with national (MEC) and European structural funds (FEDER), under the partnership agreement PT2020.

References

- World Health Organization (WHO). Tuberculosis surveillance and monitoring in Europe; 2016. Available from: https://ecdc.europa.eu/sites/portal/files/ media/en/publications/Publications/ecdc-tuberculosis-surveillance-monitoring-Europe-2016.pdf
- 2. Van Hest NA, Aldridge RW, de Vries G, Sandgren A, Hauer B, Hayward A, et al. Tuberculosis control in big cities and urban risk groups in the European Union: a consensus statement. Euro Surveill. 2014;19:pii=20728.
- Direção-Geral da Saúde, Direção de Serviços de Informação e Análise, Ministério da Saúde, Portugal. Programa Nacional para a Infeção VIH, SIDA e Tuberculose 2017. Lisboa, Portugal: Ministério da Saúde; 2017.
- 4. Apolinário D, Ribeiro Al, Krainski E, Sousa P, Abranches M, Duarte R, et al. Tuberculosis inequalities and socio-economic deprivation in Portugal. Int J Tuberc Lung Dis. 2017;21:784–9.
- Pinheiro J, Bates D. Mixed-effects models in S and S-PLUS. New York: Springer-Verlag; 2000.
- Ponticiello A, Sturkenboom M, Simonetti A, Ortolani R, Malerba M, Sanduzzi A, et al. Deprivation, immigration and tuberculosis incidence in Naples, 1996–2000. Eur J Epidemiol. 2005;20:729–34.
- Couceiro L, Santana P, Nunes C. Pulmonary tuberculosis and risk factors in Portugal: a spatial analysis. Int J Tuberc Lung Dis. 2011;15:1445–54.
- European Centre for Disease Prevention and Control (ECDC). To and HIV co-infection in the EU/EEA. ECDC; 2017. Available from: https://ecdc.europa.eu/en/publications-data/tb-and-hiv-co-infection-eueea

9. Duarte R, Neto M, Carvalho A, Barros H. Improving tuberculosis contact tracing: the role of evaluations in the home and workplace. Int J Tuberc Lung Dis. 2012;16:55–9.

Mafalda Felgueiras, ^{a,*} Sara Cerqueira, ^b Rita Gaio, ^{b,c} Óscar Felgueiras, ^{b,c} Raquel Duarte^{d,e,f}

- ^a Service of Clinical Pathology, Centro Hospitalar da Cova da Beira, Covilhã, Portugal
- ^b Department of Mathematics, Faculty of Science, Porto, Portugal
- ^c Centre of Mathematics, University of Porto, Porto, Portugal
- ^d Pulmonary Department, Centro Hospitalar de Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal
- ^e Department of Clinical Epidemiology, Predictive Medicine and Public Health, University of Porto Medical School, Porto, Portugal ^f EPIUnit, Institute of Public Health, University of Porto, Porto, Portugal
- * Corresponding author.

E-mail address: mfelgueiras@gmail.com (M. Felgueiras).

1579-2120

© 2018 SEPAR. Published by Elsevier España, S.L.U. All rights reserved.

Reply to Letter "Skeletal Muscle Metastasis: An Uncommon Finding in Lung Cancer" ☆



Réplica a la Carta «Metástasis musculoesqueléticas: hallazgo infrecuente asociado al cáncer de pulmón»

Dear Editor,

We read with interest the letter of De Vega Sánchez et al., ¹ which describes 3 patients with musculoskeletal metastases (MSM) secondary to primary lung cancer. The first case was a 57-year-old woman who consulted due to constitutional symptoms and a deep adherent mass in the right flank. Further study revealed a right hilar lesion with a mass on the left abdominal oblique muscle. The second case was an 83-year-old man who consulted due to a painful mass on the flexor digitorum superficialis muscle of the fingers. The extension study revealed 2 masses consistent with lung adenocarcinoma.

The MSMs described by the authors fall under the heading of undetected primary lung cancers. In this setting, the authors contend that the initial diagnostic process usually begins with a chest computed tomography (CT).

Surov et al.² determined that the tumors that most frequently cause MSM are gastrointestinal tumors (21.3%), followed by urological tumors (16.4%), and malignant melanoma (13.1%). Bronchial tumors, like cancers of unknown origin, account for 8.2%.

While it is true that the reported cases do not fall under the definition of the Spanish Society of Medical Oncology (SEOM) of cancer of unknown primary site,³ the referenced literature on MSM leads us to believe that a systematic approach to the detection of the primary tumor is essential.

The study of patients who develop MSM in the absence of a known primary tumor must start with a detailed clinical history, followed by a complete physical examination, including an anorectal examination, with a gynecological exploration in women and testicular in men. Additional tests must include basic clinical laboratory tests (complete blood count, kidney and liver function, electrolytes, calcium, and urine tests) and fecal occult blood. Endoscopy must be requested on the basis of indicative signs and symptoms, and finally a chest-abdominal-pelvic CT may be performed.⁴

One example of a systematic approach is the third case published by Martin Asenjo et al. in this journal. This was a 73-year-old patient who presented with constitutional symptoms and cough. Clinical laboratory tests showed iron-deficiency anemia and an altered chest X-ray. The study of the patient began with a complete clinical history, followed by a request for a gastrointestinal endoscopy, in view of the iron-deficiency anemia. Given the documented *Mycobacterium xenopi* infection and the abnormality in the chest X-ray, chest CT, fiberoptic bronchoscopy, and finally PET/CT were requested.

Only a systematic approach, taking into account all possible signs and symptoms of the primary tumor causing MSM, will lead to a more accurate diagnosis, while avoiding multiple unnecessary tests.

References

- 1. De Vega Sánchez B, Lobato Astiárraga I, Lopez Castro R, López Pedreira MR, Disdier Vicente C. Metástasis musculoesqueléticas: hallazgo infrecuente asociado al cáncer de pulmón. Arch Bronconeumol. 2017, http://dx.doi.org/10.1016/j.arbres.2017.11.011.
- Surov A, Hainz M, Holzhausen HJ, Arnold D, Katzer M, Schmidt J, et al. Skeletal muscle metastases: primary tumours, prevalence, and radiological features. Eur Radiol. 2010;20:649–58.
- 3. Varadhachary GR, Raber MN. Cancer of unknown primary site. N Engl J Med. 2014;371:757–65.
- 4. Losa F, Soler G, Casado A, Estival A, Fernández I, Giménez S, et al. SEOM clinical guideline on unknown primary cancer (2017). Clin Transl Oncol. 2018;20: 80,96
- Martín Asenjo M, Martín Guerra JM, López Pedreira MR, Prieto de Paula JM. Mycobacterium xenopi and squamous cell carcinoma of the lung. Arch Bronconeumol. 2017;53:698–700 [article in English, Spanish].

[☆] Please cite this article as: Martín Guerra JM, Martín Asenjo M. Réplica a la Carta «Metástasis musculoesqueléticas: hallazgo infrecuente asociado al cáncer de pulmón». Arch Bronconeumol. 2018;54:596–597.

Javier Miguel Martín Guerra,* Miguel Martín Asenjo

Servicio de Medicina Interna, Hospital Clínico Universitario de Valladolid, Valladolid, Spain * Corresponding author.

E-mail address: javi6vega@hotmail.com (J.M. Martín Guerra).

1579-2129/

© 2018 SEPAR. Published by Elsevier España, S.L.U. All rights reserved.