A 24-year-old woman was referred to our institution with daily near-syncope episodes that were related to change in head position. Initial evaluation revealed a smooth, nontender and immobile mass on the left side of her neck. Cardiac auscultation was normal. Ultrasonography of the neck revealed a hyper-vascular mass within the left carotid bifurcation, 3.2 cm x 2.2 cm in size, consistent with a carotid body tumor. No other abnormality was detected. Computed tomography (CT) of the neck showed a well-defined tumoral mass (Fig. A).

Multislice CT angiography demonstrated a large, left-sided carotid body tumor. Three-dimensional volume-rendering reconstructions (Fig. B, C) provided a selective visualization of the anatomic relationships among the carotid body tumor, vessels, and surrounding osseous structures, with excellent detail. The tumor involved the carotid arterial wall without disturbing its patency.

The mass was surgically removed without any complications. Histological analysis showed findings typical of a carotid body tumor (paraganglioma) with no sign of malignancy (Fig. D). No recurrence and near-syncope attacks occurred during a follow-up period of six months.

Figures. (A) A computed tomography scan of the neck showing a tumoral mass at the bifurcation of the left carotid artery. (B, C) Multislice spiral CT angiography with 3D volume-rendering reconstruction shows a large, right-sided carotid body tumor (arrows) causing marked widening of the carotid bifurcation. (D) Macroscopic appearance of the excised mass.