This resulted in loss of underlying subcutaneous tissue and decreased skin pliability. He had a large, open puncture wound at the catheter site on his neck, probably resulting in air entry" Balakrishnan et al (2016).

Abstract:

INTRODUCTION: Venous air embolism (VAE) due to central venous catheter (CVC) placement is a rare but preventable complication which is potentially fatal. We describe a case highlighting unique patient characteristics which increase the risk of developing VAE.

CASE DESCRIPTION: A sixty-year-old gentleman was admitted to the hospital with dyspnea and altered mental status. His comorbidities include cancer of the neck and tongue, currently in remission, and schizophrenia. On presentation, he was found to be in acute respiratory failure, due to pneumonia, and required mechanical ventilation. Following extubation, his CVC was removed from the right internal jugular vein. While ambulating around the unit, he experienced a coughing fit and dizziness. He rapidly developed cardiopulmonary collapse requiring re-intubation and vasopressor support. Chest x-ray demonstrated a radiolucent column along the lateral aspect of the right neck. Due to concern for VAE, an echocardiogram

was performed, revealing multiple air-bubbles in the right and left chambers of the heart.

DISCUSSION: Our patient was predisposed to developing VAE due to the extensive radiation induced skin changes, from his cancer treatment, on the neck and upper thorax. This resulted in loss of underlying subcutaneous tissue and decreased skin pliability. He had a large, open puncture wound at the catheter site on his neck, probably resulting in air entry. Anxiety and agitation, due to schizophrenia, made it difficult to maintain our patient in a supine or Trendelenburg position following CVC removal. This case highlights the importance of recognizing patient factors that may increase the risk of VAE.

Full Text

Reference:

Balakrishnan, B., Noor, Z. and Curran, C.L. (2016) Bubbles in the Heart: A Case of Venous Air Thromboembolism. Respiratory Medicine Case Reports. 18, p.58-61. eCollection 2016.

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