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Heart Block Following Supratherapeutic Conidine Ingestion.

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Introduction:
We present a case of a 15yo F presenting with AV-conduction delay secondary to clonidine overdose. While AV-conduction delay has been reported previously with clonidine overdose, this is the first case with confirmatory detection of clonidine.

Case Description:
15yo F with past medical history of bradycardia and Mobitz I, AV-block presented to the Emergency Department(ED) with complaint of intentional ingestion with intent to sleep. Patient ingested 3 tablets of clonidine of unknown strength. These were previously prescribed to her but were discontinued due to previous suicide attempts. She had previously been referred to cardiology for bradycardia following an unreported self-harm attempt with clonidine.

On initial examination she was somnolent and bradycardic with irregular beats. On EKG she was noted to have 2nd degree AV-block with HR 35, PR 284, QRS 96, QT/QTc 512/391. An EKG repeated 2hrs later continued to reveal 2nd degree AV-block with HR 41, PR 296, QRS 96, QT/QTc 536/443. Approximately 24hrs after her ingestion she returned to her native rhythm of Mobitz I, AV-block.

Urine drug screen was negative for coingestants and comprehensive screen performed by NMS was positive for clonidine only. Clonidine was serum concentration from blood obtained on arrival to the ED was 0.88 ng/ml.

The patient was kept in patient for 2 days and received standard supportive care. She was then transferred to psychiatry for further care.

Discussion:
Normal ranges for clonidine are based upon formulation used: Immediate-release, oral: 0.50 - 2.0 ng/mL, 2 hours after administration; Sustained-release, patch: 0.20 - 2.0 ng/mL, at steady-state; Sustained-release, oral: 0.20 - 0.27 ng/mL, 6.8 +/- 3.6 hours after a 0.1 mg single dose in healthy fed adults.

While non-fatal and without lasting harm this case illustrates the potentially disastrous effects that supratherapeutic clonidine use may have on undiagnosed bradyarrythmia. To our knowledge this is the first case with quantitated clonidine levels and the absence of other cardioactive coingestants. Great care should be taken before starting any patient on clonidine and a thorough evaluation for underlying arrhythmia should be undertaken.