

Reply***Réplica**

Dear Editor:

We have read with interest the recent comments about the SEPAR Guidelines for lung cancer staging that refer to the role of PET-CT.¹ The authors first suggest initially including for said test those patients who are provisionally classified in stage IIIB, supporting this suggestion with 2 important publications,^{2,3} one of which was included in the references of the Guidelines.² Those publications, as well as the SEPAR Guidelines, emphasize optimizing the selection of patients who are candidates for surgery. However, the authors of those studies based their opinions on the latest TNM classification by Mountain, and not on the recent, widely accepted edition of the IASLC.⁴ In the latter, the inclusion of subgroups T4N0 and T4N1 (some of which, depending on the T4 descriptor, could have a surgical option) in category IIIA (previously considered IIIB) means that the current limit between IIIA and IIIB is much closer to the limit that separates potentially resectable tumors from non-resectable tumors. Therefore, in our opinion, except for under very exceptional circumstances, when given a patient who has already been classified as IIIB by other means (according to the current TNM classification), PET-CT would not make much of a contribution to deciding on surgery. Nevertheless, we do agree with the comments about the potential of PET-CT to better program treatment with thoracic radiotherapy in patients who are candidates. Here, PET-CT may give a more exact definition of the volume to radiate.⁵

A second aspect commented on by the authors refers to the high diagnostic performance of PET-CT with possible bone metastasis. We completely agree with this as it is expressed in the Guidelines, which also mention the value of PET-CT for detecting possible hidden metastases in uncommon locations. However, we believe that bone scintigraphy, a more economic and universally available procedure (although less effective than PET-CT), is still useful. Often times, when scintigraphy results are interpreted together with a detailed anamnesis and physical examination, some patients are able to be classified in TNM stage IV with a reasonable certainty,

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which may avoid later tests. We believe that this procedure, which is common in many centers that do not have easy or fast access to PET-CT, is justified by a rational and efficient use of the means that are available. Naturally, this does not mean that it would not be more effective, if resources and delay times are permitting, to directly do a PET-CT.

In closing, we would like to thank the authors for their comments and suggestions, which, undoubtedly, contribute to clarifying the usefulness and the limits of lung cancer staging procedures.

References

1. Sánchez de Cos J, Hernández Hernández J, Jiménez López M, Padrones Sánchez S, Rosell Gratacós A, Rami Porta R. Normativa SEPAR sobre estadificación del carcinoma de pulmón. Arch Bronconeumol. 2011;47:454–65.
2. Silvestri GA, Gould MK, Margolis ML, Tanoue LT, McCrory D, Toloza E, et al. Non invasive staging of non-small cell lung cancer. Chest. 2007;132:178S–201S.
3. Fisher B, Lassen U, Mortensen J, Larsen S, Loft A, Bertelsen A, et al. Preoperative staging of lung cancer with combined PET-CT. N Engl J Med. 2009;361:32.
4. Shepherd FA, Crowley J, Van Houtte P, Postmus PE, Carney D, Chansky K, et al. The International Association for the Study of Lung Cancer. Lung cancer staging project: proposals regarding the clinical staging of small cell lung cancer in the forthcoming (seventh) edition of the tumor, node, metastasis classification for lung cancer. J Thorac Oncol. 2007;2:1067–77.
5. Goldstraw P, Ball D, Jett JR, Le Chevalier T, Lim E, Nicholson AG, et al. Non-small cell lung cancer. Lancet. 2011;378:1727–40.

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Pneumonia and Pleural Effusion Due to Brucella***Neumonía y derrame pleural por Brucella**

Dear Editor:

Brucellosis, or Maltese fever, is a zoonosis that is prevalent in the Mediterranean regions and is endemic in our country.¹ The disease is acquired fundamentally by consuming non-pasteurized milk and dairy products, such as cheese and cream.² Rarely, the pathogen can invade the respiratory system through inhalation. After an incubation period of 2–4 weeks, the brucellosis causes non-specific symptoms like fever of up to 40 °C, night sweats, anorexia, tiredness and weightloss.³ The serum tube agglutination or microplate agglu-

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tionation with Rose Bengal is especially used as a rapid screening test method for mass screening. Conventional serum tube agglutination (Wright agglutination test) is one of the most common laboratory tests used to confirm the diagnosis.⁴ The definitive diagnosis can be obtained with the isolation of the pathogen through hemoculture and a culture of a bone marrow sample.

A 20-year-old male patient who had just enlisted with the army came to our consultation complaining of cough, expectoration, sharp pain in the left hemithorax, night sweats, anorexia, fever in waves and dyspnea evolving over the previous 10 days. He also reported a weight loss of 3 kg in recent months. At the time, he had a fever of 38.4 °C with a respiratory rate of 22/min. Thoracic auscultation revealed bilateral basilar inspiratory rales. Leukocyte count was 27,930/mm³ and sedimentation rate was 68 mm/h. C-reactive protein was 141 mg/dl.

Chest radiography showed a pneumonic infiltrate in the right middle lobe and homogenous opacity in the left lower lobe. Computed tomography demonstrated bilateral pleural effusion

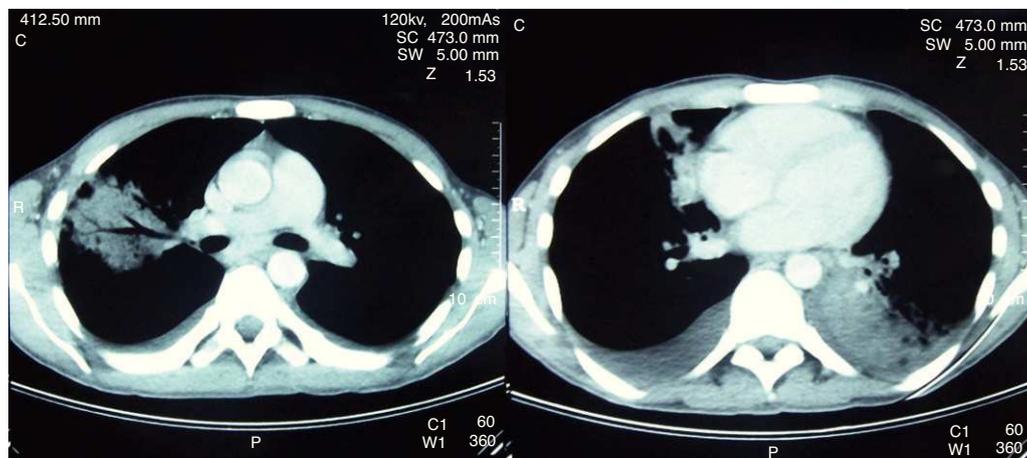


Fig. 1. Thoracic computed tomography of the patient before treatment showing pulmonary infiltrates as well as pleural effusion.

of 2 cm and pneumonic infiltrations in the anterior segment of the upper lobe and in the medial segment of the middle lobe of the right lung and in the lower lobe of the left lung (Fig. 1). The patient underwent thoracocentesis. The pleural liquid sample, which was straw-colored, was an exudate from a biochemical standpoint and contained 2000 leukocytes (80% mononuclear)/mm³. After the culture of the blood, urine and sputum samples were obtained, the patient was initiated empirical treatment with intravenous ampicillin-sulbactam at a dosage of 1 g/day with a preliminary diagnosis of bacterial pneumonia and parapneumonic effusion. The sputum samples and pleural liquid were negative for acid-fast bacilli (AFB) and the level of adenosine deaminase in the pleural liquid was 31 IU/l. In the sputum and pleural liquid cultures, no growth was observed.

On the sixth day of treatment, the patient continued to be feverish and there was no evident clinical or radiological improvement. Meanwhile, growth of *Brucella* spp. was documented in the hemoculture. When we took a more detailed personal history, it was revealed that the patient had lived in a village and worked as a shepherd, consuming non-pasteurized dairy products up until the month before. In addition, he reported that in his family there had been other cases of brucellosis. Serum agglutination with Rose Bengal was positive and the Wright serum agglutination was positive, with a titer of 1/160. The non-specific antibiotic therapy was interrupted on the sixth day and the patient initiated treatment with doxycycline at a dosage of 100 mg 2 times a day and rifampicin at a dosage of 600 mg/day orally. After 14 days of treatment, we saw an improvement in the clinical symptoms, radiological characteristics and the results of the arterial blood gases. The patient was released on the 20th day of hospitalization and he completed a 6-week treatment, making a complete recovery.

In a previous study done in our country, 1028 cases of brucellosis were retrospectively analyzed. 2% presented with cough, and in 7 patients (0.7%) there was pleural affection.⁵ In a prospective study including 110 patients with brucellosis, in 11 (10%) there

was lung affection. It was documented that the treatment of the brucellosis led to complete remission of the pulmonary symptoms in all the cases, without other morbidities.⁶

In short, brucellosis can be confused with different diseases due to the lack of specificity of its clinical characteristics. Lung affection is an uncommon manifestation, but it should be kept in mind in regions where the disease is endemic, especially if the patient does not respond to empirical antibiotic therapy.

References

1. Young EJ. *Brucella* species. In: Mandell GL, Bennett JE, Dolin R, editors. Mandell, Douglas and Bennett's Principles and practice of infectious diseases. 4th ed. New York: Churchill-Livingstone; 1995. p. 2053-60.
2. Wortmann G. Pulmonary manifestations of other agents: Brucella, Q fever, tularemia and smallpox. *Respir Care Clin.* 2004;10:99-109.
3. Pappas G, Papadimitriou P, Akritidis N, Cristou L, Tsianos EV. The new global map of human brucellosis. *Lancet Infect Dis.* 2006;6:91-9.
4. Buzgan T, Karahocagil MK, Irmak H, Baran AI, Karsen H, Evirgen O, et al. Clinical manifestations and complications in 1028 cases of brucellosis: a retrospective evaluation and review of the literature. *Int J Infect Dis.* 2010;14:e469-78.
5. Hatipoglu CA, Bilgin G, Tulek N, Kosar U. Pulmonary involvement in brucellosis. *J Infect.* 2005;51:116-9.
6. Young EJ. Serologic diagnosis of human brucellosis: analysis of 214 cases by agglutination tests and review of the literature. *Rev Infect Dis.* 1991;13:359-72.

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