

Respuesta a “Consenso multidisciplinar, ¿falta alguien?”



Reply to “Multidisciplinary Consensus, Is Anyone Missing?”

Hemos leído con atención el comentario de Ciampi-Dopazo et al. y queremos agradecer sus aportaciones al Consenso recientemente publicado¹. El objetivo del Consenso (como guía de práctica clínica) fue el de proporcionar recomendaciones para el manejo óptimo de los pacientes con tromboembolia de pulmón (TEP), que se generaron a partir de la revisión sistemática de la evidencia y de la evaluación de los riesgos y beneficios de cada una de las intervenciones.

El Consenso recomienda la fibrinólisis sistémica a dosis completas como tratamiento de reperusión de elección en los pacientes sin contraindicación para su uso, y sugiere los tratamientos dirigidos por catéter o la fibrinólisis sistémica a dosis reducidas en los pacientes con contraindicaciones absolutas o relativas para la fibrinólisis sistémica a dosis completas¹.

Hay dos razones que sustentan estas recomendaciones:

1. Los metaanálisis (de ensayos clínicos) que han evaluado la eficacia y seguridad de la fibrinólisis sistémica (comparada con la anticoagulación) han incluido más de 2.000 pacientes con TEP aguda y han demostrado reducciones estadísticamente significativas de la mortalidad². Por el contrario, solo se ha publicado un ensayo clínico que haya evaluado la eficacia y seguridad de un tratamiento dirigido por catéter (fibrinólisis potenciada por ultrasonidos) en 59 pacientes con TEP aguda y dilatación ecocardiográfica del ventrículo derecho³. El ensayo utilizó un evento de resultado ecocardiográfico, pero no tuvo potencia estadística para detectar diferencias en eventos clínicos (mortalidad, recurrencias trombóticas o sangrados). Aunque los registros clínicos aportan información médica útil y son generadores de hipótesis, están sujetos a numerosos sesgos y confusores y no deberían ser utilizados rutinariamente para evaluar la eficacia y seguridad de las intervenciones médicas.
2. Los autores tienen vasta experiencia en el manejo clínico de los pacientes con TEP y en la aplicación de tratamientos dirigidos por catéter; pero este no es el caso de la mayoría de los clínicos y de los centros que atienden habitualmente este tipo de pacientes.

Los ensayos clínicos en marcha (NCT04088292, NCT03389971) o pendientes de inicio podrán aportar evidencia robusta sobre la eficacia y seguridad de los distintos tratamientos de reperusión para los pacientes con TEP. Mientras tanto, este Consenso proporciona un marco informativo actualizado que ayudará al clínico a tomar las decisiones más adecuadas de forma individualizada para cada paciente.

Conflicto de intereses

Los autores declaran no tener ningún conflicto de intereses.

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Bronchial Artery Aneurysm and Pseudoaneurysm: Which Endovascular Treatment?



Aneurisma y pseudoaneurisma de la arteria bronquial: ¿qué tratamiento endovascular?

Dear Editor:

We appreciated the paper of Recalde-Zamacona et al., entitled: Bronchial Artery Pseudoaneurysm and Mediastinal Hematoma after EBUS-TBNA.¹ The authors have well illustrated the first case of bronchial artery pseudoaneurysm as complication of Endobronchial Ultrasound-Transbronchial Needle Aspiration (EBUS-TBNA) treated by the endovascular embolization. Only limited numbers of cases of bronchial artery aneurysm and pseudoaneurysm have been

described in literature using endovascular approaches without an indication/guide line of the various techniques available.^{1,2}

Bronchial artery aneurysm and pseudoaneurysms are a very rare vascular event, but potentially life-threatening.^{1–3} So, they must be treated as quick as possible in urgent setting. Iatrogenic, vascular wall trauma and inflammation are the main etiologies of bronchial artery aneurysm and pseudoaneurysm.^{1–3} Nowadays, endovascular approach is considered the first-line method for most aortic branch artery pathology; as performed by Recalde-Zamacona et al. with endovascular embolization in one of the few cases of bronchial artery pseudoaneurysm described in the literature.^{1–5} Skills in endovascular procedures and good knowledge of materials are mandatory to approach these challenging clinical situations. The various endovascular techniques can be applied individually or in combination with each other, since every case can be different from the other.^{1–5} Aim of our editorial is to complete and to give a

possible indication of the three possible endovascular therapeutic techniques for bronchial artery aneurysm and pseudoaneurysm: (a) isolation embolization, (b) packing embolization and (c) stenting deployment.

- a) Isolation embolization technique characterized by the complete embolization of efferent (distal) and afferent (proximal) branch arteries of the aneurysm or pseudoaneurysm sac. This method is generally the most commonly used. It is performed when the aneurysm or pseudoaneurysm sac involves the distal tract of the bronchial artery and has multiple vessels involved. Generally coils and micro-plugs are used as embolized agents. But for smaller and distal terminal vessel micro-particles or liquid embolized agents are used. Isolation embolization technique is equivalent to surgical vascular ligation. The main disadvantage of this technique is that occlude the treated artery segment with blood flow interruption. But, the possible risk of ischemic lesion of downstream territory is very low due artery vascular compensation network over time by bronchial, intercostal and mammary collateral artery vessels.^{3–5}
- b) Packing embolization technique is characterized by filling the aneurysm or pseudoaneurysm sac by metallic coils or liquid embolization agent device. This method can be performed only when the aneurysm or pseudoaneurysm sac involves a straight tract of the bronchial artery without collateral branches and it has a small neck, which guarantees the absence of migration out of the embolized agent from the sac into the main bronchial artery segment. The main advantage of this technique is that guarantee patency of the bronchial artery treated segment.^{3–5}
- c) Stenting deployment technique, using covered or flow-diverter devices, has the same aim packing embolization of guarantee aneurysm or pseudoaneurysm sac exclusion and to ensure blood perfusion to distal bronchial artery branch vessels. This type of endovascular approach is more theoretical than practical due to two main limitations: tortuosity and small size of bronchial artery that can limits the navigability of stent device, and the need of an adequate bronchial artery distal and proximal neck for stent deployment (no always present).

The main limitation of endovascular embolization is the subsequent imaging follow-up, especially with Multi Detector Computed Tomography (MD-CT). On MD-CT especially coils or high-density liquid embolic devices create artifacts, which may not highlight a possible endoleak at the level of the treated bronchial artery segment. In these case angiography has to be used to evaluate treated aneurysm or pseudoaneurysm over time.

In conclusion, patients affected by bronchial artery aneurysm or pseudoaneurysm are very rare.¹ But this potentially life-threatening pathology needs an appropriate multidisciplinary discussion having attention on pseudoaneurysm anatomical location, characteristics, extension, and patient's hemodynamic status to determine the specific treatment for each individual case.

Conflicting interest

Authors do not has any conflicts of interest, financial or otherwise, relating to the content here.

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Reply to “Bronchial Artery Aneurysm and Pseudoaneurysm: Which Endovascular Treatment?”



Respuesta a “Aneurisma y pseudoaneurisma de la arteria bronquial: ¿qué tratamiento endovascular?”

Dear Editor,

We really appreciate the letter written by Rossi UG¹ referring to our paper entitled “Bronchial artery pseudoaneurysm and mediastinal hematoma after EBUS-TBNA”, published in *Archivos de Bronconeumología*.² We take the chance to briefly review the vascular anatomy of the airway and the bronchial abnormalities that can be encountered during bronchoscopy.

Knowledge of the vascular anatomy of the airways is imperative to recognize the vascular abnormalities involving the bronchial arteries during bronchoscopy. These abnormalities can result from primary airways disorders or from other diseases which lead to the involvement of the airway vasculature. As hemoptysis is the main clinical manifestation, its recognition is essential for the appropriate management in life-threatening situations.

The lung is supplied by two vascular systems, the pulmonary and systemic (bronchial) arteries, which are connected through microvascular anastomoses at the level of the respiratory bronchioles and alveoli. The bronchial arteries usually originate from the proximal descending thoracic aorta, between the superior endplate of the T5 vertebral body and the inferior endplate of the T6 vertebral body. These are called orthotopic bronchial arteries. The term ectopic is employed when these arteries originate elsewhere in the aorta or from other vessels (i.e., intercostal or internal mammary arteries).