

Incidence, epidemiology, risk factors and prognosis of atrio-esophageal fistula following percutaneous catheter ablation. An exhaustive nationwide registry

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Funding Acknowledgement: Type of funding source: None

Introduction: A rare but often fatal complication of atrial fibrillation (AF) ablation is the formation of an atrioesophageal fistula (AEF) whose true prevalence and risk factors remain obscure.

Objective: To determine incidence, epidemiology, risk factors and prognosis of AEF using a – as exhaustive as possible – nationwide survey

Method: All French centers performing AF ablation were identified and survey were sent concerning the habits, techniques of AF ablation and eventual cases of AEF.

Results: 82 of the 103 centers (80%) performing ablation of AF in France were included in the study performing 129286 ablations from 2006 (93% of the total AF ablation in France). 33 AEF were declared (26 AEF and 4 esopericardial fistula) (0.026% risk per procedure) with a stable annual incidence over time, unchanged after the advent of thermal probe. Sensi-

tivity of CT scan for AEF diagnosis was 81%. Mortality was 60%, significantly lower in case of surgical mangement (31 vs 93%, p=0.001). No case of AEF happened after cryoablation and only two AEF occurred in redo ablation. In multivariate analysis, lack of use of contact force catheters and the realization of posterior/roof ablation lines emerged as independent factors associated with the risk of AEF with OR 23.6 (95% CI [4.5; 21]) p=0.0002 and OR 3.7 (95% CI [1.1, 13]) p=0.04) while the lack of thermal probes remained of borderline significance.

Conclusion: The rate of AEF after AF ablation in a nationwide and well exhaustive survey can be evaluated to 0.026% with an annual incidence remaining stable over time. A normal CT scan does not rule out the diagnosis. Prognosis remains poor with a mortality of 60% and crucially dependant of immediate surgical correction.

