

Isotretinoin is a safe drug that is well tolerated, but strict vigilance is needed when it is prescribed<sup>3</sup> even at low doses. Although testing prior to starting therapy would not have prevented the development of rhabdomyolysis in our patient, it could lower the risk of complications such as hepatitis and severe dyslipidemia. We think that patients on this drug should be warned to refrain from intense exercise and that physicians should watch for symptoms suggestive of rhabdomyolysis so that treatment can be started promptly.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

## References

- López-Esteban JL, Herranz-Pinto P, Dréno B, el grupo de dermatólogos expertos en acné. Consensus-based acne classification system and treatment algorithm for Spain. *Actas Dermosifiliogr*. 2017;108:120–31 [article in English, Spanish].
- Forbat E, Ali FR, Al-Niaimi F. Dermatological indications for the use of isotretinoin beyond acne. *J Dermatol Treat*. 2018;29:698–705.
- Rademaker M. Adverse effects of isotretinoin: a retrospective review of 1743 patients started on isotretinoin. *Australas J Dermatol*. 2010;51:248–53.
- Kaymak Y. Creatine phosphokinase values during isotretinoin treatment for acne. *Int J Dermatol*. 2008;47:398–401.
- Landau M, Mesterman R, Ophir J, Mevorah B, Alcalay J, Harel A, et al. Clinical significance of markedly elevated serum creatine kinase levels in patients with acne on isotretinoin. *Acta Derm Venereol*. 2001;81:350–2.
- Huerta-Alardín AL, Varon J, Marik PE. Bench-to-bedside review: rhabdomyolysis – an overview for clinicians. *Crit Care*. 2005;9:158–69.
- Paulsrud C, Stender I-M, Schmidt LS. Rhabdomyolysis after isotretinoin treatment in a 17-year-old male. *Ugeskr Laeger*. 2017;179, pii:V06170462 [article in Danish].
- Gómez-Bernal S, Rodríguez-Pazos L, Rodríguez-Granados MT, Toribio J. Rbdomiólisis durante el tratamiento con isotretinoína. *Actas Dermosifiliogr*. 2011;102:390–1.
- Hartung B, Merk HF, Huckenbeck W, Daldrop T, Neuen-Jacob E, Ritz-Timme S. Severe generalised rhabdomyolysis with fatal outcome associated with isotretinoin. *Int J Legal Med*. 2012;126:953–6.
- Amichai B, Shemer A, Grunwald MH. Low-dose isotretinoin in the treatment of acne vulgaris. *J Am Acad Dermatol*. 2006;54:644–6.
- Madera G, Cabrejas BMM, Holguín P. Rhabdomyolysis induced by isotretinoin. *Clin Case Rep Rev*. 2016;2:357.
- Phillips D, AnjaliMahto. Severe rhabdomyolysis with isotretinoin therapy for acne. *J Am Acad Dermatol*. 2015;72 Suppl. 1:AB11.
- Inci A, Refic O, Bayram I, Gülhan Ö, Funda S, Metin S. Rhabdomyolysis and toxic hepatitis in a patient receiving isotretinoin treatment; a case report. *Turk Neph Dial Transpl*. 2016;25:89–91.
- Kempeneers D, Gielen K, Lucker G. Rhabdomyolysis on both isotretinoin and minocycline in the treatment of acne vulgaris in a 15-year old boy. *Nederlands Tijdschr v Dermatol Venereol*. 2013;23:275–7.
- Karaa A, Page S. Exercise-induced rhabdomyolysis associated with isotretinoin therapy: a case report. *J Hosp Med*. 2009;4 Suppl. 1, abstract 164.
- Guttman-Yassky E, Hayek T, Muchnik L, Bergman R. Acute rhabdomyolysis and myoglobinuria associated with isotretinoin treatment. *Int J Dermatol*. 2003;42:499–500.
- Trauner MA, Ruben BS. Isotretinoin induced rhabdomyolysis? A case report. *Dermatol Online J*. 1999;5:2.
- Hodak E, Gadoth N, David M, Sandbank M. Muscle damage induced by isotretinoin. *Br Med J Clin Res Ed*. 1986;293:425–6.

D. Morgado-Carrasco,\* A. del Rosario, X. Fustà-Novell, P. Giavedoni

*Servicio de Dermatología, Hospital Clínic de Barcelona, Universitat de Barcelona, Barcelona, Spain*

\*Corresponding author.

*E-mail address:* [morgadodaniel8@gmail.com](mailto:morgadodaniel8@gmail.com)

(D. Morgado-Carrasco).

<https://doi.org/10.1016/j.adengl.2018.08.006>  
1578-2190/ © 2019 AEDV. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## Ultrasound-Guided Fine-Needle Aspiration Biopsy and Core Needle Biopsy of Lymph Node and Subcutaneous Metastases From Lung Adenocarcinoma<sup>☆</sup>



### PAAF y BAG ecoguiadas en metástasis ganglionar y subcutánea de adenocarcinoma de pulmón

*To the Editor:*

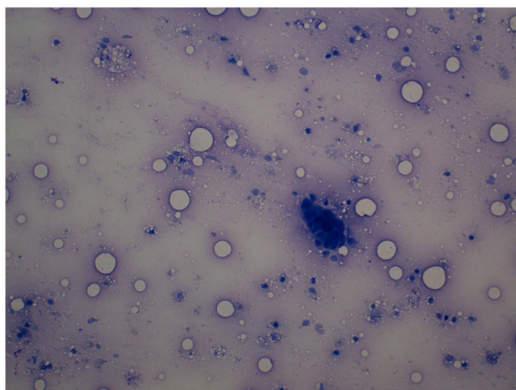
A 55-year-old female smoker was seen for 3 subcutaneous nodules that had appeared during the preceding month.

The patient had a history of colon cancer (6 years earlier) but was cancer-free at the time of the consultation. Physical examination revealed 3 firm nodules of 1 cm in diameter located beneath healthy-looking skin on the upper chest, rib cage, and armpit on the right side of the body (Fig. 1). Doppler ultrasound revealed 3 ovoid hypoechoic lesions in the subcutaneous tissue that lacked posterior reinforcement, exhibited internal vascularization, and were compatible with 2 subcutaneous metastases and 1 lymph node metastasis. After providing written informed consent, the patient underwent fine-needle aspiration (FNA) of the axillary adenopathy with a 21-G needle and core-needle biopsy (CNB) of the lesion on the upper chest with an 18-G needle. The procedures were performed under local anesthesia with ultrasound guidance in the operating room of the dermatology service on the same day as the consultation, with no complications. FNA cytology was positive for malignant cells (Fig. 2). Histology of the CNB was diagnostic of adenocarcinoma metastasis (Fig. 3) and the

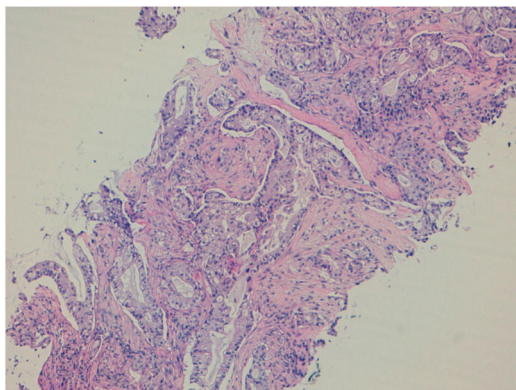
<sup>☆</sup> Please cite this article as: Vidal D, Pujol M. PAAF y BAG ecoguiadas en metástasis ganglionar y subcutánea de adenocarcinoma de pulmón. *Actas Dermosifiliogr*. 2020;111:335–336.



**Figure 1** Lymph node metastasis in the right armpit.



**Figure 2** Malignant epithelial cells. Fine-needle aspiration smear (Giemsa staining).



**Figure 3** Metastatic adenocarcinoma of the lung. Core-needle biopsy obtained using an 18-G needle (hematoxylin-eosin staining).

immunohistochemistry profile (CK7<sup>+</sup>, TTF-1<sup>+</sup>, CK20<sup>-</sup>, CDX2<sup>-</sup>) was compatible with a pulmonary origin. Computed tomography revealed findings compatible with lung cancer and the patient was referred to the oncology service for further studies and treatment.

In cases involving subcutaneous nodules with suspected malignancy the usual practice is to perform an incisional

biopsy with a scalpel. Because our patient had 3 lesions, we opted to perform ultrasound-guided FNA and CNB in parallel in order to examine 2 lesions with minimal morbidity. FNA can be performed rapidly and causes minimal pain, and the corresponding pathology report can be rapidly obtained. In some cases, the small sample volume obtained by FNA can complicate the job of the pathologist and can give rise to false negatives. CNB is a better diagnostic technique than FNA as it yields one or more cylinders of histological tissue, from which multiple sections can be obtained and stained.<sup>1</sup> Ultrasound-guided FNA and CNB are routinely performed by radiologists,<sup>2</sup> but can also be performed by other well-trained ultrasound specialists (e.g. endocrinologists).<sup>3</sup> Our dermatology service has had an ultrasound scanner available for consultations for the past 5 years, and we regularly carry out ultrasound-guided procedures. Consequently, our patient was able to benefit from these diagnostic techniques on the day of her consultation. In conclusion, this case illustrates the value of knowledge and experience in performing ultrasound-guided FNA and CNB, which can help dermatologists to rapidly diagnose subcutaneous metastases.

### Conflicts of Interest

The authors declare that they have no conflicts of interest.

### References

1. Balasubramanian I, Fleming CA, Corrigan MA, Redmond HP, Kerin MJ, Lowery AJ. Meta-analysis of the diagnostic accuracy of ultrasound-guided fine-needle aspiration and core needle biopsy in diagnosing axillary lymph node metastasis. *Br J Surg*. 2018;105:1244–53.
2. Soudack M, Nachtigal A, Vladovski E, Brook O, Gaitini D. Sonographically guided percutaneous needle biopsy of soft tissue masses with histopathologic correlation. *J Ultrasound Med*. 2006;25:1271–7.
3. Tofé Povedano S, Argüelles Jiménez I, García Fernández H, Quevedo Juanals J, Díaz Medina S, Serra Soler G, et al. Incorporación de la ecografía y la punción de tiroides a la actividad de endocrinología en una consulta de alta resolución. *Endocrinol Nutr*. 2010;57:43–8.

D. Vidal,<sup>a,\*</sup> M. Pujol<sup>b</sup>

<sup>a</sup> *Servicio de Dermatología, Hospital de Sant Joan Despí Moisès Broggi, Sant Joan Despí, Barcelona, Spain*

<sup>b</sup> *Servicio de Anatomía Patológica, Hospital de Sant Joan Despí Moisès Broggi, Sant Joan Despí, Barcelona, Spain*

\* Corresponding author.

E-mail address: [david.vidal@sanitatintegral.org](mailto:david.vidal@sanitatintegral.org) (D. Vidal).

<https://doi.org/10.1016/j.adengl.2020.04.002>

1578-2190/ © 2019 AEDV. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).