

Catheter Ablation: Radical Cure for Atrial Fibrillation

Atrial fibrillation is a common form of cardiac arrhythmia. Rapid and disorganized heartbeat causes patients to feel an uncomfortable flopping sensation inside the chest. The occurrence of atrial fibrillation is associated with heart failure and stroke, with the related mortality doubled when compared with normal populations.

In 1997, Division of Cardiology, Department of Medicine, Faculty of Medicine, HKU pioneered the introduction of catheter ablation in HK, making HK one of the leading places in adopting this technique in Asia.

Catheter ablation is generally used to treat patients not response to medications. The procedures cure 60% to 70% atrial fibrillation cases. The risk of complications is 1% to 2%.

Starting from 2001, the Division at HKU has been researching on the use of different energies in catheter ablation. Conventional catheter ablation uses heat energy to kill heart cells that cause electrical short-circuits leading to irregular heartbeats. However, heat energy can potentially cause narrowing in pulmonary veins, thus increases the chances of blocking.

HKU has already conducted trials to use cold energy to eliminate abnormal heart cells. Cryoablation prevents narrowing of pulmonary veins and reduces damage in the atria and other surrounding organs related to the use of heat energy. The cold method may also prevent the formation of blood cots, thus reduces the incidence of stroke during the procedures.