NCT
Neumol Cir Torax
Vol. 75 - Núm. 2:191
Abril-junio 2016

Pulmonary aspergilloma/Aspergiloma pulmonar

Vitorino Modesto dos Santos

TO EDITOR

Aspergilloma is an uncommon infection usually with invasion of lung cavities, often posing diagnostic challenges, and surgical treatment is not consensual.[1,2] Clinical manifestations of aspergillosis include allergic bronchopulmonary and chronic necrotizing pulmonary disease, aspergilloma, and invasive infections.[1,2] The diagnosis of pulmonary aspergillosis should be based on classical images, positive serology test, or culture isolation of *Aspergillus* from respiratory tract.[1,2]

I read the interesting retrospective review by Zotes-Valdivia *et al*. about results of the surgical management of 12 female and 10 male Mexican patients with pulmonary aspergillosis.[1] The average age was 55 years, 54.5% of them had antecedent of pulmonary tuberculosis, and 77.7% underwent lobectomy.[1] Worthy of note, only one of the 22 patients died - mortality rate lower than 6%;the old patient had postoperative hypovolemic shock and acute renal failure.[1] The authors emphasized three capital issues - the scarce number of studies evaluating the postoperative quality of life, the role of lobectomy as the first option procedure, and the challenges involved in the diagnosis of aspergilloma.[1] Indeed, the establishment of this diagnosis was possible in only 71% of cases.[1]

The mentioned study is very well described, but I would like to add comments about a Brazilian case study, which involved an aspergilloma and lung cancer.[2] Dos Santos *et al*. described a case of aspergillosis on the site of metastatic lung adenocarcinoma, presenting with images mimicking a pulmonary aspergilloma.[2] The old Brazilian male had lung adenocarcinoma on the right upper lobe, treated with chemotherapy and corticosteroid, and a metastasis in the left lung.[2] A thin-walled cavity with a fungus-ball image developed at the site of implant, and bronchoalveolar aspirate and mycological cultures showed *Aspergillus spp*. Differing from the majority of cases, the sputum was thick and without blood.[1,2] The patient underwent a schedule of intravenous followed by oral voriconazole, and his pulmonary infection was controlled without need of surgical procedure.[2] Therefore, the pulmonary cavity showed total regression with clinical treatment. The authors highlighted the possibility of diagnostic pitfalls between lung nodule cavitation by necrotizing aspergillosis, and central necrosis occurring in a metastatic pulmonary nodule, with debris in the cavity mimicking aspergilloma.[2]

In this setting, both Mexican and Brazilian authors agreed with respect to the need of better evaluation about the role of preoperative antifungal treatments.[1,2]

The herein commented manuscripts may improve the suspicion index of non-specialists about this uncommon fungal infection, in addition to stimulate more researches with large sample size to accurately establish the surgical options.[1,2]

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Financial disclosure: There was no grant support for this study.

Disclosure of potential conflicts of interest: The author had full freedom of manuscript preparation and there were no potential conflicts of interest.

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Reply

Víctor Hugo Zotes-Valdivia, José M. Mier

The authors thank your valuable comment. While we consider important the need for comparative studies of the medical and surgical treatment, it is clear that hemoptysis is the most common form of presentation of aspergilloma, with an incidence of approximately 80%,[1] 81.8% in our serie,[2] and this is definitely surgical indication in the treatment of cavitated lesions.

It is also worth mentioning that surgery in aspergilloma must be indicated from the time of diagnosis, even in patients without hemoptysis, since studies show conclusively that approximately 30% of patients with minor hemoptysis, might develop hemoptysis to compromise the life.[3] In addition, the prognosis varies if a patient is operated on electively and stable, compared to what is involved in the emergency and bleeding episode.

Conservative treatment should be limited to specific situations, such as patients with pulmonary functional reserve decreased, or in selected cases as published by you, in which, we assume that his patient was not a candidate for surgical treatment oncologically.[1,4]

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Sincerely

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NCT
Neumol Cir Torax
Vol. 75 - Núm. 2:193
Abril-junio 2016

Chest wall plasmacytoma/Plasmocitoma de la pared torácica

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TO EDITOR

Primary bone tumors of chest wall are rare, and near 50% are malignant.[1,2] Solitary plasmacytoma is a rare condition that may affect bones or soft tissues, and can evolve to overt multiple myeloma if not early detected and controlled.[1,2] Bone plasmacytoma often occurs in vertebrae, femur, iliac, sternum and ribs, and the outcomes are usually favorable if treated by surgery or radiotherapy.[1,2] Authors call attention to differential diagnosis, including metastasis, sarcoma, lymphoma, neurectodermal and giant cell tumors, histiocytoma, chondroma, chondroblastoma, fibroma, fibrous dysplasia, and lipoma and bone infarction.[2]

Arévalo-Zamora *et al*. described a 55-year-oldman with long standing chest pain due to an unsuspected solitary plasmacytoma of the sternum, which was diagnosed by typical histology findings in bone marrow biopsy; in addition to normal levels of serum immunoglobulins and kappa and lambda light chains.[1] These features were consistent with the diagnosis of solitary plasmacytoma; and, in addition, the possibility of coexistent multiple myeloma was ruled out.[1,2] The authors emphasized the lack of consensual procedures-either surgery or radiotherapy, for the best management of this scarcely reported condition.[1] They substituted the sternal body by a biological mesh, plus titanium bars; radiotherapy was utilized to treat a residual lesion showed by control images.[1] The authors believe that the approach reduces complications, yielding good quality of life;[1] therefore, their case report should stimulate confirmatory studies.

In this setting, I would like to comment the report by Santos *et al*. about rib plasmacytoma and overt multiple myeloma in a 65-year-old Brazilian woman.[2] The patient with uncontrolled hypertension and type 2 diabetes, had severe anemia, heart insufficiency, renal failure, hypercalcemia and hyper viscosity.[2] Further investigations showed monoclonal IgA/Kappa, 51% of plasmacytes in bone marrow, highly elevated beta-2 micro globulins, and a solitary osteolytic lesion disclosed in the right fourth rib by images of the computed tomography.[2] Unsuccessfully, the patient underwent three sessions of plasmapheresis and dexamethasone to control the hyper viscosity manifestations; after initial improvement, the patient died because of irreversible pulmonary acute edema. This debilitated old woman was considered to have a long standing undetected solitary rib plasmacytoma that might have evolved to a generalized myeloma.[2] The authors emphasized diagnostic challenges related to the co morbidities and the role of late diagnosis of plasma cell malignancies in the present case study.[2] Should the diagnosis of rib plasmacytoma be established in an earlier phase, the outcome of the patient would be favored by surgery and radiotherapy.[1,2]

The commented reports may enhance the suspicion about this rare bone tumor, and call attention to biological mesh plus titanium bars as good options.

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Financial disclosure: There was no grant support for this study.

Disclosure of potential conflicts of interest: The author had full freedom of manuscript preparation and there were no potential conflicts of interest.