Midterm follow-up of patients with paroxysmal and persistent atrial fibrillation after pulmonary vein isolation by cryoballoon ablation

Sarah Traulé, Maciej Kubala, Jean-Sylvain Hermida
CHU sud, Centre d’activité de rythmologie, Amiens, France

Introduction: The objective of this prospective study was to evaluate the midterm clinical outcomes of PV isolation, using a cryoballoon catheter in our center.

Methods: Between July 2006 and November 2011, 234 consecutive patients (age 56±11 years, 76% of men) with symptomatic paroxysmal (n=162) or persistent AF (n=72) underwent PV isolation with a 28 mm or 23 mm cryoballoon catheter. In case of AF recurrence, patients could have several procedures using cryoablation and/or PV isolation and additional linear lesions by radiofrequency. Follow-up with holter monitoring and phone calls were performed.

Results: We successfully isolated 713 of 936 PV (76%). In 73 patients (31%), an irrigated-tip radiofrequency catheter was used to create a supplemental focal lesion after cryoapplication and 55 patients (24%) had cavotricuspid isthmus line. 28 mm cryoballoon catheter was mostly used (141 procedures, 60%). The mean overall procedural duration was 178±36 min (range 120–285), and mean duration of fluoroscopic exposure was 9±5 min (range 3–27). Over a median period of 20 months (range 3–53), 12 patients were lost to follow-up, 4 patients were deceased. At 3 months of follow-up, 78% of patients with paroxysmal AF had remained recurrence free, vs. 69% of patients with persistent AF. Phrenic nerve palsy was the most frequent, although reversible complication. A left atrial flutter appeared in 23 cases (11%). Considering midterm outcomes, 68% of patients with paroxysmal AF and 62% of patients with persistent AF had no recurrence, after an average of 1.3 procedures. Looking at failures, only 10% of patients did not have any improvement after ablation. 52% of patients were free of AF without antiarrhythmic drugs and 36% of them had stopped anticoagulation.

Conclusion: PV isolation, using a cryoballoon catheter is a safe and effective strategy with a high rate of success. It can be an alternative to RF ablation but randomised comparisons are needed.

Incidence of atrial fibrillation in patients with atrial flutter before and after ablation according to the nature of associated heart disease

Béatrice Brembilla-Perrot (1), Maxime Benichou (2), Jean Marc Sellal (2), Pierre Yves Zinzius (1), Jérôme Schwartz (1), Vladimir Manenti (1), Daniel Beurrier (1), Gabriel Cismaru (2), Mahesh Pauriah (2), Pierre Louis (1), Christian De Chillou (1), Olivier Selton (1), Arnaud Terrier De La Chaise (1)

(CHU of Braibois, cardiologie, Vandoever Les Nancy, France – (2) Cardiologie, CHU de Braibois, Vandoever Les Nancy, France

Radiofrequency (RF) ablation is a treatment of choice of typical atrial flutter (AFL). However the risk of atrial fibrillation (AF) is high. Heart disease (HD) presence may modify this risk. The purpose of the study was to look for the role of associated HD on previous history of AF and later occurrence of AF after AFL ablation.

Methods: 965 patients, mean age 64±12, were consecutively referred for ablation of recurrent or poor-tolerated AFL. Clinical history, occurrence of AF after ablation according to the nature of associated heart disease

Results: HD was present in 744 patients (77%): hypertensive disease (HTD) (n=186), ischemic HD (IHD) (n=163), valvular HD (VHD) (n=113), dilated cardiomyopathy (DCM) (n=87), respiratory failure (resp) (n=84), congenital HD (cong) (n=26), miscellaneous HD (n=59). Prior AF was more frequent in patients without HD (67%) than in patients with HD (26%(p<0.0000). Differences were significant with all subgroups of HD except for patients with DCM (55%). Last patients differed significantly from all other subgroups of HD. During follow-up (3±3years) 40 patients without HD (22%), 113 with HD (18%) developed AF (NS). There were no differences among all subgroups of HD. Among patients with later AF, 15 without HD (8%); 70 with HD (10%) had no prior AF (NS). Among subgroups with HD, patients with cong HD had a higher risk of AF (28.5%) than patients without HD (10%)(p<0.003) or patients with DCM (7%) (p=0.011) or HTD (7.5%). Differences were not significant for other HD's.

Conclusions: Surprisingly patients without HD had more frequently prior AF than patients with HD. However after AFL ablation AF risk was similar. Antiarrhythmic drugs maintained in patients with AF history could have decreased the risk of subsequent AF. Prior AF was more frequent in patients with DCM than in patients with other HD. After AFL ablation only patients with congenital HD seem to have a high risk of developing AF compared to patients with HD of other origin or patients without HD.

Discrepancy between antithrombotic therapy and assessed risk of stroke among patients with atrial fibrillation in French primary care


Rational: In France around 800,000 patients are diagnosed for atrial fibrillation (AF) with an increased risk of stroke. Oral anticoagulants (AC) dramatically reduce the risk of stroke but increase risk of major bleeding. As a consequence, guidelines recommend a risk-based approach to anticoagulation for AF. The CHADS2 score is the most widely used. In France, thromboprophylaxis of patients with AF is followed up in primary care. This study was to describe AF patients’ management by general practitioners (GP).

Methods: This cross-sectional study analyzed the Longitudinal Patient Database (LPD) which contains prescriptions, patients’ profiles and other information collected by a representative sample of 1,200 GPs. Data from all patients present in the database from July-2010 to June-2011, with a diagnosis of AF and aged 18 and above were extracted. CHADS2 score based on 5 features (HTA, age ≥75, diabetes, previous stroke, transient ischaemic attack or systemic embolism, congestive heart failure or left ventricular dysfunction) was calculated for all patients. According to ESC guidelines, no antithrombotic therapy is preferred for AF patients with CHADS2 score=0, aspirin or oral AC is recommended with CHADS2 score=1 and chronic oral AC is recommended with a CHADS2 score ≥2.

Results: A total of 15,623 AF patients were identified. Mean age was 74.6 (±11.1) years old, 59.5% were men and mean CHADS2 score was 1.5 (±1.1).

Table 1: Antithrombotic therapy according to CHADS2 score

<table>
<thead>
<tr>
<th>CHADS2</th>
<th>N=2638</th>
<th>N=5026</th>
<th>N=7959</th>
<th>Total N=15623</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VKA* n (%)</td>
<td>1090 (41.3%)</td>
<td>2460 (48.9%)</td>
<td>4372 (54.9%)</td>
<td>7922 (50.7%)</td>
</tr>
<tr>
<td>Aspirin* n (%)</td>
<td>610 (23.1%)</td>
<td>1079 (21.5%)</td>
<td>1571 (19.8%)</td>
<td>3260 (20.9%)</td>
</tr>
<tr>
<td>None n (%)</td>
<td>938 (35.5%)</td>
<td>1487 (29.6%)</td>
<td>2016 (25.3%)</td>
<td>4441 (28.4%)</td>
</tr>
</tbody>
</table>

*None or associated

Conclusion: In this large French patient database, in primary care according to ESC guidelines, more than 40% of AF patients with a very low risk of stroke (CHADS2=0) are over treated, while 45% of high risk patients (CHADS2=2) are under-treated. Further analyses should be performed to investigate the gap between clinical practice and guidelines.

*Additional abstract received later – No numbering