

An Endotracheal Ectopic Parathyroid Adenoma Mimicking Asthma

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Abstract

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INTRODUCTION: Ectopic parathyroid glands can be seen from the front of the bifurcation of carotis to pericardium (1). In this case report an ectopic parathyroid adenoma (EPA) obstructing the tracheal lumen, locating in the distal part of the trachea is presented. It has never been reported in the literature before.

CASE PRESENTATION: 52 year old female patient who was being followed epicentral for 5 years with asthma diagnosis was hospitalized after directing to our center with pre-diagnosis of tracheal mass. Patient's epicentral thorax CT showed a polypoid lesion with sizes of 22x19 mm in the trachea with a posterior soft tissue extension. In rigid bronchoscopy, a pink mass, which has hypervascular nodular formation on its surface and was obliterating 95 % of distal tracheal lumen was found. The mass was coagulated with argon plasma coagulation (APC) and Nd-YAG laser. Biopsy report identified the lesion as a EPA which was located abnormally. After this report of EPA, on parathyroid scintigraphy performed with Technetium 99m metoksiisobutilisonitrit (Tc99-m MIBI); on the early images at 15 minutes a focal increased uptake of 99mTc-MIBI was observed at the right posterolateral wall of trachea. With right posterolateral thoracotomy, right hemithorax was explored. Tumor in size of 2 cm was found in the distal part of trachea, extending from membranous surface to posterior mediastinum. Histopathological examination showed that the mass has pathological parathyroid tissue. The mass was accepted to be adenomatous ectopic parathyroid tissue

DISCUSSION: Besides the rare appearance; EPA are usually seen related with structures embryological developing from third and fourth pharyngeal pouches in different localizations. In our case ectopic parathyroid adenoma was located posterolaterally of trachea passing through intratracheal area and made an almost complete constriction. Benign endobronchial tumors are characterized by a slow growth rate and generally present with dry cough and wheezing. Intermittent, low-grade respiratory symptoms can often be misdiagnosed as asthma. Our patient was being followed with asthma diagnosis for years. The localization and screening works for PA generally used for misdiagnose, unnoticed PA, not being able to find the adenoma in the first surgery because of lack of surgical experience. For this reason ultrasound; Tc99-m MIBI scintigraphy; SPECT and MRI are the most common used methods among the noninvasive tests (2). In our case with a prediagnosis of tracheal mass. After pathological ectopic parathyroid adenoma diagnosis 99mTc-MIBI scintigraphy and SPECT/CT were performed. MIBI uptake was seen at the right posterolateral distal part of the trachea. Endobronchial bronchoscopic resection can be diagnostic as well as curative because of the benign nature of the tumor. Neodymium: yttrium- aluminum garnet (Nd:YAG) laser fotoresection, chriotherapy, electrocautery and argon plasma coagulation (APC) are used to provide the airway openness (3). In our case; because of the almost complete obstructing tracheal mass, we used primarily Nd:YAG laser and APC afterwards to clean the tumor in order to provide airway openness. The surgical technique decision is related to adenoma's localization. In our case thoracotomy was performed in order to excise the remaining residual tissue after rigid bronchoscopic parathyroid adenoma resection. With right posterolateral thoracotomy, right hemithorax was explored.

CONCLUSIONS: In conclusion, PA may be seen endotracheally as the ectopic location. Clinicians should be aware of this rare entity, that can clinically mimic other common pulmonary pathology like bronchial asthma

Reference #1: 1. Okuda I, Nakajima Y, Miura D, Maruno H, Kohno T, Hirata K. Diagnostic localization of ectopic parathyroid lesions: developmental consideration. *Jpn J Radiology* 2010;28(10):707-13.

Reference #2: 2. Hindié E, Ugur O, Fuster D, O'Doherty M, Grassetto G, Ureña P, Kettle A, Gulec SA, Pons F, Rubello D; Parathyroid Task Group of the EANM. 2009 EANM parathyroid guidelines. *Eur J Nucl Med Mol Imaging*. 2009 Jul;36(7):1201-16.

Reference #3: 3. Wahidi MM, Herth FJF, Ernst A. State of the art. Interventional pulmonology. *Chest* 2007; 131: 261-74.

DISCLOSURE: The following authors have nothing to disclose: Ekrem Seyhan

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