

UDK 616.831-005.4
616.441-006.6-06
COBISS.SR-ID 214713100

ISSN 0350-2899, 40(2015) br. 1, p.41-43

TRANSIENT ISCHAEMIC ATTACK AT THE ADMISSION UNIT - EXPECT THE UNEXPECTED

TRANZITORNI ISHEMIJSKI ATAK U PRIJEMNOJ AMBULANTI - OČEKUJ NEOČEKIVANO

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Sažetak: 51-godišnji muškarac je pregledan u prijemnoj ambulanti Urgentnog Centra, zbog ponavljanih ataka desnostranog piramidnog deficita i sumnjom na tranzitorni ishemijski atak. Neurološki i fizikalni nalaz je bio uredan, osim registrovane ovalne, bezbolne, nepokretne tumorske mase, lokalizovane pored sternokleidomastoidnog mišića, na levoj strani vrata. CT mozga i neuroultrazvučne dijagnostičke metode su bile uredne. CT vrata sa kontrastom i CT angiografija su prikazale bogato-vaskularizovanu tumorsku masu, bez kompresije na okolne vaskularne strukture. Isključena je stenoza karotidne arterije i dijagnostikovana patološka vaskularizacija tumora iz spoljašnje karotidne arterije. Nakon hirurške resekcije tumora, patohistološki nalaz je potvrdio metastazu papilarnog karcinoma tiroidne žlezde.

Ključne reči: tranzitorni ishemijski atak, karotidna arterija, papilarni karcinom tiroidne žlezde

Summary: We report a 51-year-old Caucasian male admitted at the Admission Unit of the Emergency Centre with recurrent right-sided hemiparesis suggesting transient ischemic attack. Neurological and physical examination was normal, save for the oval, painless, immobile tumour mass at the left side of the neck, near the sternocleidomastoid muscle. Imaging of brain parenchyma and vascular structures were normal. A contrast neck CT scan and neck CT angiography verified well-vascularised cervical tumour mass of the left side, without compression on the surrounding blood vessels. CT angiography excluded carotid artery stenosis, but revealed pathological vascularisation of cervical tumour mass from external carotid artery. Surgical resection of the cervical mass was done and histopathological analysis revealed metastasis of papillary thyroid carcinoma.

Key words: transient ischemic attack, carotid artery, papillary thyroid carcinoma

INTRODUCTION

Typical clinical symptoms in Transient Ischemic Attack (TIA) last less than one hour and there is no neuroradiology evidence of cerebral infarction. Usually, it is caused by arterial stenosis. However, sometimes other pathological processes can cause the same phenomenon [1].

CASE REPORT

A 51-year-old male with a history of hypertension, tobacco smoking and ten-year professional exposure to radiation was admitted at the Admission Unit of the Emergency Centre with symptoms of recurrent right-sided weakness. The symptoms repeated several times in the previous few days, appearing only during physical activity and reduced at rest, lasting up to 15 minutes. There was no headache, vomiting, dizziness, disturbances of vision or speech.

Family history was negative for cerebrovascular, endocrine and malignant diseases.

On admission the patient had no neurological deficits (NIHSS 1, mRS 0, ABCD2 scores 2). Physical examination was normal, save for oval, painless, immobile tumour mass, soft in consistency at the left side of the neck, near the sternocleidomastoid muscle (SCM), approximately 5cm in diameter.

The thyroid gland was not palpable in its normal position.

A contrast CT of the neck and CT angiography verified well-vascularized tumour mass of the left side, size 4x3x4cm, located behind the SCM (Figure 1A).

The tumour was fed by a branch of the external carotid artery (Figure 1B). The thyroid gland was normal except for a small calcification in the left lobe and completely isolated from the left

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Rad primljen: 23. 01. 2015. Rad prihvaćen: 24. 01. 2015. Elektronska verzija objavljena: 29.04.2015.

cervical mass. CT angiography excluded stenosis of carotid and vertebral arteries which would require vascular surgical treatment.

However, a treatment with 100 mg aspirin per day was started.

A first non-contrast head computed tomography (CT) scan, as well as the control one, 24 hour later, were normal. Carotid and vertebral duplex ultrasound, as well as transcranial Doppler of intracranial arteries, revealed normal findings. Basic metabolic panel and cell blood count were unremarkable, except hypercholesterolemia. Thyroid function test results were also normal,

he was clinically euthyroid. Electrocardiography monitoring and chest X-ray were normal.

After ten days, total neck tumour resection was done. Histopathological analysis revealed metastasis of papillary thyroid carcinoma (PTC) (Figure 1C). After three months, total thyroidectomy was done and the patient received radioiodine therapy treatment (¹³¹I). The definitive histopathological diagnosis was PTC. At one-year follow-up, the patient was on substitution thyroid hormone and antiplatelet therapy, without repeated episodes of neurological symptoms.

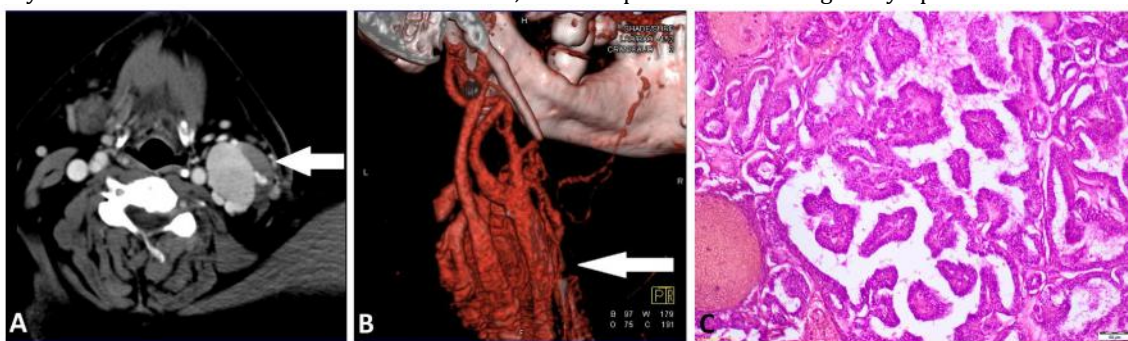


Figure 1: A) CT of the neck shows cervical lateral tumour mass on the left side.

CT vrata pokazuje veliku tumoursku masu sa leve strane vrata.

Figure 1: B) CT angiography shows well-vascularised cervical tumour mass with branches of left external carotid artery.

CT angiografija pokazuje dobro-vaskularizovanu tumoursku masu povezanu sa levom spoljašnjom karotidnom arterijom.

Figure 1: C) Histopathological analysis revealed papillary thyroid carcinoma with highly dilated and numerous blood vessels. (HEx 40).

Patohistološka analiza potvrđuje papilarni tiroidni karcinom sa brojnim dilatiranim krvnim sudovima. (HEx 40).

DISCUSSION

From the beginning, we were skeptical that the typical vascular causes were bases of recurrent TIA in this case.

Brain CT and neuroutrasonography did not show cerebral infarction or carotid artery disease. Blood supply of the left cervical mass was found to be from the arteries "feeders" of the External Carotid Artery (probably Artery Thyroid Superior) with drainage in the Internal Jugular vein (IJV), but carotid angiography ruled out the existence of arteriovenous malformation. After that, we suspected ectopic thyroid tissue, but differentiation between a ectopic thyroid carcinoma and a metastatic thyroid carcinoma can be very difficult. According to the literature data, ectopic thyroid carcinoma should be considered when there is separate blood supply of the ectopic gland from extra-cervical vessels,

no personal history of malignancy, and normal or absent orthotropic thyroid with no history of surgery [2,3].

In addition, total thyroidectomy and histopathological findings of the thyroid gland still revealed primary papillary thyroid carcinoma (PTC).

The most common of all thyroid carcinoma is PTC with genetic factors and radiation exposure as risk factors. It usually has lymphatic dissemination in regional lymph nodes (90%), while less common is the hematogenous dissemination (2-5%) [4].

On the other hand, distinguishing transient ischemic attack (TIA) from nonischemic causes is difficult in the ER [5].

Up to 60% of patients referred to a TIA clinically do not have a final diagnosis of TIA [6]. In addition to cardiovascular diseases, various

neoplasms of neck or head can also cause symptoms of the TIA, by mechanism of compression, infiltration, or vascular steal phenomenon [7].

Although it could just be a coincidence, hypervascularized metastasis of PTC neck tumour in this case could cause TIA symptoms by mechanism of carotid compression or steal phenomenon in physical activity. After the surgical resection of the tumour, the neurological symptoms did not repeat.

To our knowledge, we have described a rare and perhaps the first case of such a large and well-vascularized metastatic thyroid carcinoma causing TIA.

In conclusion, with TIA in ER, beside usual causes of TIA, always keep on mind other, nonvascular diseases. So, you can expect unexpected!

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