Pheochromocytoma: Yes or No?

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CASE DESCRIPTION

A 76-year-old woman was admitted for cardiac decompensation, hypertension, and renal failure. To explore her chronic hypertension, urinary fractionated metanephrines were quantified. Fig. 1A shows the chromatogram of the patient’s urine, and Fig. 1B shows the chromatogram of a calibration standard. A very large methoxytyramine peak was observed (Fig. 1A, black arrow). The peak signal was saturated, representing a concentration greater than 16 200 nmol/L (0–1 600 nmol/L).

![Chromatograms of urine metanephrines](image)

**Fig. 1.** Chromatograms of urine metanephrines. (A), Patient; (B), calibration standard.

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QUESTIONS
1. What is the methoxytyramine?
2. Are isolated increases in methoxytyramine frequently observed?
3. What causes should be considered?

The answers are below.

ANSWERS

Methoxytyramine is a dopamine metabolite. Isolated methoxytyramine increases are rare. They are observed in (a) drug interferences with tricyclic antidepressant or antihypertensive treatments (1, 2), (b) food intake (e.g., walnuts, pineapple) (2, 3), and (c) exceptional dopamine-secreting neoplasms (4, 5). Clinical context and therapeutic information are crucial and must be systematically evaluated. In this case, the clinician overlooked a treatment by dopamine the day before sampling, which caused this increased methoxytyramine concentration.

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References


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