Clinical trials and new studies are clearly needed to determine the causes of both exacerbation and death in these patients and the most appropriate treatment.

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EBUS-TBNA Diagnosis of a Granulomatous Reaction to Surgicel® in mediastinal adenopathy☆

Diagnóstico mediante EBUS-TBNA de reacción granulomatosa secundaria a Surgicel® en adenopatía mediastínica

To the Editor,

We report 2 similar cases of diagnosis by pathology study of a granulomatous reaction caused by hemostatic material (oxidized cellulose, Surgicel®) that occurred in 2019 at the Hospital Universitario Virgen de las Nieves in Granada.

The first was a 61-year-old patient with no significant medical history, diagnosed with a solitary pulmonary nodule measuring 15 mm×20 mm in the right inferior lobe. Right lower lobectomy was performed by video-assisted thoracoscopy (VATS) with a histological diagnosis of adenocarcinoma of pulmonary origin. Follow-up computed tomography (CT) showed right lower paratracheal nodes (station 4R) measuring 19 mm×16 mm, enlarged compared to previous imaging studies, so linear endobronchial ultrasound transbronchial needle aspiration (EBUS-TBNA) was performed. The pathology study of the node revealed multiple inclusions of birefringent material under polarized light, suggestive

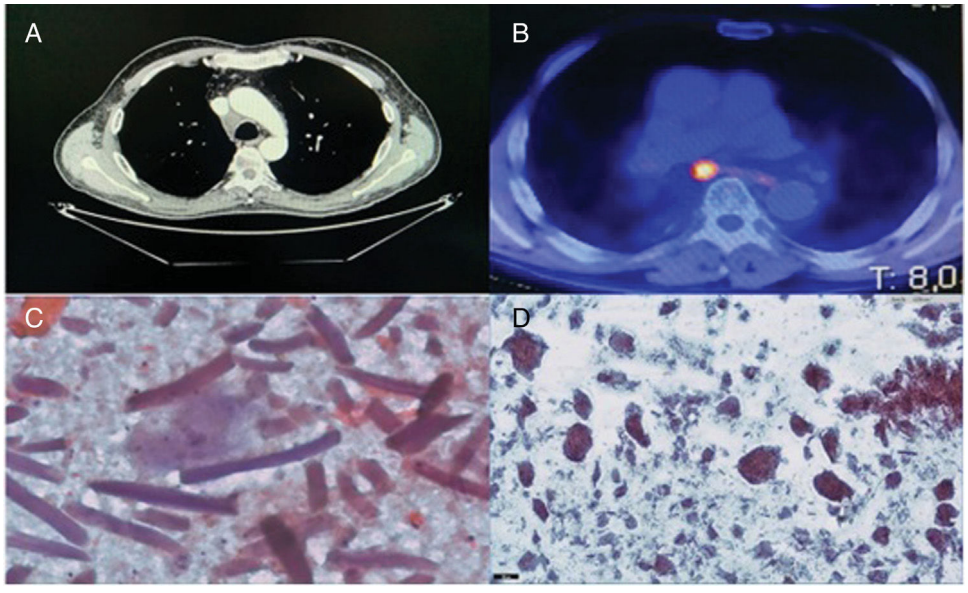

Fig. 1. (A) Chest CT scan showing enlarged nodal station 4R. (B) PET/CT with increased metabolism in subcarinal adenopathy. (C) Giant cells with birefringent material (400×) from the first case. (D) Birefringent amorphous material under polarized light from the second case.

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of oxidized cellulose (Surgicel®) and cells with evidence of histiocytic/macrophagic reaction to a foreign body. It was subsequently determined that during the surgical process, hemostatic material had been used near the 4R space (Fig. 1).

The second case was a 70-year-old man with a history of right lower lobectomy by VATS, with mediastinal lymphadenectomy at 4R and in the subcarinal region (G7) due to a pulmonary nodule measuring 22 mm×14 mm, with a histologic diagnosis of invasive keratinizing squamous cell carcinoma. In the follow-up CT, enlarged mediastinal nodes were observed, so positron emission tomography (PET/CT) was performed, revealing hypermetabolism at the G7 and right upper paratracheal stations (2R). Nodal neoplastic relapse was suspected, so EBUS-TBNA was performed, showing adenopathy at 2R and a rounded image measuring about 15 mm in its short axis at G7. Three aspirations were made of each lesion in the presence of a cytopathologist, and the initial diagnosis was granuloma. The definitive diagnosis was non-necrotizing giant cell granulomatous reaction and birefringent amorphous material under polarized light, with no neoplastic cells. Similarly, it was confirmed that Surgical® had been used in the adenopathic beds during surgery.

The use of Surgicel® has been widespread in virtually all surgical fields for decades, and its safety and hemostatic properties have been demonstrated, although its mechanism of action is not yet fully clarified. In the vast majority of cases, complete resorption occurs between 1 and 2 weeks after the intervention, starting as soon as 24 h post-surgery. Resorption depends on the amount of Surgicel® used in the procedure and the saturation of this material by blood and the tissue bed. Cases of complications due to the excessive use of this hemostat have been documented.[1] Although a greater number of cases have been reported in cardiovascular,[2] maxillary,[3] and abdominal surgeries, reactions of this nature have also been described in patients undergoing thoracic surgery,[4] although this is the first report in the literature of 2 cases. Similar reactions have been described with the inclusion of other materials, such as sutures, talc, and implants,[5] and a histological study of the lesion must be performed if a neoplastic process is suspected that cannot be ruled out by other procedures. The presence of this material must be taken into account during the differential diagnosis prior to cytohistological confirmation.

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Successful Lobectomy in Preterm With Diffuse Persistent Interstitial Pulmonary Emphysema

Lobectomía realizada con éxito en prematuro con enfisema pulmonar intersticial persistente difuso

Dear Editor:

Persistent interstitial pulmonary emphysema (PIPE) is a rare condition with a high degree of mortality and morbidity.[1,2] It is associated with prematurity, distress respiratory syndrome, severe bronchopulmonary dysplasia and prolonged mechanical ventilation. However, it has also been reported in both non ventilated infants and full term infants.[3,4] Emphysema arises from accumulation of air in the pulmonary interstitium which is due to a break in the alveolar wall that leads to air leakage and compression of adjacent structures.[4–6] PIPE has two different forms: diffuse or localized in one pulmonary lobe (the lobes most commonly affected are the left upper and the right middle and lower lobes).[1,5] Diffuse PIPE is most commonly associated with bronchopulmonary dysplasia.[4] PIPE is clinically and histologically distinct from congenital lobar emphysema.[5,7]

The diagnosis is suspected by clinical signs and chest radiography, and confirmed by chest computed tomography (CT).

Currently, there is not satisfactory treatment for this condition in infants, especially when the formation of bullae has led to mechanical problems in ventilation, pulmonary hypertension and compresses adjacent lobes. In severe emphysema in adults, one of the most promising approaches is lung volume reduction surgery (LVRS), in which lobar emphysema is resected to allow adjacent lung tissue to expand and improve respiratory function. Nevertheless, experiences with children are limited.[8] Surgery could be an option when conservative treatment does not obtain satisfactory results, although indications for LVRS in infants need to be defined.[1–3]

A case of severe PIPE in a patient with bronchopulmonary dysplasia successfully treated with surgery is detailed next.

The female patient was born with a gestational age of 26^{+5} weeks with a birth weight of 788 g after a controlled pregnancy and a spontaneous vaginal delivery. Partial pulmonary maturation was administered.

She had a 1 min Apgar score of 6, being necessary orotracheal intubation due to ineffective respiratory effort.

She developed hyaline membrane disease, receiving a dose of surfactant. She was extubated 6 h after birth, being supported with continuous positive airway (CPAP). She needed several reintubations in the context of apneas of prematurity, sepsis and intestinal volvulus needing aggressive ventilation parameters. She *met* criteria of severe bronchopulmonary dysplasia at 36 weeks corrected gestational age (CPAP, 30% FiO_2). At the age of 150 days, the patient had an exacerbation of her bronchopulmonary dysplasia with a new reintubation. She presented many recurrent airway obstruction episodes, which were refractory to treatment and caused hemodynamic instability to the patient. These symptoms