

Effect of Gender on the Incidence of Tamponade in Patients Undergoing RF Ablation of Supraventricular Tachyarrhythmias: A Single Center Experience in 3,373 Cases

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Background:

Cardiac tamponade is a dramatic complication of cardiac ablation procedures. Female gender may be a risk factor for complications during ablation. However, it is unknown whether women have a higher risk of tamponade.

Aim:

To assess the incidence rate of tamponade in regard to patient gender during ablation of various types of supraventricular tachyarrhythmias (SVTA) in a large patient cohort.

Method:

We reviewed the computerized database of all SVTA ablation procedures performed at our institution between years 1993-2012. All cases of acute tamponade were further assessed in respect to patient gender, age and management.

Results:

Overall, 3373 patients underwent ablation: 1928 (57%) men and 1445 (43%) women. There was no significant difference in patient age according to gender for each of the types of arrhythmias ablated. A total of 11 (0.3%) cases of acute tamponade occurred. The incidence rates of tamponade were 0.1%, 0.4%, 0.1% and 2.8% during ablation of AVNRT, AP, AFL and AF, respectively. Nine (0.6%) cases of tamponade occurred in women and 2 (0.1%) in men ($P=0.009$). The higher incidence of tamponade in women was mainly observed in patients undergoing AF-ablation. In this latter group, women had a 12-fold higher risk for developing this complication ($p=0.003$). The incidence rate of tamponade during ablation of the other types of SVTA was not significantly different in regard to patient gender. In 2 patients (0.2%) undergoing ablation of AFL late tamponade occurred 15 days and 3 months after the procedure.

Tamponade was managed by pericardiocentesis in 9 (82%) of patients. In the remaining 2 (18%) patients, who both underwent AF ablation, emergency surgery was required. All patients had a subsequent uneventful course.

Conclusions:

Tamponade is extremely rare during ablation of AVNRT, AP and AFL; however it occurs in 2.8% of patients undergoing AF ablation. Women have a 12-fold higher risk of developing tamponade during AF ablation. In centers performing AF ablation, surgical back-up is warranted.

	No Patients	No Procedures/pt	Male	Female	Tamponade Male	Tamponade Female	P
AVNRT	1372	1.03	557	815	0(0%)	1(0.12%)	0.41
AP	645	1.1	403	242	1(0.25%)	2(0.82%)	0.3
AFL	1140	1.08	814	326	0	1 (0.31%)	0.11
AF	216	1.12	154	62	1(0.65%)	5(8.06%)	0.003
ALL	3373		1928	1445	2(0.10%)	9(0.62%)	0.009

AVNRT=AV nodal reentry tachycardia; AP=accessory pathway;

AFL=atrial flutter; AF=atrial fibrillation