*Cardiac arrest in elderly male patient 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 a case report in a 78 yo male that comes to the emergency department with atrial fibrillation and treated with Flecainide. During the infusion we assist to cardiac arrest. A cardiopulmonary resuscitation (CPR), according to AHA guidelines, is performed till return of spontaneous circulation (ROSC) is achieved after 1min and 40 seconds. Conclusion. Despite of some trials, like the CAST trial, which considered flecainide to be safe, our case report, together with few other case 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.

Keywords: elderly man, 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 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 report a case report in a 78 yo male that comes to the emergency department complaining about palpitations. In his medical history he refers a previous event of Atrial Fibrillation and denies other pathologies and the use of prescribed medications and illicit drugs. At the examination there are no signs or symptoms other than the arrhythmic peripheral pulse. The laboratory tests are normal. The electrocardiogram shows Atrial Fibrillation at 140 HR. Echocardiography rules out any cardiopathy. A therapy with Flecainide is 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 followed by cardiac arrest. A cardiopulmonary resuscitation (CPR) according to AHA guidelines is performed till return of spontaneous circulation (ROSC) is achieved after 1 min and 40 seconds.

**Conclusion**

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 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 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" \o "Annals of internal medicine.)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" \o "The American journal of cardiology.)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" \o "Der Anaesthesist.) 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" \o "Revue medicale de Liege.) 2015;9:442-5.