

心房細動に対するアブレーションの効果(150427)

心房細動に対するカテーテルアブレーションが話題になった。学生と一緒に抄読会。

文献 1 はアブレーションの効果を検討したメタ解析。

●PECO

P: atrial fibrillation

E: catheter ablation (CA)

C: antiarrhythmic drug therapy

O: first- and second-line therapy for the maintenance of sinus rhythm

心房細動患者にカテーテルアブレーションを行うと、抗不整脈薬を投与する場合と比較して、洞調律維持ができる患者が増えるかどうかを検討した試験であることが分かる。

●妥当か

meta-analysis of randomized controlled trials とあり、問題はなさそう。

●結果

カテーテル群で再発が 60%減少した。

There was recurrence of atrial tachyarrhythmia in 222 of 785 (28%) patients who underwent CA and in 451 of 696 (65%) patients who were on antiarrhythmic drug therapy (relative risk, 0.40; 95% confidence interval, 0.31–0.52; $P=0.00001$). Subgroup analysis revealed a beneficial effect of CA both as a first-line (relative risk, 0.52; 95% confidence interval, 0.30–0.91; $P=0.02$) and as a second-line (relative risk, 0.37; 95% confidence interval, 0.29–0.48; $P<0.00001$) therapeutic modality. There was a significantly higher incidence of major adverse events in the CA group when compared with those in the antiarrhythmic drug therapy group (relative risk, 2.04; 95% confidence interval, 1.10–3.77; $P=0.02$, $I(2)=0\%$).

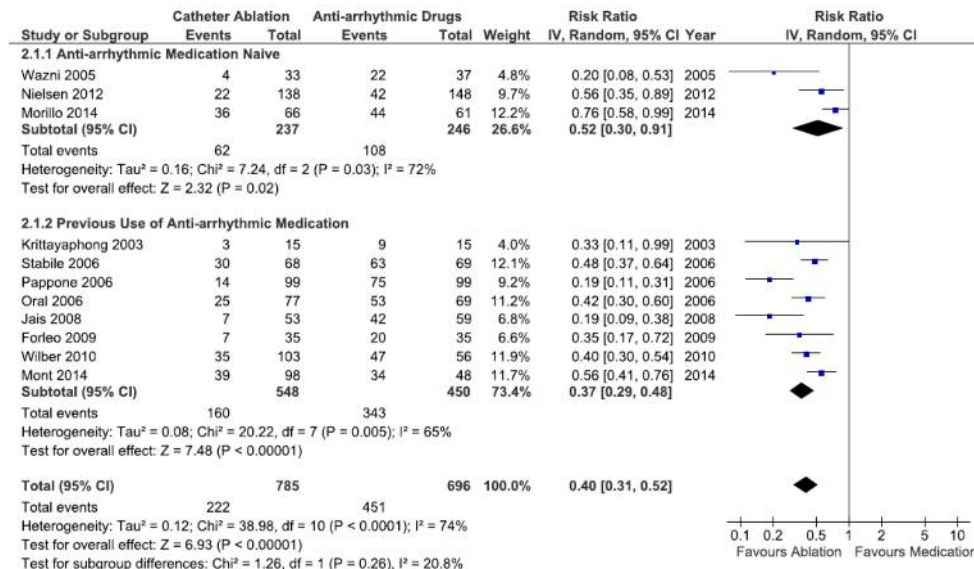


Figure 2. Forest plot comparing the efficacy of catheter ablation to antiarrhythmic drug therapy. Stratified on the basis of exposure to antiarrhythmic medications. CI indicates confidence interval; and IV, inverse variance.

(参考文献 1 より引用)

論文自体に出版バイアスの可能性が指摘されていることから(有意ではないが)、効果についてはやや割り引いて考える必要があるかもしれない。カテーテル群に重大な副作用が多いことは無視できないと思う。

A separate analysis was performed for major adverse events, defined as sudden death, embolic events (stroke or transient ischemic attack), major bleeding, pulmonary vein stenosis, atrioesophageal fistula, pericardial complications (effusion, hemorrhage, tamponade, and perforation), and life-threatening arrhythmias.

文献 2 も 2014 に発表されているが、こちらは RCT。

●PECO

P: patients with paroxysmal AF as a first-line therapy.(treatment-naive patients with paroxysmal AF)

E: radiofrequency ablation

C: antiarrhythmic drugs (standard therapy)

O: The time to the first documented atrial tachyarrhythmia of more than 30 seconds (symptomatic or asymptomatic AF, atrial flutter, or atrial tachycardia), detected by either scheduled or unscheduled electrocardiogram, Holter, transtelephonic monitor, or rhythm strip, was the primary outcome. Secondary outcomes included symptomatic recurrences of atrial tachyarrhythmias and quality of life measures assessed by the EQ-5D tool.

未治療の発作性心房細動患者に対して、カテーテルアブレーションを施行すると、抗不整脈薬を投与する場合と比較して、心房細動の再発が減少するかどうかを検討した研究であることが分かる。

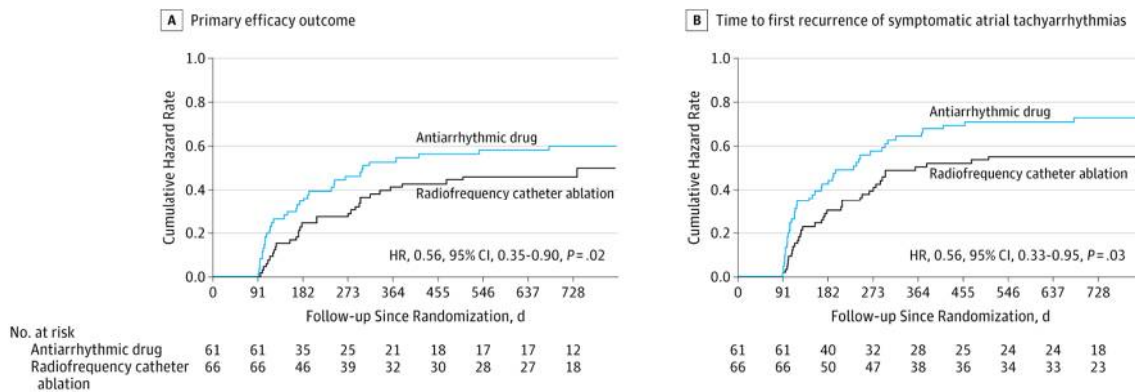
● 妥当か

抄録中に randomized、followed up for 24 months との記載があり、本文の Statistical Analysis に Treatment groups were analyzed on an intention-to-treat basis. と記載されている。

● 結果

アブレーション群で 44%再発が減少した。

Forty-four patients (72.1%) in the antiarrhythmic group and in 36 patients (54.5%) in the ablation group experienced the primary efficacy outcome (hazard ratio [HR], 0.56 [95% CI, 0.35–0.90]; $P=.02$). For the secondary outcomes, 59% in the drug group and 47% in the ablation group experienced the first recurrence of symptomatic AF, atrial flutter, atrial tachycardia (HR, 0.56 [95% CI, 0.33–0.95]; $P=.03$). No deaths or strokes were reported in either group; 4 cases of cardiac tamponade were reported in the ablation group. In the standard treatment group, 26 patients (43%) underwent ablation after 1-year. Quality of life was moderately impaired at baseline in both groups and improved at the 1 year follow-up. However, improvement was not significantly different among groups.



(参考文献 2 より引用)

現段階では内服治療が最初に考慮されることが多いと思う。今後、高齢者が増えたと心房細動の患者も増えるだろう。薬剤の服用が出来ないような患者ではアブレーションも選択の一つになると思うし、そうでなくてもアブレーションの件数は増えてくるのかもしれない。

参考文献

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2. Morillo CA, Verma A, Connolly SJ, Kuck KH, Nair GM, Champagne J, Sterns LD, Beresh H, Healey JS, Natale A; RAAFT-2 Investigators. Radiofrequency ablation vs antiarrhythmic drugs as first-line treatment of paroxysmal atrial fibrillation (RAAFT-2): a randomized trial. *JAMA.* 2014 Feb 19;311(7):692-700. doi: 10.1001/jama.2014.467. Erratum in: *JAMA.* 2014 Jun 11;311(22):2337. PubMed PMID: 24549549.