

Women Have a Two-fold Higher Risk for Developing Cardiac Tamponade during AF Ablation Procedures: Results from a Multicenter International Survey in 27,249 Cases

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Introduction:

Cardiac tamponade is the most dramatic complication observed during AF ablation and the leading cause of procedure-related mortality. Female gender is a known risk factor for complications during AF ablation; however, it is unknown whether women have a higher risk of tamponade.

This multicenter survey was designed to assess the risk of cardiac tamponade during AF ablation procedures according to patient gender in a large cohort of patients.

Methods:

A systematic Medline review was conducted for all English language papers published between 2000-2012 dealing with AF ablation in patients ≥ 19 years old. All authors reporting tamponade as a procedure complication in their publications were contacted for providing more detailed information on: a) total number of procedures performed in each patient gender; b) total number of acute tamponade in regard to patient gender; c) age and management of patients experiencing tamponade. In a second step, authors were invited to update their results to include all AF ablation procedures performed in their laboratory.

Results:

Twenty seven EP centers provided detailed information on 27,249 ablation procedures (Table). Overall 260 (1%) cases of tamponade were reported (males 0.75%, females 1.5%, $P < 0.0001$). The incidence of tamponade in the participating centers varied from 0.2 to 3.7% in men and from 0.2 % to 6.9 % in women. There was no gender difference in the mode of management.

Table:

	Male	Female	P value
Total procedures (n).	19,554 (71.7%)	7695 (28.3%)	
Tamponade (n)	147 (0.75%)	113 (1.5%)	<0.0001
Management			
Pericardiocentesis	83%	84%	NS
Surgery	17%	16%	NS
Age of patients with tamponade (years)	61±9	62±9	NS

Conclusions:

Tamponade during AF ablation procedures is relatively rare. Women have a twofold higher risk for developing this complication. This gender difference should be taken in account when obtaining informed patient consent before the procedure.