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VERNAKALANT VERSUS FLECAINIDE FOR CONVERSION OF RECENT ONSET ATRIAL FIBRILLATION IN PATIENTS ATTENDING THE EMERGENCY DEPARTMENT

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BACKGROUND AND IMPORTANCE

Oral flecainide has been commonly used for conversion of recent-onset (<48h) atrial fibrillation (AF) in the Emergency Department (ED). **Vernakalant** is a relatively new drug that showed efficacy and safety compared to placebo and amiodarone in clinical trials but **few data are available compared to oral flecainide**.

OBJECTIVES

To evaluate successful cardioversion in patients treated with vernakalant or oral flecainide with recent onset AF attending the ED

METHODS

Observational and retrospective study conducted in patients diagnosed with recent-onset AF in the ED

 Vernakalant was included in the hospital drug formulary in June 2018

- **Flecainide group** (from January to June 2018) → 200- 300 mg orally
- **Vernakalant group** (from July 2018 to October 2020) → Short infusions of 3 mg/kg followed by 2 mg/kg if necessary

Patient data were collected retrospectively from the patient records and were used to calculate the following endpoints: percentage of patients that achieved sinus rhythm, conversion time to sinus rhythm, length of stay in the ED and percentage of patients that maintained sinus rhythm after 3 months of cardioversion

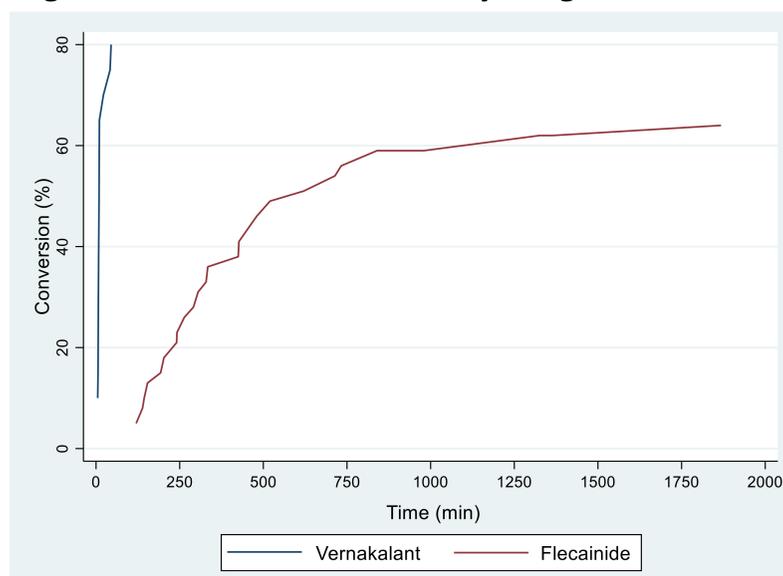
RESULTS

Sixty-three patients were included in the study, 20 patients received vernakalant and 43 were treated with flecainide. Median age was 59 years (IQR=53-66) and 63% were men. Baseline characteristics were similar in both groups.

Table 1. Results

Variable	Flecainide (n=43)	Vernakalant (n=20)	P
Successful cardioversion, %	64.3	80	0.21
Time to conversion, min	489	13	<0.001
Necessity of ECV, %	23.1	10	0.22
ED stay length, hours	20	9	0.006
Sinus rhythm after 3 months, %	92	92	0.97

Figure 1. Time to conversion by drug used



Only one patient of each group presented a mild adverse event (itching at the injection site and hypotension in the vernakalant group and flecainide group, respectively).

CONCLUSIONS

- Vernakalant achieves a higher conversion rate than oral flecainide in recent-onset AF patients
- Cardioversion with vernakalant is significantly faster and it is associated with shorter hospital stay
- Long-term effectiveness is similar between both drugs, as well as the safety profile

