Major Complications of IVC Filter Placement
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Objective:
We report our experience with major complications of IVC filter placement to identify unusual but potentially serious problems.

Methods:
385 filters were placed in our institution in 2010 and 2011—98% of which were placed by vascular surgeons. We present five cases (one of which has been previously reported)—three of which lead to significant complications for the patient—with appropriate imaging demonstrating the complications and their treatment.

Results:
Two filters were misdeployed in the retroperitoneum—one in the spinal canal. One patient had a second filter placed within the vena cava after consultation. The first patient remained without a filter as the family refused further intervention. Another patient expired when the filter deployed but did not expand allowing the device to embolize to the pulmonary artery. The family and the patient’s physicians chose not to pursue operative retrieval of the device. The last two patients had perforation of the IVC by the legs of the filter. One patient, a young woman, had the filter so misshapen that retrieval was deemed to be unsafe. The fifth patient experienced perforation of the IVC by the filter leg which subsequently violated the aorta resulting in a 10cm pseudoaneurysm of the distal aorta. This was repaired using endovascular techniques as the patient was not a reasonable open operative candidate.

Conclusions:
While a very safe and effective technique to prevent pulmonary embolization, placement of an IVC filter is not without the potential for major complications. Recognition of the complication and, when appropriate, immediate treatment is necessary to avoid further complications, including mortality, from occurring.