Transient A-V Dissociation and Severe Hypotension due to Consumption of Ayurvedic Medicine – Vatsanabha (Aconitum Ferox)

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Abstract
A 24 year old married, well educated, female patient presented with complaints of giddiness and blackouts. On evaluation, patient had hypotension and bradycardia. ECG findings were suggestive of complete A – V dissociation. On detailed history patient revealed consumption of Ayurvedic medicine Vatsanabha for arthritis. This study impresses upon the need for complete history taking and generating awareness regarding the correct and observed use of any drug including alternative medicines.

Case Report
A 24 year old female patient presented at Laddhad Hospital, Buldhana, a tertiary care centre, with complaints of giddiness and blackouts every 2-3 hours, since 1 day. There was no history of palpitations, chest pain and sweating. No history of similar episode in the past. Family history was insignificant. On asking for any drug consumption repeatedly, patient reaveled consumption of some Ayurvedic medicine for joint pains. When contacted the respective doctor who prescribed the drug, the drug given was found to be Vatsanabha – Aconitum Ferox. Patient took one prescribed dose of the medicine.

Examination: Patient had bradycardia - Pulse: 46/min, irregular and low volume; Hypotension- BP-70/40 mm of Hg (supine); 68/40 mm of Hg (standing). Cold extremities with nail bed circulation prolonged. Patient was immediately admitted to Intensive cardiac care unit.

Investigation: ECG - AV dissociation with bradycardia (Figure 1).
Repeat ECG after 20 min – reverted to normal sinus rhythm (Figure 2).
Haematological and Metabolic Parameters (serum electrolytes, etc.) were all within normal limits.
Holter Monitoring: Essentially normal study.
2 D ECHO: Hyperkinetic myocardium (Dopamine effect.); Mitral valve prolapse; all other parameters were normal.

Management: A – V dissociation was transient and did not require any treatment. Patient was given a fluid challenge with 500 ml normal saline for severe hypotension. No improvement in blood pressure after fluid resuscitation. Injection Dopamine 0.5 mcg/kg/min infusion started and titrated according to the haemodynamic response. Vasopressor support was gradually tapered over 2 days. Patient recovered completely and discharged with no sequel.

Discussion
Vatsanabha (aconitum ferox) is a very well known ingredient of Ayurvedic
formulations and is prescribed as an antipyretic, analgesic, appetiser and a digestive. It is alterative, antiarthritic, diaphoretic, diuretic, sedative, and stimulant. This is a very poisonous drug and should only be used with extreme caution and under the supervision of a qualified practitioner. It is used in India and Nepal in the treatment of neuralgia, leprosy, fever, cholera and rheumatism. It was used as an arrow poison in ancient India. Purification process involves submerging the roots in cow’s urine for 3-5 days, and then drying into sunlight for 1 day. By this process they lose their depressant action on the heart, becoming a stimulant instead.

Toxicity: Burning and tingling sensation in mouth, oesophagus and stomach, sweating, hypotension, respiratory failure, cardiac depression.

With the use of 1 dose of Vatsanabha – patient become symptomatic and showed adverse effects like severe hypotension and transient AV dissociation which recovered. The action of aconitine on the circulation is due to an initial stimulation of the cardio-inhibitory centre in the medulla oblongata, and later to a directly toxic influence on the nerve-ganglia and muscular fibres of the heart itself. The major alkaloids are aconitine, pseudoaconitine, bikhaconitine, diacetyl pseudoaconitine, aconine, picro-aconine, veratry pseudaconitine, chamaconitine, veratryl gama, acoline, and di-Ac–Y-aconitine. Aconitine is a potent neurotoxin that opens tetrodotoxin-sensitive sodium channels. It increases influx of sodium through these channels and delays repolarisation, thus increasing excitability and promoting ventricular dysrhythmias, bradycardia.

Ayurvedic medicine is a popular form of alternative medicine in India. We may encounter patients who presents with adverse effects of Ayurvedic medicines which are not purified and prepared in the prescribed form. We need to ask for consumption of such drugs. In this case patient was not ready to accept that the condition was a consequence of Ayurvedic drug. General population is under a wrong impression that an Ayurvedic medicine does not cause any adverse effect and do not give proper history of its consumption, thus a need to create awareness.

References