the implant and the detection of its migration, as well as the migrated device's anatomical position, Tricard and colleagues¹ eventually chose surgical treatment first. However, they chose a less-invasive method by performing a lung-sparing procedure through the transparenchymal approach. The surgery was successfully accomplished thoracoscopically, and the patient had no perioperative complications.

We congratulate Tricard and colleagues¹ again on their clinically meaningful attempt to perform lung-preserving surgery in this patient. This approach may be a novel and

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useful option for the retrieval of the subdermal contraceptive implants that migrated into the distal pulmonary artery.

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