

had not rechanneled, the PS had resolved, and the residual lung had expanded. Resolution and expansion were particularly evident in the first patient, who had presented a very large PS; in this patient, the pulmonary scintigraphy also showed normal uptake in the right lung.

Although no significant differences have been identified between surgery and percutaneous intervention in terms of mortality, series with large numbers of patients undergoing surgery report 7–14 days of hospitalization, chest tube for 4 days, and lobectomy in most cases, particularly if the PS was intralobar.^{3,5} We did not make a comparative study of the 2 techniques, but these comorbidities are avoided with the use of percutaneous treatment.

To our knowledge, this is the second report of percutaneous treatment for PS in children in South America,⁴ and while endovascular was safe and effective in our series, it is still early to recommend it as an initial treatment choice, because more experience is required. However, thanks to the growing body of information about its effectiveness,^{2–4} it can be considered as a first treatment option in places where resources are limited in terms of intensive care beds or the availability of pediatric surgeons trained in the correction of congenital pulmonary disorders.

References

1. Pryce DM. Lower accessory pulmonary artery with intralobar sequestration of lung: a report of seven cases. *J Pathol Bacteriol.* 1946;48:457–67.

2. Chien KJ, Huang TC, Lin CC, Lee CL, Hsieh KS, Weng KP. Early and late outcomes of coil embolization of pulmonary sequestration in children. *Circ J.* 2009;73:938–42.
3. Brown SC, de Laat M, Proesmans M, de Boeck K, van Raemdonck D, Louw J, et al. Treatment strategies for pulmonary sequestration in childhood: resection, embolization, observation? *Acta Cardiol.* 2012;67:629–34.
4. Alvarez JA, Cleveland PC, Green MK, Sanhuesa HE, Silva VJ. Embolización transcatéter con dispositivo, una promisoriosa opción en el tratamiento del secuestro pulmonar: casos clínicos. *Rev Chil Pediatr.* 2014;85:197–202.
5. Ou J, Lei X, Fu Z, Huang Y, Liu E, Luo Z, et al. Pulmonary sequestration in children: a clinical analysis of 48 cases. *Int J Clin Exp Med.* 2014;7:1355–65.

Raúl E. Ríos-Méndez,^{a,*} Jimena N. Andrade-Herrera,^b
María E. Aráuz-Martínez^c

^a Servicio de Cardiología y Hemodinamia, Hospital Pediátrico Baca Ortiz, Ministerio de Salud Pública, Quito, Ecuador

^b Servicio de Imagenología, Hospital Pediátrico Baca Ortiz, Ministerio de Salud Pública, Quito, Ecuador

^c Servicio de Neumología, Hospital Pediátrico Baca Ortiz, Ministerio de Salud Pública, Quito, Ecuador

* Corresponding author.

E-mail address: riosmendez@intramed.net.ar (R.E. Ríos-Méndez).

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Endoscopic Cyanoacrylate for Persistent Air Leak From a Bronchopleural Fistula in a Patient With Idiopathic Pulmonary Fibrosis*



Tratamiento endoscópico con cianoacrilato de fuga aérea persistente por fistula bronco-pleural en paciente con fibrosis pulmonar idiopática

Idiopathic pulmonary fibrosis (IPF) is a type of chronic fibrosing interstitial pneumonia of unknown cause with a radiological/histological pattern of usual interstitial pneumonia (UIP).¹ IPF can occur in combination with centrilobular and paraseptal emphysema in the upper lobes,² and 12% of patients present pneumothorax. Bronchopleural fistulae (BF), communications between the pleural space and the bronchial tree, can be a result of previous pleuroparenchymal changes. They represent a therapeutic challenge due to high associated morbidity, and the best approach is individualized treatment.³

We report the case of a 67-year-old man with a history of hydropneumothorax due to pulmonary contusion and spontaneous pneumothorax, diagnosed with IPF (combined fibrosis/emphysema syndrome subtype) according to ATS/ERS 2011 clinical, radiological and functional criteria,¹ treated with pirfenidone. He consulted due to chest pain, sudden onset dyspnea, with the use of accessory muscles of respiration. Examination showed loss of vesicular breath sounds in the right hemithorax, and the findings of a radiographic study were compatible with tension pneumothorax (Fig. 1A). After placement of a chest tube, the patient was transferred to the hospital ward, where a pleural space with persistent air leak was observed, despite 3 endothoracic drainage procedures (2 with fine

caliber tube, 8 and 10 F, and another with thick caliber tube, 24 F) with no resolution of the pneumothorax.

Surgery was ruled out due to the high surgical risk posed by his parenchymal disease, so flexible fiberoptic bronchoscopy (FFB) was performed on day 21 of hospitalization, under deep sedation (patient in semi-sitting position), using a 24 G chest tube in the right hemithorax with water seal to identify the absence/presence of air leak. No endoscopic changes were found in the right bronchial tree. The lateral subsegmentary bronchus (SB) of the middle lobe bronchus was accessed, which on detailed examination of the results of a computed axial tomography (CAT) scan appeared to be the origin of the air leak. A Fogarty catheter[®] was then used to completely collapse the SB, revealing absence of air leak. Two ml of cyanoacrylate were then instilled into the bronchus, guided by telescopic catheter, with no immediate complications. On completion of the FFB, the air leak was intermittent and progressively resolving, and no pneumothorax was observed on the chest radiograph obtained before discharge, 16 days after the procedure (Fig. 1B).

No consensus guidelines are available on the appropriate treatment of these patients. Therapeutic options range from surgery to interventional FFB with the use of different glues, coils, and sealants.^{3,4} The use of cyanoacrylate, a tissue glue widely used in clinical practice, initially seals the air leak and then subsequently induces an inflammatory response causing fibrosis and proliferation of the mucosa, which seals the leak permanently.

Other possible therapeutic options in this case could have included the use of silver nitrate (glue commonly used in rigid bronchoscopy for sealing fistulae with air leak at the surgical site), Watanabe[®] spigots (silicon cylinders with small rounded extensions that can be anchored in the bronchus and which rarely migrate), or endobronchial valves (removable, well tolerated, with few known complications, that do not rule out subsequent surgical intervention).^{4,5} Nowadays, interventional FFB is proposed as an alternative treatment for many airway diseases that were conventionally the preserve of thoracic surgery.

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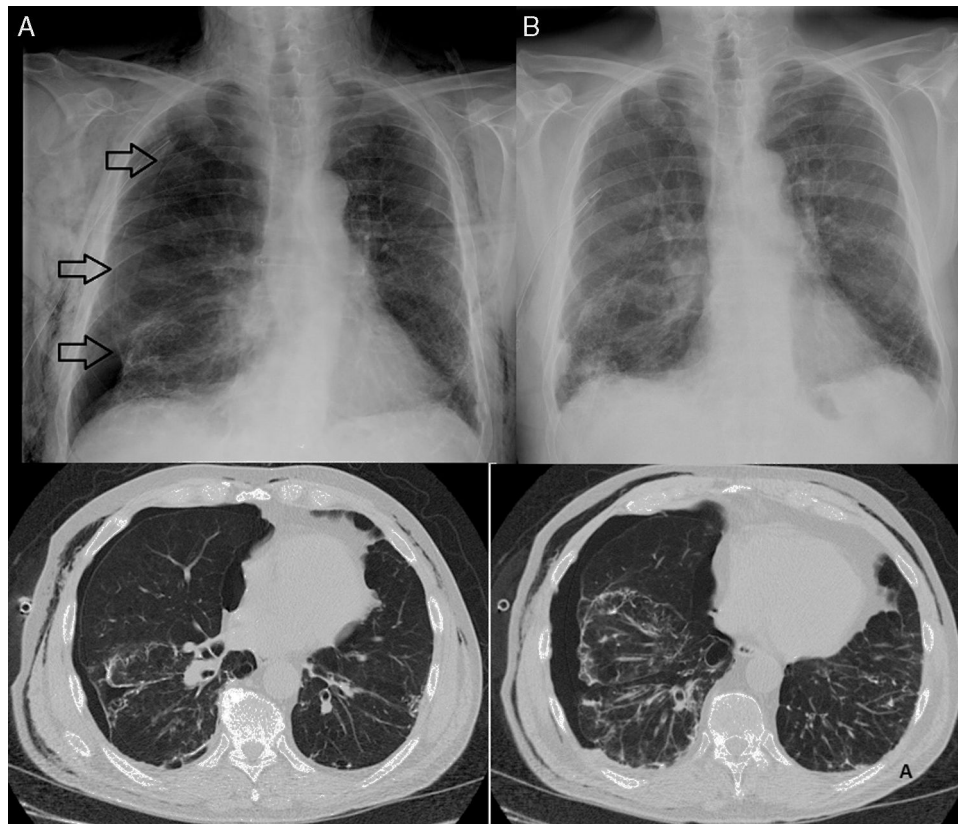


Fig. 1. (A) Chest radiograph and chest computed tomography before flexible fiberoptic bronchoscopy. (B) Chest radiograph after endoscopic treatment.

References

1. Raghu G, Collard HR, Egan JJ, Martínez FJ, Behr J, Brown KK, et al., ATS/ERS/JRS/ALAT Committee on Idiopathic Pulmonary Fibrosis. An official ATS/ERS/JRS/ALAT statement: idiopathic pulmonary fibrosis: evidence-based guidelines for diagnosis and management. *Am J Respir Crit Care Med*. 2011;183:788–824.
2. Jankowich MD, Rounds S. Combined pulmonary fibrosis and emphysema syndrome: a review. *Chest*. 2012;141:222–31.
3. Lois M, Noppen M. Bronchopleural fistulas: an overview of the problem with special focus on endoscopic management. *Chest*. 2005;128:3955–65.
4. Mora G, de Pablo A, García-Gallo CL, Laporta R, Ussetti P, Gámez P, et al. Is endoscopic treatment of bronchopleural fistula useful? *Arch Bronconeumol*. 2006;42:394–8 [in Spanish].
5. Hance JM, Martin JT, Mullett TW. Endobronchial valves in the treatment of persistent air leaks. *Ann Thorac Surg*. 2015;100:1780–5.

Blanca de Vega Sánchez,* Vicente Roig Figueroa

Servicio de Neumología, Hospital Clínico Universitario Valladolid, Valladolid, Spain

* Corresponding author.

E-mail address: blancadevegasanchez@gmail.com
(B. de Vega Sánchez).

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Systemic Sclerosis and Kaposi's Sarcoma with Pulmonary Involvement: An Unexpected Association[☆]



Esclerosis sistémica y sarcoma de Kaposi con afectación pulmonar: una asociación inesperada

To the Editor:

Systemic sclerosis (SSc) is a rare disease, characterized by complex immune disorders, vascular damage and fibrosis of the skin and visceral organs.¹ Autoimmune (AI) diseases, including SSc, and immunosuppressive drugs have been associated with many types of cancers.

Kaposi's sarcoma (KS) is a rare angioproliferative tumor associated with human herpesvirus 8 (HHV-8) infection. Mucocutaneous involvement is the most common, but KS can be seen in almost all visceral sites.² Pulmonary KS can involve the lung parenchyma, airways, pleura, and/or intrathoracic lymph nodes.³ The iatrogenic type, one of the four KS types, is related to immunosuppressive therapy, typically in patients that have undergone solid organ transplantation or with other conditions such as AI diseases.²

We report the case of a 66-year-old woman, diagnosed with limited cutaneous SSc at the age of forty, with a four-year history of pulmonary involvement presenting as interstitial lung disease with an usual interstitial pneumonia pattern. She was being treated with pentoxifylline 1200 mg/day, pantoprazole 40 mg/day, azathioprine 100 mg/day (2 mg/kg/day) and prednisolone 10 mg/day.

The patient presented a brownish-to-reddish *de novo* nodule on her lower right eyelid that was surgically removed, and which histological examination was compatible with KS. Serology for human immunodeficiency virus (HIV) was negative. Six months

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