How to avoid complications of AF ablation?

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Catheter ablation became an effective rhythm control strategy in patients with antiarrhythmic drug refractory atrial fibrillation (AF). With the development of irrigated tip ablation catheter and 3D electroanatomical mapping system, its efficacy and safety has been improving. However, there are still 4~5% major complication rates. In world-wide survey conducted by Cappato et al. there were 0.15% mortality and 0.04% risk of atrio-esophageal fistula which results in catastrophic clinical outcome. Another potential complications are cardiac tamponade, stroke, sinus node dysfunction, phrenic nerve paralysis, or other groin complications. But, these complications are generally recoverable by appropriate managements. To avoid such complications and improve clinical outcome of AF ablation, the following factors should be kept in mind.

First, we have to select appropriate patients and understand detailed cardiac anatomy. Second, do not push ablation catheter without watching electrogram, and do not fully trust 3D maps. Third, the operator should concentrate to ablation procedure for a long time, but have to listen to the patients' complaint. The last, but not least, interventional EP physician need to make a good surgeon friends.