Pulmonary embolism in lead-related infective endocarditis with large vegetations

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Introduction: Transvenous lead extraction (TLE) in cardiac implantable electronic device patients with infective endocarditis and large vegetations is controversial due to the risk of embolization.

Methods: All consecutive patients referred to our centre for TLE due to infection and with evidence of large vegetations (>10mm), underwent pre- and post-procedure computed tomography (CT) scanning to assess pulmonary embolism.

Result: A total of 11 patients (73% males, mean age 62±8 years) implanted with pacemaker or implantable cardioverter defibrillator were included in the study. In the largest longitudinal diameter, the mean size of vegetations on endocardial leads was 20±8 mm. Pre-procedural CT scanning identified 8 (72%) patients with one or more significant pulmonary emboli with an overall mean size of 20.2±12.2 mm. All patients underwent successful complete TLE with 28 leads extracted using locking styles (45%) or laser sheath (55%). The mean fluoroscopy time was 17.5±22.8 minutes without difference between those with or without pre-procedural pulmonary embolism. There were no intra- or early post-procedure major complications. The post-procedure CT scanning confirmed the presence of silent pulmonary emboli in 6 (54%) patients with a mean size of 22.5±3.5 mm. There was no evidence of different distribution of emboli among the lungs lobes. Patients with or without post-procedure pulmonary embolism had similar hospitalization stay (21.0±10.8 days).

Conclusion: In high-volume centres, TLE of infected leads with large vegetations is feasible. In our cohort, the prevalence of pulmonary embolism is high both before than after the procedure, but neither procedure outcome nor hospital stay were affected by this complication.