*Cardiac arrest in an older ~~elderly~~ male patient treated with flecainide for atrial fibrillation*

*~~without organic cardiopathy:~~ ~~a case report~~*

1Tiziana Ciarambino, 2Rosario Bottone, 2Gennaro Sansone, 2Mauro Giordano

1Ospedale Marcianise, ASL Caserta

2Università della Campania, L. Vanvitelli

*Corresponding Authors:*

Tiziana Ciarambino

MD, PhD

Ospedale Marcianise, ASL Caserta

MAIL: [tiziana.ciarambino@gmail.com](mailto:tiziana.ciarambino@gmail.com)

Abstract

~~Learning Objective.~~ Flecainide is a class I antiarrhythmic used for supraventricular tachyarrhythmias with mild adverse reactions. We ~~report~~ present a case report in a 78 year-old male that came ~~comes~~ to the emergency department with atrial fibrillation and was subsequently treated with flecainide. During the infusion the patient went into ~~we assist to~~ cardiac arrest. A cardiopulmonary resuscitation ~~(CPR),~~ ~~according to AHA guidelines, is~~ was performed until ~~till~~ return of spontaneous circulation ~~(ROSC)~~ ~~is~~ was achieved after 1min and 40 seconds. Conclusion. ~~Despite of~~ Some trials, like the CAST trial, ~~which~~ consider~~ed~~ flecainide to be safe, but our case report, together with ~~few~~ several other ~~case~~ published reports ~~already described~~, ~~wants to~~ brings ~~the~~ attention to ~~on~~ the use of flecainide in pharmacologic cardioversion of atrial fibrillation as a cause of cardiac arrest.

Keywords: ~~elderly~~ older man, atrial fibrillation, emergency department, cardiac arrest, flecainide

**Introduction**

Atrial ﬁbrillation (AF) accounts for more than one-third of all hospitalizations for arrhythmia. Flecainide is a class I antiarrhythmic drug used for supraventricular tachyarrhythmias with mild adverse reactions (1-2). In addition to their limited efﬁcacy, anti- arrhythmic drugs are sometimes poorly tolerated and some of the side effects are serious. The CAST trial, reported a 2 to 5-fold increased risk of sudden cardiac arrest ~~(SCD)~~ in patients treated with flecainide compared with placebo in a population with structural heart disease (3). Flecainide is recommended by American and European heart societies as a first-line treatment for patients with symptomatic atrial fibrillation (4).

**Case report**

We present a case report in a 78 ~~yo~~ year-old male that came ~~comes~~ to the emergency department complaining ~~about~~ of palpitations. His medical history described ~~he refers~~ a previous event of AF ~~Atrial Fibrillation~~ ~~and denies~~ without other pathologies ~~and~~ or the use of prescribed medications ~~and~~ or illicit drugs. At the examination there ~~are~~ were no signs or symptoms other than the arrhythmic peripheral pulse. The laboratory tests ~~are~~ were normal. The electrocardiogram ~~shows~~ showed AF ~~Atrial Fibrillation~~ at 140 HR. Echocardiography ~~rules~~ ruled out any cardiopathy. ~~A therapy~~ Treatment with f~~F~~lecainide ~~is~~ was started with a bolus of 1fl (150 mg/15ml) followed by a continuous infusion with 300 mg of flecainide in G5% 250 ml. During the infusion ~~we assist to an~~ extreme bradycardia developed followed by cardiac arrest. ~~A~~ Cardiopulmonary resuscitation, ~~(CPR)~~ according to AHA guidelines, ~~is~~ was performed ~~till~~ until return of spontaneous circulation ~~(ROSC) is~~ was achieved after 1 min and 40 seconds.

**Conclusion**

This case report describes cardiac arrest in an older patient treated with flecainide for AF, which is in line with several other published reports (5, 6). Several trials, including the CAST trial, considered flecainide to be safe. ~~Despite of some trials, like the CAST trial, which considered flecainide to be safe, our elderly case report, together with few other cases reports already described, wants to bring the attention on the~~ ~~use of flecainide in pharmacologic cardioversion of atrial fibrillation as a cause of cardiac arrest (5,6).~~ We found an increased incidence of proarrhythmic events in this real-world study of flecainide used for the treatment of AF. The findings suggest that further investigation into the safety of flecainide for the treatment of patients with AF is warranted, in particular older patients. ~~elderly population.~~ Trials may be needed to better describe the safety of this drug, above all in the setting of atrial fibrillation in young patients, in whom it might exacerbate undiagnosed ion channel diseases.

**Conflict of Interest**

The authors declare ~~that not have~~ no conflict of interest

**References**

1. [Falk RH](https://www.ncbi.nlm.nih.gov/pubmed/?term=Falk%20RH%5BAuthor%5D&cauthor=true&cauthor_uid=2500880). Flecainide-induced ventricular tachycardia and fibrillation in patients treated for atrial fibrillation. [Ann Int med 1](https://www.ncbi.nlm.nih.gov/pubmed/?term=1989+jul+15%2C+111%2C+(2)%3A+107+11)989; 15:107-11.
2. [Pritchett EL](https://www.ncbi.nlm.nih.gov/pubmed/?term=Pritchett%20EL%5BAuthor%5D&cauthor=true&cauthor_uid=1902055), [Wilkinson WE](https://www.ncbi.nlm.nih.gov/pubmed/?term=Wilkinson%20WE%5BAuthor%5D&cauthor=true&cauthor_uid=1902055). Mortality in patients treated with flecainide and encainide for supraventricular arrhythmias. [Am J cardiol 1](https://www.ncbi.nlm.nih.gov/pubmed/1902055)991;11:976-80.
3. Echt DS, Liebson PR, Mitchell LB, Peters RW, Obias-Manno D, Barker AH, Arensberg D, Baker A, Friedman L, Greene HL, et al.[Mortality and morbidity in patients receiving encainide, flecainide, or placebo. The Cardiac Arrhythmia Suppression Trial.](https://pubmed.ncbi.nlm.nih.gov/1900101/) N Engl J Med. 1991 Mar 21;324(12):781-8.
4. [A John Camm](https://pubmed.ncbi.nlm.nih.gov/?term=Camm+AJ&cauthor_id=20876603), [Paulus Kirchhof](https://pubmed.ncbi.nlm.nih.gov/?term=Kirchhof+P&cauthor_id=20876603), [Gregory Y H Lip](https://pubmed.ncbi.nlm.nih.gov/?term=Lip+GY&cauthor_id=20876603), [Ulrich Schotten](https://pubmed.ncbi.nlm.nih.gov/?term=Schotten+U&cauthor_id=20876603), [Irene Savelieva](https://pubmed.ncbi.nlm.nih.gov/?term=Savelieva+I&cauthor_id=20876603), [Sabine Ernst](https://pubmed.ncbi.nlm.nih.gov/?term=Ernst+S&cauthor_id=20876603), [Isabelle C Van Gelder](https://pubmed.ncbi.nlm.nih.gov/?term=Van+Gelder+IC&cauthor_id=20876603), [Nawwar Al-Attar](https://pubmed.ncbi.nlm.nih.gov/?term=Al-Attar+N&cauthor_id=20876603), [Gerhard Hindricks](https://pubmed.ncbi.nlm.nih.gov/?term=Hindricks+G&cauthor_id=20876603), [Bernard Prendergast](https://pubmed.ncbi.nlm.nih.gov/?term=Prendergast+B&cauthor_id=20876603), [Hein Heidbuchel](https://pubmed.ncbi.nlm.nih.gov/?term=Heidbuchel+H&cauthor_id=20876603), [Ottavio Alfieri](https://pubmed.ncbi.nlm.nih.gov/?term=Alfieri+O&cauthor_id=20876603), [Annalisa Angelini](https://pubmed.ncbi.nlm.nih.gov/?term=Angelini+A&cauthor_id=20876603), [Dan Atar](https://pubmed.ncbi.nlm.nih.gov/?term=Atar+D&cauthor_id=20876603), [Paolo Colonna](https://pubmed.ncbi.nlm.nih.gov/?term=Colonna+P&cauthor_id=20876603), [Raffaele De Caterina](https://pubmed.ncbi.nlm.nih.gov/?term=De+Caterina+R&cauthor_id=20876603), [Johan De Sutter](https://pubmed.ncbi.nlm.nih.gov/?term=De+Sutter+J&cauthor_id=20876603), [Andreas Goette](https://pubmed.ncbi.nlm.nih.gov/?term=Goette+A&cauthor_id=20876603), [Bulent Gorenek](https://pubmed.ncbi.nlm.nih.gov/?term=Gorenek+B&cauthor_id=20876603), [Magnus Heldal](https://pubmed.ncbi.nlm.nih.gov/?term=Heldal+M&cauthor_id=20876603), [Stefan H Hohloser](https://pubmed.ncbi.nlm.nih.gov/?term=Hohloser+SH&cauthor_id=20876603), [Philippe Kolh](https://pubmed.ncbi.nlm.nih.gov/?term=Kolh+P&cauthor_id=20876603), [Jean-Yves Le Heuzey](https://pubmed.ncbi.nlm.nih.gov/?term=Le+Heuzey+JY&cauthor_id=20876603), [Piotr Ponikowski](https://pubmed.ncbi.nlm.nih.gov/?term=Ponikowski+P&cauthor_id=20876603), [Frans H Rutten](https://pubmed.ncbi.nlm.nih.gov/?term=Rutten+FH&cauthor_id=20876603), [ESC Committee for Practice Guidelines](https://pubmed.ncbi.nlm.nih.gov/?term=ESC+Committee+for+Practice+Guidelines%5BCorporate+Author%5D). Guidelines for the management of atrial fibrillation: the Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC). Europace. 2010 Oct;12(10):1360-420.doi: 10.1093/europace/euq350.
5. [Dokter M](https://www.ncbi.nlm.nih.gov/pubmed/?term=Dokter%20M%5BAuthor%5D&cauthor=true&cauthor_uid=29594407), [Talarico G](https://www.ncbi.nlm.nih.gov/pubmed/?term=Talarico%20G%5BAuthor%5D&cauthor=true&cauthor_uid=29594407), [Armbrust S](https://www.ncbi.nlm.nih.gov/pubmed/?term=Armbrust%20S%5BAuthor%5D&cauthor=true&cauthor_uid=29594407), et al . Fatal flecainide intoxication in a 17-year-old girl. [Anaestesist](https://www.ncbi.nlm.nih.gov/pubmed/29594407) 2018; 5:359-61.
6. [Benoit A](https://www.ncbi.nlm.nih.gov/pubmed/?term=Benoit%20A%5BAuthor%5D&cauthor=true&cauthor_uid=26638444), [Paolucci M](https://www.ncbi.nlm.nih.gov/pubmed/?term=Paolucci%20M%5BAuthor%5D&cauthor=true&cauthor_uid=26638444), [Stefan L](https://www.ncbi.nlm.nih.gov/pubmed/?term=Stefan%20L%5BAuthor%5D&cauthor=true&cauthor_uid=26638444), et al. A case of flecainide intoxications. [Rev med Liege](https://www.ncbi.nlm.nih.gov/pubmed/26638444) 2015;9:442-5.