

FIGURE 407-4 Von Hippel-Lindau disease. **A**. Retinal angioma. All subsequent panels show findings on MRI: **B–D**. Hemangioblastomas of the cerebellum (**B**) in brainstem (**C**) and spinal cord (**D**). **E**. Bilateral pheochromocytomas and bilateral renal clear cell carcinomas **F**. Multiple pancreatic cysts. (Parts **A** and **D** from HPH Neumann et al: *Adv Nephrol Necker Hosp* 27:361, 1997. © Elsevier. Part **B** from SH Morgan, J-P Grunfeld [eds]: *Inherited Disorders of the Kidney*. Oxford, UK, Oxford University Press, 1998. Part **F** from HPH Neumann et al: *Contrib Nephrol* 136:193, 2001. © S. Karger AG, Basel.)

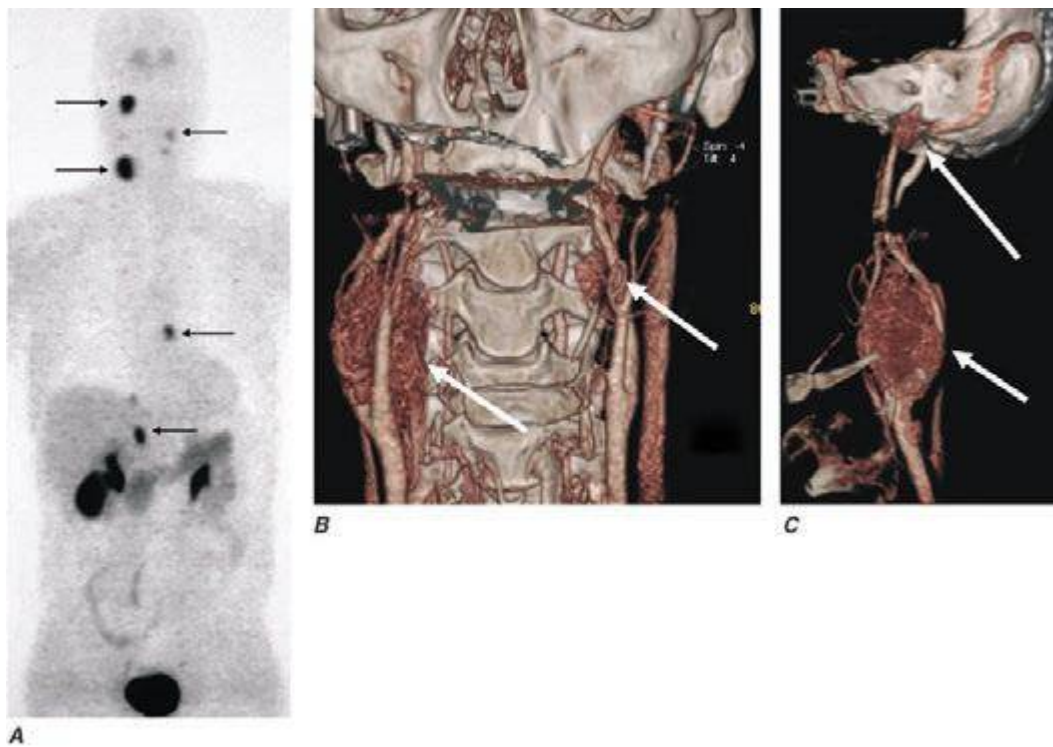


FIGURE 407-5 Paraganglioma syndrome. A patient with the SDHD W5X mutation and PGL1 underwent incomplete resection of a left carotid body tumor. **A**. ^{18}F -DOPA positron emission tomography demonstrating tumor uptake in the right jugular glomus, the right carotid body, the left carotid body, the left coronary glomus, and the right adrenal gland. Note the physiologic accumulation of the radiopharmaceutical agent in the kidneys, liver, gallbladder, renal pelvis, and urinary bladder. **B** and **C**. CT angiography with three-dimensional reconstruction. Arrows point to the paraganglial tumors. (From S Hoegerle et al: *Eur J Nucl Med Mol Imaging* 30:689, 2003; with permission.)