To examine the safety and efficacy of contrast injection through a central venous catheter (CVC) for contrast-enhanced computed tomography (CECT)" Buijs et al (2017).

Abstract:

OBJECTIVE: To examine the safety and efficacy of contrast injection through a central venous catheter (CVC) for contrast-enhanced computed tomography (CECT).

METHODS: A systematic literature search was performed using PubMed. Studies were deemed eligible if they reported on the use of CVCs for contrast administration. Selected articles were assessed for their relevance and risk of bias. Articles with low relevance and high risk of bias or both were excluded. Data from included articles was extracted.

RESULTS: Seven studies reported on the use of CVCs for contrast administration. Catheter rupture did not occur in any study. The incidence of dislocation ranged from 2.2-15.4%. Quality of scans was described in three studies, with less contrast enhancement of pulmonary arteries and the thoracic aorta in two studies, and average or above average quality in one study. Four other studies used higher flowrates, but did not report quality of
CONCLUSION: Contrast injection via CVCs can be performed safely for CECT when using a strict protocol. Quality of scans depended on multiple factors like flow rate, indication of the scan, and cardiac output of the patient. In each patient, an individual evaluation whether to use the CVC as access for contrast media should be made, while bolus tracking may be mandatory in most cases.

Reference:


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