

especially in the study of cerebral infarctions (2). The dual-radionuclide technique will be further assessed as more data become available, but certainly all avenues for increasing diagnostic specificity with noninvasive procedures should be explored.

The technical points raised are valid ones. We strove to compare activity in lesions with activities in adjacent structures, and thus our data should not be changed by the collecting method. We agree that Polaroid film is not an ideal method of displaying analog data: the Massachusetts General Hospital is

now in the process of converting its recording system to transparent film.

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JUGULAR VEIN REFLUX

The example of jugular vein reflux given in the case report by Drs. Friedman, Lovegrove, and Wagner (1) may not be due to breath holding. Our findings (2) indicate that cervical vascular reflux is radiographically shown to be reflux into the cervical venous plexus through the external jugular veins and inferior thyroid veins, which are normally valveless. A Valsalva maneuver is not a prerequisite in that we have observed this phenomenon in unconscious patients. Nor is it related to a bolus effect or layering of the radioactive material. Conceivably, superior venacaval obstruction and congestive cardiac failure could be contributing factors, but these were not

causative factors in the cases we studied. In our experience the incidence of jugular reflux is approximately 2-3% of all dynamic studies.

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FALSE-POSITIVE CHEMODECTOMAS

We were fascinated by the case report of chemodectoma (1) reported by Russell et al in the June 1975 issue of the *Journal of Nuclear Medicine*. Serafini et al also reported imaging a carotid body tumor with ^{99m}Tc -pertechnetate and ^{67}Ga -citrate (2).

In the last 2 years we have seen several unilateral and one bilateral carotid body tumors during the cervical part of the dynamic study following intravenous injection of $^{99m}\text{TcO}_4$. These tumors are rarely bilateral (3) but in some cases may occur at several anatomic regions such as the internal jugular vein, aortopulmonary area, mandible, retroperitoneum, near the hypoglossal nerves, interatrial septum, femoral canal, eye, supraclavicular region, ileal mesentery, and lungs (4). Since this entity is autosomal dominant, it has a strong familial tendency and may be symptomatic in some family members and asymptomatic in others. Possibly a $^{99m}\text{TcO}_4$ flow study in asymptomatic members of the patient's family might be worthwhile, particularly since the procedure is benign.

We have encountered a patient with three cervical chemodectomas that were shown by contrast carotid angiography but were not visualized by the radionuclide flow study. Hence, one must recognize the

possibility of false-negative radionuclide studies in patients with these tumors. Since positive findings by nuclear medicine procedures are good evidence of its presence, such studies should be undertaken in all clinically suspect cases and asymptomatic family members.

Korn et al (4) reported the presence of chemodectomas in the lungs. The case of carotid body tumor that Russell et al presented had "multiple, inoperable pulmonary malformations" on pulmonary angiogram. Since chemodectomas are highly vascular tumors with marked arteriovenous shunting we wonder if these were really chemodectomas in the lungs as it is not uncommon to have chemodectomas at multiple sites in the same patient.

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