A Pain in the Neck

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CASE DESCRIPTION

A 62-year-old man complaining of neck pain was found to have a mass in the left carotid region. He was on treatment for hypertension but had no symptoms suggestive of catecholamine excess. Urinary dopamine values were near or above the upper reference limit in 2 samples (Table 1). Free and total plasma methoxytyramine, plasma dopamine, and urine methoxytyramine concentrations were above their upper reference limits (46-, 9-, 54-, and 6-fold, respectively). The values for other catecholamines were normal.

QUESTIONS

1. What is the most likely diagnosis?
2. What are the clinical signs associated with the production of dopamine and methoxytyramine?
3. What is the best way to follow this disorder?

The answers are on the next page.

Table 1. Measured catecholamine and metabolite concentrations during monitoring of the disease.

<table>
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<tr>
<th>Date</th>
<th>Urine, nmol/24 h</th>
<th>Plasma, nmol/L</th>
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<td></td>
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<td>MN</td>
</tr>
<tr>
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<td>735</td>
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<tr>
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</tbody>
</table>

* The tumor was removed in August 2008. Boldface numbers are abnormal values.

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This mass was a paraganglioma. Dopamine is metabolized by catechol-O-methyltransferase into methoxytyramine within head and neck paragangliomas (HNPGL). Urinary dopamine derives from renal extraction and decarboxylation of circulating L-dopa (1). Sixty-nine percent of HNPGL are benign, and 5%–16% secrete catecholamines. Isolated secretion of methoxytyramine is limited to 8%–13% of HNPGL (2, 3). Unlike norepinephrine- and epinephrine-secreting tumors, dopamine-secreting tumors lack symptoms of catecholamine excess. Methoxytyramine is the best biochemical marker to monitor the relapse of dopamine-producing HNPGL.

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References

News & Views

US Preventive Services Task Force HIV Screening Guidelines: A Laboratory Perspective
Patricia R. Slev¹,²*

The US Preventive Services Task Force (USPSTF)² released guidelines that assign a grade A recommendation for screening the general population for HIV (1) (http://www.uspreventiveservicestaskforce.org). The CDC first published HIV testing guidelines that advocated for routine HIV screening in 2006. Shifting the HIV screening strategy from targeting high-risk populations to “universal” screening transformed the paradigm and was controversial at the time. The CDC recommended that testing be conducted under opt-out protocols and eliminated aspects that were perceived as cumbersome barriers to testing, such as pretest counseling and separate consent forms. The change in guidelines was prompted by evidence that 20%–25% of individuals infected with HIV are unaware of their status (2). Undiagnosed individuals cannot benefit from treatment and continue to contribute to disease transmission.

Since then many professional organizations, including the American College of Physicians and the Infectious Diseases Society of America, have expressed support for routine HIV testing. At first glance this recent move by the USPSTF appears to be just the latest and perhaps an overdue endorsement of the CDC recommendations. However, it is believed that the USPSTF policy change will have a significant impact on making the 2006 CDC guidelines a reality, because private and state health plans use this organization’s recommendations to determine reimbursement and define local policy on HIV testing. Furthermore, in the context of the Affordable Care Act (ACA), a grade A recommendation for preventive services mandates that health plans, both private and public, will provide coverage without out-of-pocket expenses or copayments for the patient. Practical considerations such as reim-

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² Nonstandard abbreviations: USPSTF, US Preventive Services Task Force; ACA, Affordable Care Act.