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A Rare Cause of Recurrent Dyspnea in Emergency Service: Carotid Body Tumor

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Authors' contributions

This work was carried out in collaboration between all authors. Authors HO and EK designed the study, wrote the protocol and wrote the first draft of the manuscript. Authors MGT, SG and KT managed the literature searches, analyses of the study and authors OE and IB read and approved the final manuscript.

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Case Study

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ABSTRACT

Carotid Body Tumors (CBT) are rare neoplasms that are represent 0.5% of neoplasms of the head and neck.
In the current report, we present the case of a patient with syncope and recurrent dyspnea attack who, after other causes had been ruled out, was found to have a left-sided CBT as the cause of her problems.
She was monitored in the emergency department for 24 hours. Lastly, she was discharged by arranging symptomatic therapy because she refused the surgical intervention due to fear of death.
Despite the development of therapy techniques, CBT continue to have high incidence of complications like in our case.

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1. INTRODUCTION

Carotid body tumors which are known as paraganlioma or glomus tumours are neuroendocrine tumors which originate from extra adrenal paraganglioma of autonomic nervous system [1]. Invasion of adjacent tissue by the tumors causes pain, hoarseness because of compression, dysphagia and 9^{th} and 12^{th} cranial nerves pressure symptoms may also ocur [2]. With this case report we aim to present a patient who applied to emergency service with complain about neck mass, dyspnea, palpitation and syncope.

2. CASE REPORT

71-years-old white female patient, applied our service with complaints of recurrent dyspnea attacks and syncope. Two years ago a mass occured left side of the patient's neck and recently growing up mass, dispnea and syncope complaint developed. She was conscious. The patient's vital signs upon arrival at emergency department were body temperature 36.4ºC blood pressure 140/80 mmHg, heart rate 85 beats per minute and repiratory rate 25 breaths per minute and oxygen saturation 92 percent on air room. Measurement of arterial blood gas shows pH: 7.5, PaO_2: 92 mm Hg, $PaCO_2$: 29 mm Hg, HCO_3: 24 mmol/L. She was tachypneic, but her lung sounds were clear. She was mildly tachycardic but cardiac examination were otherwise normal. There was a mobile, painless, palpable mass at the left lateral necks, which was approximately 4x5 cm sized and other system examinations were normal. There were no abnormal values in routine blood tests and arteriel blood gas. Sinus tachycardia was stated on patient's electrocardiography. There were no pathologic results in tests which were in terms of dyspnea and syncope etiology.

Computed tomography demonstrated soft tissue density mass of size 3.5 cm × 4.6 cm × 2.6 cm and located at the bifurcation of the left carotid artery. This finding was considered to be consistent with a diagnosis of carotid body tumour. However patient's complaints were thought up to press and patient was hospitalized because of advance test and examination. After test, surgical operation was planned for the patient who had carotid tumour diagnosis. She was monitored in the emergency department for 24 hours. But she did not accept surgical treatment, and so was discharged after symptomatic treatment option has been arranged. Because incorrectly, she had an obvious fear of death in the case of surgical intervention and nobody could persuade her.

3. DISCUSSION

The carotid body tumours was first described by von Haller in 1743 [3]. It is highly specialized organ located at the common carotid artery bifurcation. Carotid body tumours are generally seen between 50-70 ages [1-3]. In addition to this tumour is more common in women [3]. These tumours can be 4 different settlement on the head and neck area. These are juguler bulb, middle ear cavity, carotid body and vagal nerve [2]. Although carotid body tumour has low incidence, it is most diagnosed paraganglioma on the head and neck. Bilateral carotid mass tumours were seen more often (31.8%) in familial diagnosis than not familial (4.4%) Unilateral mass on the neck area was stated in our patient and there was no family story, most of the lesions were benign and malignancy was found in diagnosis's 3-12.5% [4]. Although this tumour has slow progress, invasion of adjacent tissue pain, dysphagia, coarsening voice up to vagus and Horner syndrome can occur, cathecolamine oscillation may cause fluctuating paroxysmal hypertension, blushing obstructive sleep apnea and palpitations [1-3]. Our patient had dyspnea, syncope and sinus tachycardia.

Servical ultrasound is the first diagnostic test for the management of patients who applies with neck masses. However CT, MR, MR angiography or DSA can be required for definitive diagnosis and treatment plan [5-6]. The duplex ultrasonography and brain tomography was used for diagnosis in the our case. Carotid body tumors are treated with either surgery or radiotherapy. Choice of treatment should be done by considering patient's age, symtoms, size of tumor, growth rate and general manner surgical treatment has been accepted as being standart approach recently, radiotherapy is preventive method for inoperable patients [6]. In postoperative patients neurological complications that can be noticed postoperatively include hemiplegia, recurrent laryngeal nerve palsy, Horner's syndrome. and severe postoperative respiratory depression [7]. Complete excision of functional tumours will lead to sudden decrease of catecholamine and also cause hypotension.

Fig. 1. Image of a patient with a large carotid body tumor

4. CONCLUSION

In conclusion, we have reported a case of CBT and its emergency ward evaluation. Long-term follow-up is obligatory as the time interval for local recurrences. Beside abscess and thyroid pathologies which we see to patient's who applied mass on the neck, dyspnea and compress symptoms, like carotid mass tumors discriminating diagnosis should be thought and asking test should be intented them.

CONSENT

All authors hereby declare that informed consent was obtained from the patient for publication of this report and accompanying image.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Cooper RA, Slevin NJ, Johnson RJ, Evans G.An unusual case of carotid body tumor Clin Oncol. 1998;10:62-6.
2. Fahim A, Faruqi S, Stafford NDS, Morice AH. Glomus vagale presenting as chronic cough. ERJ. 2010;35(2):446-447.
3. Davidovic LB, Djukic VB, Vasic DM, Radomir P Sindjelic RP, Stevo N Duvnjak SN. Diagnosis and treatment of carotid body paraganglioma: 21 years of experience at a clinical center of Serbia World Journal of Surgical Oncology. 20053;10:1-7.
4. Janda PHS, Veerappan V, McKenzie ME, Dhudshia NV. Carotid Body Tumor as a Reversible Cause of Syncope J Am Osteopath Assoc. 2011;111(11):638-644.
5. Ilhan G, Bozok Ş, Berkan Ö, Güneş T, Gökalp O, Bayrak S, Aksun M, Gürbüz A. Diagnosis and management of carotid body tumor: a report of seven cases. Turk Göğüs Kalp Damar Cerrahisi Dergisi. 2013;21(1):194-200.
6. Georgiadis GS, Lazarides MK, Tsalkidis A, Argyropoulou P, Giatromanolaki A. Carotid body tumor in a 13-year-old child: Case report and review of the literature. J Vasc Surg. 2008;47:874-80.
7. Sen I, Stephen E, Malepathi K, Agarwal S Shyamkumar N.K, Mammen S Neurological complications in carotid body tumors: A 6-year single-center experience. J Vasc Surg. 2013;57(2S):64S-68S.

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