patients leads us to believe that percutaneous catheter fragmentation and dispersion of the thrombus using conventional cardiac catheters is important in the emergency management of patients who have collapsed or are seriously compromised because of a massive pulmonary embolus. While catheter pulmonary embolectomy by experienced operators undoubtedly has saved lives, clinicians in hospitals without angiographic equipment but with access to x-ray screening facilities should still consider attempting percutaneous catheter fragmentation and dispersion in such patients.

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REFERENCES

To the Editor:

We appreciate the interest expressed by Brady and colleagues in our article and fully agree that only an experienced physician can carry out pulmonary embolectomy using a catheter device. We read with great interest the experience at the Hammersmith Hospital with breakdown of pulmonary emboli using conventional catheters.3

We recently undertook this procedure in an 82-year-old woman who had suffered from a massive acute pulmonary embolism with collapse and iterative cardiac arrests. Fragmentation of the thrombi was attempted via the femoral vein with an 8F pigtail catheter mounted on a J wire. Despite significant angiographic revascularization of the left pulmonary artery, the mean pulmonary arterial pressure remained elevated (27 mm Hg before and after the procedure), and inotropic support could not be reduced until 48 h after the procedure. Even if promising results were obtained in the three patients reported by Brady et al,4 the present case suggests that percutaneous catheter fragmentation could have variable success in improving hemodynamic and clinical status. One possible explanation is that dispersal of a proximal thrombus into the more distal branches would not significantly increase pulmonary blood flow if the smaller vessels are initially obstructed, so that catheter fragmentation would be less effective in this situation.

In our opinion, isolated proximal emboli are probably infrequent in massive pulmonary embolism. Therefore, there is need for further experience, on a more large-scale basis, to assess the efficacy of this attractive and simple technique.

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Another Complication of Barotrauma

To the Editor:

Pressure-induced injury, commonly known as barotrauma, occurs in 1 percent to 20 percent of patients receiving mechanical ventilation.1 The presence of subcutaneous air in the neck or upper part of the thorax is pathognomonic of pulmonary barotrauma.2 We recently cared for a patient who developed an unusual complication of barotrauma.

A 45-year-old man with a past medical history significant for traumatic C5-6 quadriplegia was admitted to the hospital with mental status changes. His initial examination was significant for clouding of the sensorium, but the findings were otherwise unchanged from those during previous hospital visits. While being examined, the patient's condition deteriorated rapidly; respiratory failure developed, necessitating assisted ventilation and prompting his admission to the intensive care unit. His chest radiograph showed bilateral diffuse opacities, and arterial blood gas analysis revealed significant hypoxemia. Blood cultures obtained on admission showed Candida parapsilosis infection, which was treated with intravenous amphotericin B.

Six days after admission the patient's clinical condition continued to deteriorate with worsening hypoxemia unresponsive to increasing levels of supplemental oxygen and positive end-expiratory pressure. Subsequently the patient developed a right-sided pneumothorax, which was managed by tube thoracostomy. Within hours, a left-sided pneumothorax occurred, which was treated similarly. His oxygenation status remained marginal.

On day 8 after admission it was noted that the patient's scrotal size had increased rapidly (Fig 1). The scrotum was distended and tense. However, no scrotal masses were found on palpation or transillumination. No changes in skin color were noted. A chest radiograph obtained at the same time revealed significant subcutaneous emphysema and a loculated left-sided pneumothorax. No evidence of pneumoperitoneum was found on multiple abdominal radiographs. Unfortunately, multisystem failure ensued, and the patient died on day 10.

Figure 1. Scrotum was distended and tense, and size had increased rapidly.

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1 Brady AJB, Crake T, Oakley CM. Percutaneous catheter fragmentation and distal dispersion of proximal pulmonary embolus. Lancet 1991; 338:1186-89
Massive pneumoperitoneum immediately following initiation of mechanical ventilation has been previously reported. The air may dissect forward to the anterior abdominal wall and/or rupture into the peritoneal cavity. On rare occasions a scrotal pneumatocele (pneumoscrotum) occurs, as air enters directly from the peritoneal cavity. However, our patient did not have evidence of pneumoperitoneum on radiographic studies.

Although physically deforming, the presence of a pneumoscutum has no clinical consequences and requires no immediate treatment. This unusual complication of pulmonary barotrauma should be recognized by physicians who care for artificially ventilated patients.

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Tracheobronchomegaly

To the Editor:

In the September 1991 issue of Chest, Boomsma and Schraufnagel reported a case of tracheobronchomegaly (Mounier-Kuhn syndrome). In their discussion of the findings, they mentioned other conditions, such as diffuse inflammatory tracheomalacia, relaxing polychondritis, Ehlers-Danlos syndrome, and cutis laxa, can also rarely cause diffuse tracheal widening. The authors failed to refer to a quite frequent cause of an enlarged tracheal diameter, namely, diffuse pulmonary fibrosis.

Acquired tracheomalacia as a cause of diffuse pulmonary fibrosis has been reported by Woodring et al. These authors studied chest radiographs of 34 consecutive patients with diffuse pulmonary fibrosis and measured the internal transverse diameter of the trachea 2 cm above the top of the aortic arch, considering greater than 25 mm in men and 21 mm in women as indicative of tracheomalacia. Tracheomalacia was present in ten of their patients, including four with fibrosing alveolitis, four with sarcoidosis, and two with chronic progressive histoplasmosis. In seven of these patients, serial radiographs documented that the tracheal dilatation had progressed with time.

These data and our own experiences suggest that tracheobronchomegaly can occur as a complication of diffuse lung fibrosis. Fibrotic lung diseases should therefore be mentioned as a cause of increased size of the trachea.

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Cardiac Dysfunction and Pulmonary Edema following Scorpion Envenomation

To the Editor:

In a report of cardiac dysfunction and pulmonary edema following scorpion envenomation, which appeared in the October 1991 issue