To the Editor: When video-assisted thoracoscopic (VATS) treatment is used to manage spontaneous pneumothorax (SP), the objective is to eradicate the lesions that caused the air leak and to perform pleurodesis to minimize recurrence.\(^1\) In our institution, iodine in hydroalcoholic solution has been utilized to treat primary SP since 1993. The only significant postoperative complication that has been documented is the recurrence of pneumothorax (in 6.2% of cases).\(^2\) We report the first instance in our experience of hemithoracic retraction after VATS and instillation of a chemical agent—in this case a hydroalcoholic solution of povidone iodine.

A 17-year-old male with no known significant medical history diagnosed with a third recurrence of primary SP was admitted for definitive treatment by...

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**Thoracic Retraction After Chemical Pleurodesis by Video-Assisted Thoracoscopy for Spontaneous Juvenile Pneumothorax**

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LETTERS TO THE EDITOR

VATS, which was carried out with three trocars. The pleural cavity and the surface of the lung were carefully inspected and no resectable lesion causing the air leak was found. Pleurodesis was performed with 60 mg of a hydroalcoholic solution of povidone iodine instilled until a uniform distribution was obtained in the pleural cavity and across the surface of the lung. The patient had an uneventful postoperative recovery, did not present air leaks, and was discharged 5 days following the procedure. He was referred to respiratory physiotherapy because a small left pleural effusion was observed on the x-ray. The patient was well at early follow-up visits; he was also well by clinical standards at the 6-month visit and had apparently normal thoracic x-rays. However, he complained of a deformity in the operated hemithorax. Physical examination revealed a left-sided retraction and marked left-right asymmetry. A computed axial tomography scan (Figure) and magnetic resonance of the chest were obtained, and spirometry was performed. Both the computed tomography scan and the magnetic resonance image revealed posttreatment alterations in the pleura without pleural thickening, a small left loculated pleural effusion, a small scar-like infiltrate near the operated region, and a marked retraction of the left hemithorax. No muscular or osseous alterations of the thoracic wall that could have caused the retraction were found. Forced vital capacity was 4.19 (86%) and forced expired volume in 1 second was 3.79 (92%). Complete biochemical analyses with immunological studies were requested and were normal. Imaging techniques did not reveal pleural thickening with sufficient severity to explain retraction of the thoracic cavity.

Chemical pleurodesis with povidone iodine solution is used in our facility in patients with primary SP to create pleural adhesions that, if thick enough, could hinder future resective surgery in that lung. The use of povidone iodine solution also circumvents the side effects due to talc application, which we use in older patients with secondary SP. Was the pleurodesis so intense it caused the thoracic cavity to retract? The degree of observed pleural thickening does not support that hypothesis. Furthermore, the tests ruled out a systemic process or an allergy to povidone iodine. This complication has not been reported after any pleurodesis technique to date, even after talc pleurodesis, and the case remains unexplained.

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Figure. The thoracic computed tomography scan reveals retraction of the right hemithorax.