



FIT Clinical Decision Making

PARADOXICAL HYPERTENSIVE ADVERSE REACTION TO NITROGLYCERINE DURING TILT TABLE TEST UNMASKING UNDIAGNOSED PHEOCHROMOCYTOMA: A CASE REPORT

Moderated Poster Contributions

Spotlight on Special Categories Moderated Poster Theater, Poster Hall, Hall C

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Background: Tilt table test (TTT) is commonly used for dizziness work-up, that includes use of nitroglycerine(NTG) during provocation phase. Paradoxical hypertensive reaction to NTG is extremely rare. Pheochromocytoma rarely presents as dizziness and hypertensive emergency can rarely occur during TTT with NTG provocation in these patients.

Case: A 51-year-old woman with controlled hypertension underwent TTT for dizziness with sublingual NTG for provocation phase. Within 14 minutes, she developed hypertensive emergency, pulmonary edema and cardio-pulmonary instability with room air SpO₂ 71%, heart rate 103 bpm and BP 273/158mmHg, cold, clammy and greyish skin. Possible anaphylaxis to NTG with hypertensive emergency was suspected and treated with hydralazine, metoprolol, intravenous methylprednisolone sodium succinate and diphenhydramine. Initially, epinephrine was withheld due to severe hypertension. Despite treatment, patient decompensated with further respiratory distress and developed hypotension. Epinephrine was given with respiratory support to stabilize her. She recovered uneventfully and was discharged home.

Decision-Making: Possible anaphylaxis to NTG was suspected given the rapidity of the patient's adverse reaction. Skin test with NTG was recommended, but posed risk of life threatening adverse reaction. Hyperadrenergic surge from undiagnosed pheochromocytoma was considered as alternate diagnosis. Laboratory studies showed elevated 24-hour urine metanephrine 4266 mcg/24hr (normal range, 140 to 785) and 24-hour urine normetanephrine 4175 mcg/24hr (normal range, 75 to 375). MRI of abdomen revealed right suprarenal mass consistent with diagnosis of pheochromocytoma.

Conclusions: NTG, an antihypertensive, with paradoxical hypertensive response should evoke suspicion for pheochromocytoma. Focused laboratory and imaging studies prevented a potentially life threatening skin test with nitroglycerine in this patient.