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A case of Flecainide overdose

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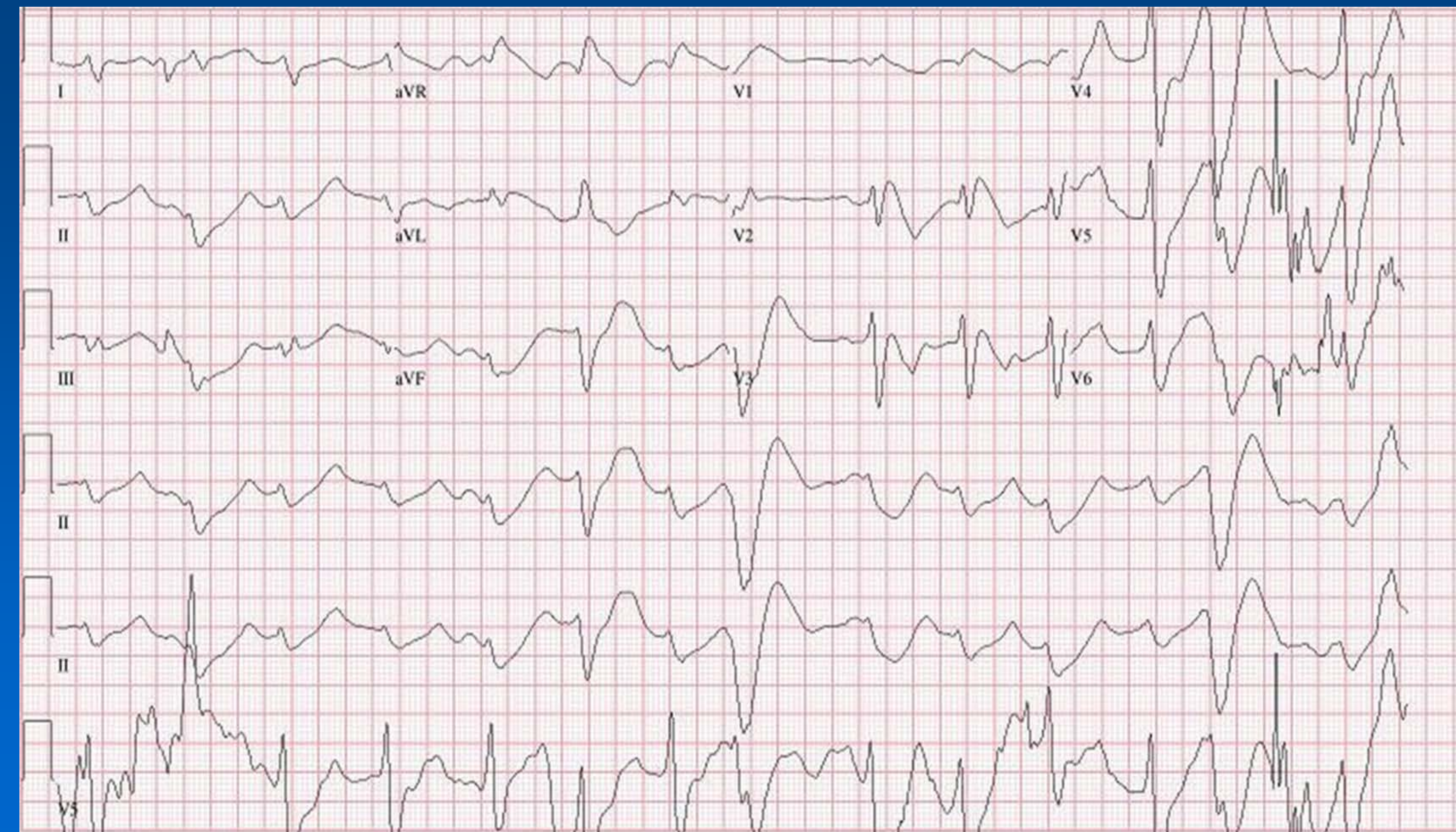
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INTRODUCTION

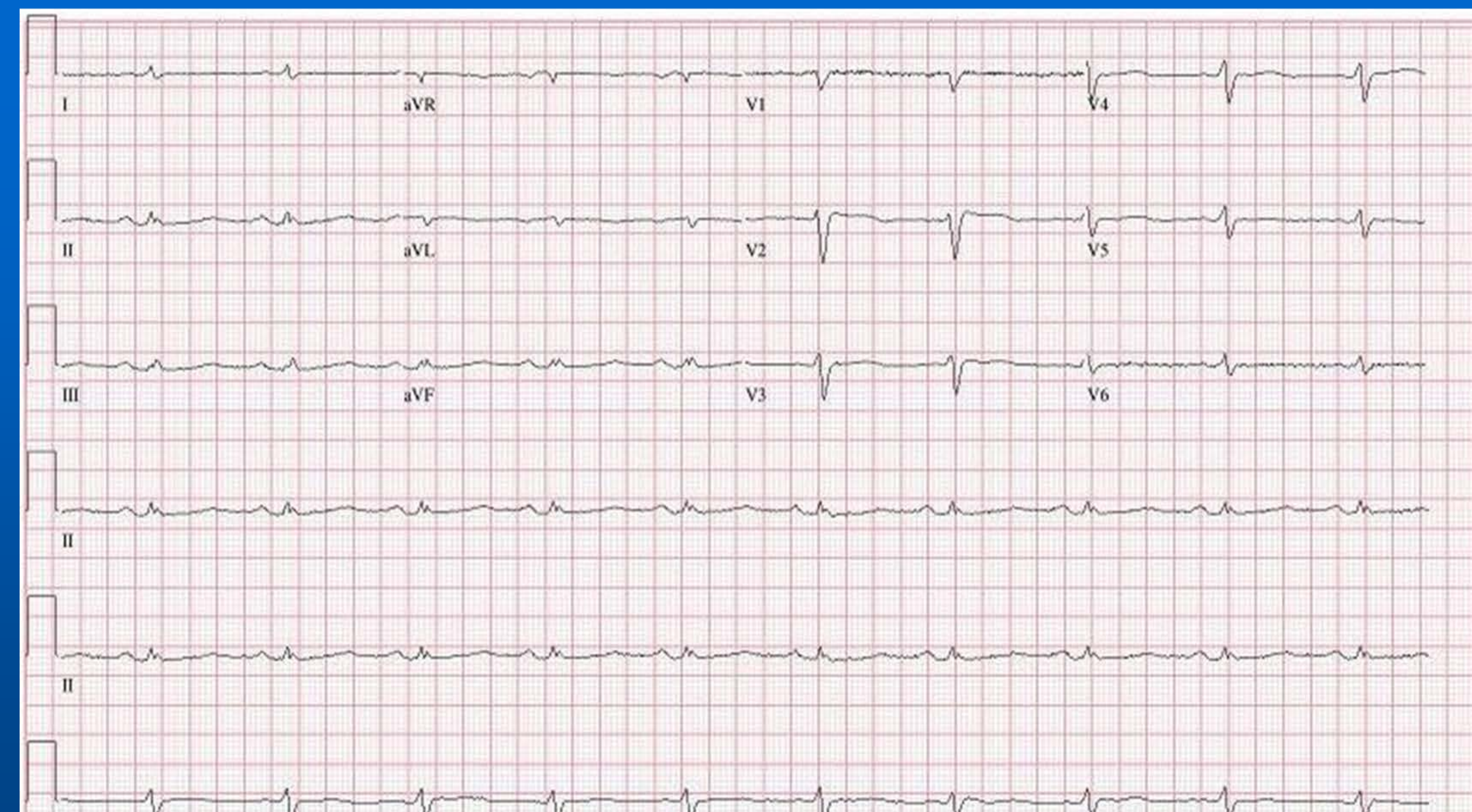
Flecainide is a Vaughn-Williams class 1C antiarrhythmic used for the treatment of supraventricular arrhythmias. Severe flecainide toxicity is associated with high mortality because of severe hypotension and ventricular arrhythmias. We present a case where severe flecainide toxicity is managed successfully using extracorporeal membrane oxygenation (ECMO).

CASE DESCRIPTION

A 51 year old female with past medical history of atrial fibrillation and depression was found unresponsive, hypotensive and bradycardic following flecainide overdose. She was externally paced for wide QRS complexes and was successfully resuscitated according to ACLS protocol for pulseless electrical activity (PEA) cardiac arrest. The patient received activated charcoal, sodium bicarbonate and intralipid following the recommendations of the Poison Control Center. She required norepinephrine for hypotension and lorazepam for grand mal seizures. As flecainide is not dialyzable, patient received extracorporeal membrane oxygenation (ECMO) for 24 hours until hemodynamic stability with narrow QRS complexes and an intact neurological status was regained.



Pre
ECMO



Post
ECMO

DISCUSSION

Flecainide toxicity is associated with 10% mortality.¹ Flecainide toxicity is associated with conduction abnormalities leading to pulseless electrical activity and asystole, severe hypotension secondary to myocardial depression, metabolic acidosis, hypoxia, convulsions and coma. Management of flecainide toxicity includes pharmacotherapy with activated charcoal within first hour after ingestion, inotropes and fluids for hypotension, seizure control with benzodiazepines, sodium bicarbonate to treat acidosis and maintain pH of 7.5 - 7.55. Intralipid has been used as it acts as a "lipid sink" for lipid soluble drug overdoses.² There are case reports of intra aortic balloon pump³, cardiopulmonary bypass and ECMO being used successfully in the management of flecainide toxicity.^{4,5} ECMO improves hepatic perfusion and helps liver metabolize flecainide.

CONCLUSION

ECMO should be considered early in the management of severe flecainide toxicity with conduction disturbances and hemodynamic collapse along with other supportive measures.

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