

Images in Medicine

Isolated heart block in snake bite: Recurrent syncope as presenting symptom

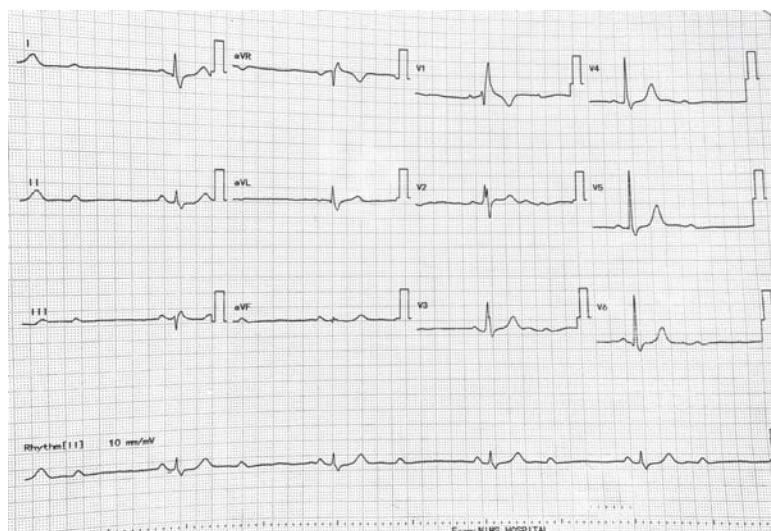


FIG 1. Electrocardiogram suggestive of severe bradycardia with complete right bundle branch block and 2:1 Mobitz type 2 block

A 44-year-old healthy male with no prior comorbid conditions, presented to our emergency department with recurrent syncopal attacks, each lasting for 2 minutes for 2 days. He had a history of an unknown snake bite 2 days ago following which he developed syncopal attacks. He had received 20 vials of anti-snake venom. His vital parameters were normal and a mark of the snake bite was present on the right ankle. Central nervous system examination was normal. Electrocardiogram revealed complete right bundle branch block with 2:1 Mobitz type 2 block (Fig. 1).

The big 4 snakes¹ are Indian cobra (*Naja naja*), the common krait (*Bungarus caeruleus*), the Russell viper (*Daboia russelii*) and the saw-scaled viper (*Echis carinatus*). Cardiotoxicity due to snake bite is poorly described in the literature. Viper toxin is more commonly associated with adverse cardiovascular events.² Electrocardiographic changes include sinus arrhythmia (6.6%), myocardial ischaemia (10%), non-specific ST-T changes (16.7%) and atrioventricular block (3.3%).³ Case reports of cardiac tamponade,⁴ Takotsubo cardiomyopathy,⁵ acute myocardial infarction,⁶ and cardiogenic pulmonary oedema,⁷ have been described.

We emphasize that a trivial syncopal attack can be the presenting symptom of a dangerous snake bite.

REFERENCES

- 1 Simpson ID, Norris RL. Snakes of medical importance in India: Is the concept of the "Big 4" still relevant and useful?. *Wilderness Environmental Med* 2007;**18**:2–9.
- 2 Virmani S, Bhat R, Rao R, Kapur R, Dsouza S. Paroxysmal atrial fibrillation due to venomous snake bite. *J Clin Diagn Res* 2017;**11**:OD01–OD02.
- 3 Liblik K, Byun J, Saldarriaga C, Perez GE, Lopez-Santi R, Wyss FQ, *et al*. Snakebite envenomation and heart: Systematic review. *Curr Probl Cardiol* 2022;**47**:100861.
- 4 Senthilkumaran S, Meenakshisundaram R, Thirumalaikolundusubramanian P. Cardiac tamponade in Russell viper (*Daboia russelii*) bite: Case report with brief review. *J Emerg Med* 2012;**42**:288–90.
- 5 Murase K, Takagi K. Takotsubo cardiomyopathy in a snake bite victim: A case report. *Pan Afr Med J* 2012;**13**:51.
- 6 Thillainathan S, Priyangika D, Marasinghe I, Kanapathippillai K, Premawansa G. Rare cardiac sequelae of a hump-nosed viper bite. *BMC Res Notes* 2015;**8**:437.
- 7 Agarwal R, Singh AP, Aggarwal AN, Agarwal R, Singh AP, Aggarwal AN. Pulmonary oedema complicating snake bite due to *Bungarus caeruleus*. *Singapore Med J* 2007;**48**:e227–30.

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