

## OP033

### Is hyperkalaemia associated with the development of heart blocks in patients with acute yellow oleander poisoning?

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#### Introduction

Yellow oleander (*Thevetia peruviana*) contains cardiac glycosides which result in arrhythmias, heart blocks and electrolyte imbalances.

#### Objectives

The objective of the study was to find whether the development of hyperkalaemia within the first 24 hours of admission predicts the development of heart blocks.

#### Methods

A prospective cohort study was carried out at Teaching Hospital Batticaloa, Sri Lanka, from 1st July 2022 to 28th February 2023 among patients admitted with acute yellow oleander poisoning. Patients were recruited if any of the following signs were present: bradycardia (<60bpm), systolic blood pressure <80mmHg, nausea, vomiting, abdominal pain, diarrhoea, xanthopsia, within 2 hours of admission. Serum potassium level was assessed at recruitment and 6 hourly, serial electrocardiograms were done at recruitment and 4 hourly, for 24 hours. The association between hyperkalemia (serum potassium >5.5mmol/L) and the development of heart blocks were calculated using the chi-squared test. Ethical Clearance was granted by the Ethics Review Committee of the Faculty of Medical Sciences, University of Sri Jayewardenepura.

#### Results

Among 120 consenting symptomatic patients recruited, 26.67%(n=32) patients developed hyperkalemia while 7.5%(n=9), 10.0%(n=12) and 3.33%(n=4) patients developed 1st, 2nd, and 3rd degree heart blocks respectively. Temporary cardiac pacing (TCP) was done in 9.16%(n=11) patients and 2.5%(n=3) died due to cardiac arrest. Hyperkalemia within 24 hours of admission was associated with the development of heart block ( $\chi^2(1, N=120)=12.9689$ ,  $p=0.0003$ ).

#### Conclusion

Patients who developed hyperkalemia within 24 hours of admission following acute yellow oleander poisoning should be closely monitored for the development of heart blocks and managed at centres where facilities for TCP are available.

**Key words:** *Hyperkalemia, Heart-blocks, oleander*