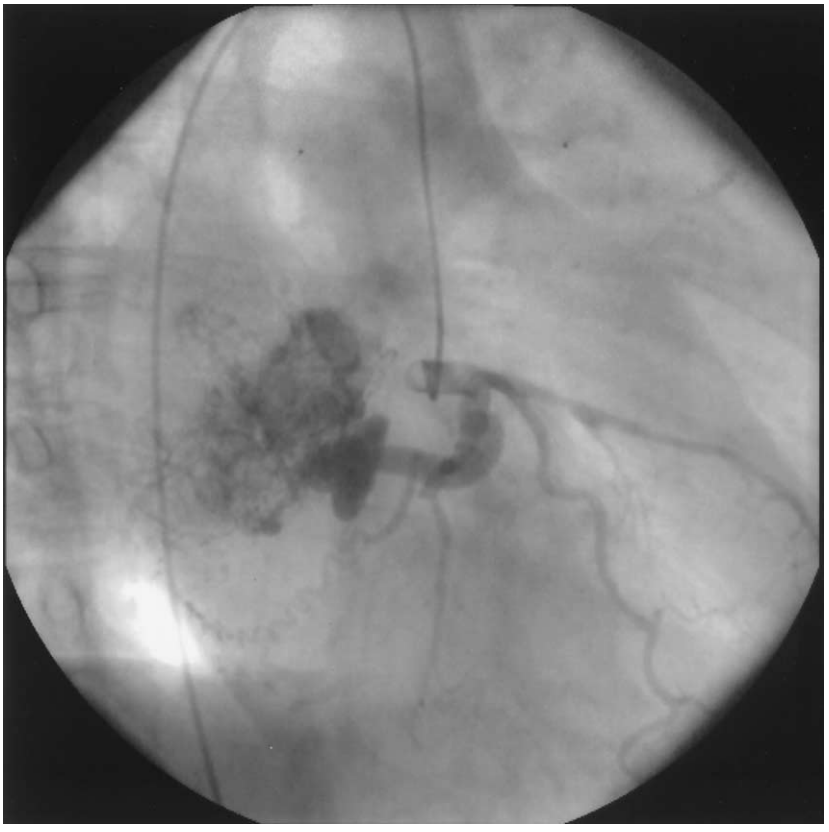

Figure 1. Selective coronary angiogram showing a dilated left circumflex coronary artery with a branch supplying a highly vascular tumor.

was 4.17 μg/L (reference, <0.42 μg/L). The plasma epinephrine level in the same specimen was not elevated.

A meta-iodobenzyl guanidine scintigram showed an area of mediastinal enhancement. Magnetic resonance imaging of this area revealed a paracardial mass measuring 7.5 by 6 by 5 cm that exhibited features consistent with pheochromocytoma. Because of the proximity of this mass to the heart, we performed coronary angiography that was revealing (Figure 1). The left circumflex coronary artery was markedly dilated and a branch of the vessel fed the tumor. The tumor was operatively removed in its entirety (Figure 2).

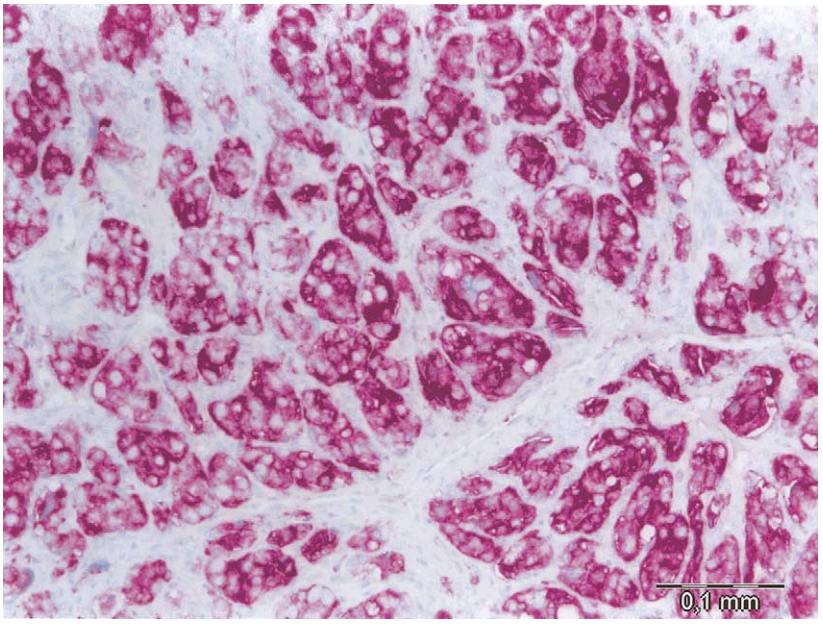

Figure 2. Paraganglioma stained with an antibody against chromogranin A.

Because as many as one third of pheochromocytoma patients have a Mendelian form (1), we considered mutations in the genes coding for the succinate dehydrogenase family subunits (*SDHB* and *SDHD*) and von Hippel-Lindau's disease. Our patient had no evidence of multiple endocrine neoplasia type 2 or of neurofibromatosis type 1. We sequenced the patient's genomic DNA for the VHL gene and the SDHB and SDHD genes and found no germ-line mutations. Young age at onset, a bilateral pheochromocytoma, or multiple paragangliomas would have made the chances of a germ-line mutation more likely.

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PNEUMOPERICARDIUM AFTER MANUAL STRANGULATION

To the Editor:

Most nonpenetrating external blunt neck traumas cause superficial

skin lesions or laryngeal injuries (1–3). Hypopharyngeal and pharyngoesophageal perforations after blunt neck traumas are rare (2). Bloody expectorations, painful swallowing, and subcutaneous emphysema are symptoms of hypopharyngeal perforations (3,4). Despite the frequency of blunt neck traumas, aerodigestive perforations with subcutaneous, mediastinal, and pericardial air spread are extremely rare. The two cases reported previously occurred after a car accident and a blow against the handlebar of a bicycle (1,5). Although the results of human violence are frequently seen in emergency medicine, the literature on strangulation injuries in surviving victims is scant.

We report a 32-year-old man who had been strangled by hand in a homicide attempt. He had no complaints, but neck palpation revealed crackling. Indirect laryngoscopy was normal, but chest radiography showed a hypointense outline of the heart. Computed tomographic (CT) scan revealed air within the subcutaneous (Figure 1, asterisk), retropharyngeal (Figure 1, arrow), mediastinal (Figure 2, plus sign), and pericardial spaces (Figure 2, arrowhead) without visible lesions of the upper aerodigestive tract. Panendoscopy showed a tear in the posterior hypopharyngeal wall. Conservative treatment with a nasogastric feeding tube and antibiotherapy was undertaken. Control CT a week later showed complete disappearance of the subcutaneous emphysema, pneumomediastinum, and pneumopericardium.

Besides pulmonary origins, cervical emphysema occurs after hypopharyngeal, esophageal, or tracheal perforations. Usually, penetrating injuries rather than blunt neck trauma cause perforations (6). Most blunt neck traumas cause laryngeal contusions (4), with barely visible injuries. Thus, patients with a history of blunt neck trauma should alert investigators so that symptoms like hoarseness, dysphagia, or dyspnea (6) may be sought. Symptoms indicating up-

Figure 1. Cervical CT showing extensive subcutaneous air spread.

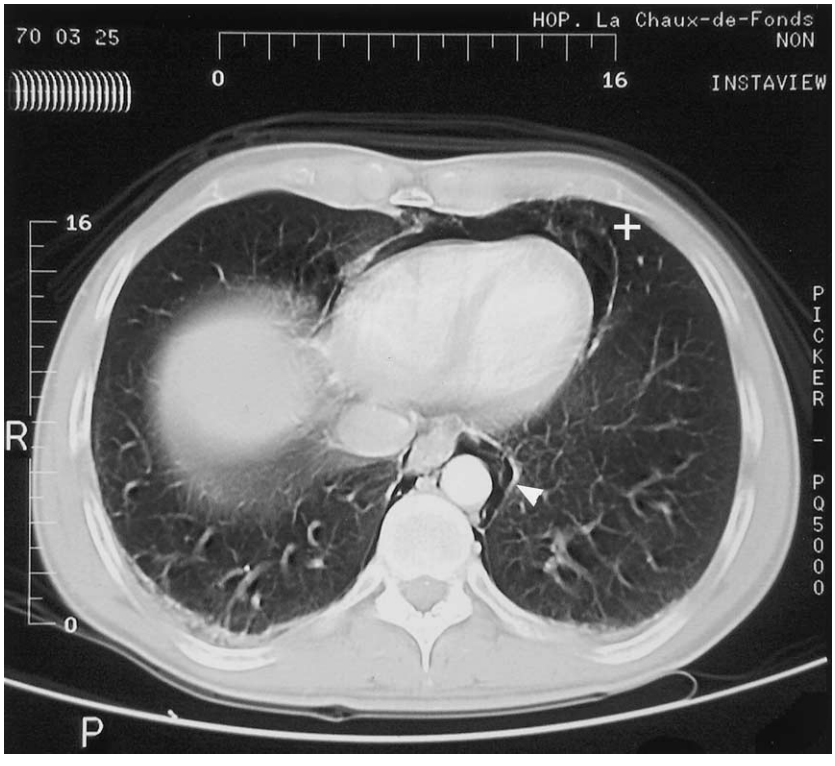

Figure 2. Thoracic CT showing mediastinal and pericardial air spread.

per airway ruptures are pharyngeal pain worsened by swallowing, subcutaneous emphysema, and bloody saliva.

Although suicidal or homicidal acts are frequent (4,6), most strangulation injury descriptions are found in the forensic literature (7). The few reports in survivors revealed hyoid bone and laryngotracheal fractures as main lesions (8), but even carotid artery dissection has been reported after strangulation (9). Above all, the literature on survivors reveals that inexperienced physicians and policemen tend to underestimate the possible extent of the injuries caused by blunt neck trauma (8), probably due to the lack of visible and clinical signs.

Compression, shearing, and barometric forces have been identified as possible causes of perforation in blunt neck traumas. In our case, shearing forces possibly weakened the mucosa, strangulation compressed the upper airway, and desperate exhalation trials increased barometric forces in the hypopharynx. In contrast to pneumopericardium caused by penetrating chest trauma, which often requires surgical intervention, pneumopericardium caused by blunt neck trauma can be approached conservatively if tension pneumopericardium is excluded (5). Nevertheless, a close cardiovascular surveillance is necessary.

Aerodigestive perforations are associated with high mortality, whereas localization and treatment within the first 48 hours seems the most important factor determining the outcome (2).

Manual strangulation, a frequent reason for emergency medical attendance, is sufficient to cause hypopharyngeal perforation. Because blunt neck traumas often lack clear and visible signs, alertness, careful physical examination, and detailed analyses of neck and chest images in patients with a history of blunt neck traumas are required.

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TRACHEAL PUNCTURE REVISITED

To the Editor:

As I contemplated the letter by Malik and Adams, I was ambivalent whether I should thank the editors for allowing me a walk down the memory lane of central catheter placement or express my regrets that the technologic advances that have occurred since the 1980s in this aspect of critical care apparently have gone unrecognized (1).

In 2001, the Agency for Health Care Research and Quality supported an evidence-based review of best hospital safety practices (2). Leading the list was the use of ultrasound for placement of central venous catheters. The literature is replete with articles documenting the efficacy and safety of this adjunct, yet I suspect a substantial number of individuals placing central lines have not adopted this practice. In fact, principal to the listing of this recommendation in the "top 11" is the fact that it was considered highly rated in terms of strength of the evidence supporting more widespread implementation. Given that fact, I find it incredible that the editors would publish a letter on the topic without seizing the opportunity to emphasize "best practice". Discussions of the complications from the "blind stick" technique need no longer be a part of the lexicon of clinical practice and should have little role in the current medical literature.

Without attempting to open an unrelated critical care hot-button issue not directly related to the focus of the article, one can only hope that the authors' approach to end of life care has progressed beyond their approach to central venous access.

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