

Air embolism (AE) is a rare, but serious complication that can occur in the practice of hemodialysis” Sahutoglu et al (2016).

Abstract:

Introduction: Air embolism (AE) is a rare, but serious complication that can occur in the practice of hemodialysis. In contrast to careful techniques and meticulous care during insertions and manipulations of the central catheters, awareness of the risk of AE following catheter removal is less. We aimed to analyze the clinical characteristics of the all case reports with AE after catheter removal and summarize the mechanisms, clinical consequences, treatment and prevention of AE.

Methods: In addition to our case, MEDLINE database was searched for all case reports with AE following catheter removal, and the clinical, diagnostic and outcome data were analyzed.

Findings: A total of 10 patients (including our case) (M/F 6/4; median age 50.5 years) were found for the analysis. Procedures for prevention of AE were reported in a few patients (Trendelenburg position 2, airtight dressing 1). The time that elapsed between catheter removals and onset of AEs was ranged from seconds to 6 hours. The most common findings were dyspnea (90%), hypoxemia (70%), and cerebral dysfunction (70%). The most common sites where air could be detected were the left ventricle (40%), pulmonary artery (30%) and right ventricle (30%). Mortality was reported in 4 (40%) cases and the remaining 6 patients had complete recovery. Blocking of air portal was not reported in any of the fatal cases.

Discussion: AE following catheter removal carries a major risk of mortality. Great awareness and attention to preventive procedures and appropriate care after development of AE seem mandatory.

Reference:

Sahutoglu, T., Sakaci, T., Hasbal, N.B., Kara, E., Ahbap, E., Sevinc, M., Koc, Y., Basturk, T., Sahutoglu, E. and Unsal, A. (2016) Air embolism following removal of hemodialysis catheter. Hemodialysis International. July 25th. .

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