

- diagnosis and management. *Postgrad Med J.* 2007;83:95–9.
6. Bhatia R, Hill MD, Shobha N, Menon B, Bal S, Kochar P, et al. Low rates of acute recanalization with intravenous recombinant tissue plasminogen activator in ischemic stroke: real-world experience and a call for action. *Stroke.* 2010;41:2254–8.
  7. Jovin TG, Gupta R, Uchino K, Jungreis CA, Wechsler LR, Hammer MD, et al. Emergent stenting of extracranial internal carotid artery occlusion in acute stroke has a high revascularization rate. *Stroke.* 2005;36:2426–30.
  8. Stampfl S, Ringleb PA, Möhlenbruch M, Hametner C, Herweh C, Pham M, et al. Emergency cervical internal carotid artery stenting in combination with intracranial thrombectomy in acute stroke. *Am J Neuroradiol.* 2014;35:741–6.
  9. Moret J, Ross IB, Weill A, Piotin M. The retrograde approach: a consideration for the endovascular treatment of aneurysms. *Am J Neuroradiol.* 2000;21:262–8.
  10. Hui FK, Narayanan S, Cawley CM. Posterior-to-anterior circulation access using the Penumbra Stroke System for mechanical thrombectomy of a right middle cerebral artery thrombus. *World Neurosurg.* 2010;73:17–21.

M.E. Pérez Montilla<sup>a,\*</sup>, I.M. Bravo Rey<sup>a</sup>,  
M.D. Bautista Rodríguez<sup>b</sup>, S.V. Alvarado<sup>c</sup>,  
F.de A. Bravo-Rodríguez<sup>a</sup>, F. Delgado Acosta<sup>a</sup>

<sup>a</sup> *Sección de Neurorradiología Diagnóstica y Terapéutica, Unidad de Gestión Clínica de Radiodiagnóstico, Hospital Universitario Reina Sofía, Córdoba, Spain*

<sup>b</sup> *Servicio de Medicina Intensiva, Hospital Universitario Reina Sofía, Córdoba, Spain*

<sup>c</sup> *Servicio de Neurología, Hospital Universitario Reina Sofía, Córdoba, Spain*

\* Corresponding author.

E-mail address: [marigen\\_16@hotmail.com](mailto:marigen_16@hotmail.com)

(M.E. Pérez Montilla).

2173-5808/

© 2015 Sociedad Española de Neurología. 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/>).

## Recurrent diaphoresis, acute confusional state, and pleural mesothelioma<sup>☆</sup>



### Diaforesis recurrente, estado confusional agudo y mesotelioma pleural

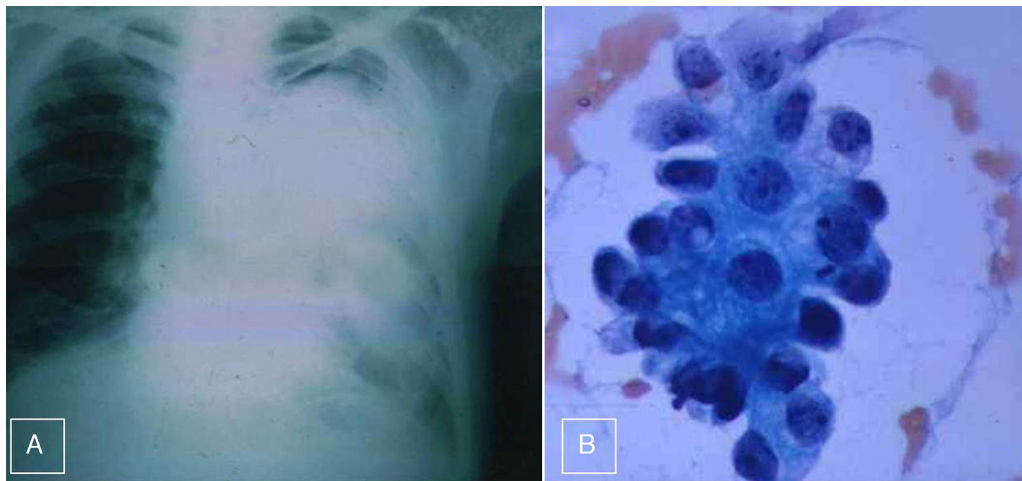
Dear Editor:

Daytime and night-time excessive, generalised recurrent sweating is an infrequent and under-reported symptom in elderly patients. When present, however, it may point to a number of conditions, including tumours.<sup>1,2</sup> Acute confusional state (ACE) or delirium is frequent among elderly patients and may be the reason for institutionalisation or an intercurrent condition in institutionalised patients. Cancer is a possible diagnosis for this manifestation.<sup>3</sup> Both diaphoresis and delirium are regarded as syndromes due to the wide range of causes potentially triggering them.<sup>4</sup>

We present the case of a 79-year-old man who was brought in the morning to the emergency department of our hospital due to behavioural changes, inattention, incoherent thinking, and visual hallucinations. The night before he had displayed normal behaviour and cognition. He had no history of vascular risk factors and had previously been diagnosed with right bundle branch block. Our patient had been taking 50 µg levothyroxine during fasting for the last 20 years and was not receiving any psychoactive drugs. Over the previous year he had experienced episodes of excessive sweating in the evening and night 2–3 times per week, which forced him to change clothes. These episodes were not associated

with hyperthermia; complete blood counts performed on 2 occasions in the previous months revealed normal results. He displayed diaphoresis the night before admission. Physical examination revealed no abnormalities except for mild gait instability, increased base of support, and side stepping. Our patient displayed cognitive and behavioural alterations and was inattentive; we were unable to perform more specific tests due to lack of patient cooperation. He met the diagnostic criteria for ACE.<sup>5</sup> Results from the heart examination were normal except for right bundle branch block; he displayed normal heart rate and blood pressure level, and required no additional medications. A brain CT scan revealed moderate cortical and central atrophy, a typical finding for his age, and no lesions in or around the brain parenchyma. A complete blood count showed normal results except for low glucose levels (26 mg per cent). We suspected a typing error since our patient was not diabetic and was not taking any antidiabetic drugs. A blood sugar test revealed a glucose level of 28 mg per cent; we therefore started treatment with glucose 10%. Chest radiography revealed a large radiopaque mass on the left side (Fig. 1A). ACE resolved 2 hours after glucose infusion. An insulin test disclosed 7.5 mIU/mL (normal range: <10 mIU/mL). A lung biopsy revealed mesothelioma with typical cells and reactive fibrosis (Fig. 1B). We ruled out asbestos exposure based on reports from our patient's relatives. Our patient was discharged one week later. We decided not to excise the mesothelioma in view of its proximity to the mediastinum and our patient's advanced age. He received medications similar to those prior to admission, started a carbohydrate-rich diet, and was instructed to eat every 3 hours, even at night. Our patient was followed-up every 3 months for 5 years; he experienced no further episodes of diaphoresis or ACE, his cognitive function was normal, and he was independent for daily living activities. Follow-up chest radiographies were performed every 4 months and revealed no changes compared to the image shown in Fig. 1A. Our patient was diagnosed with benign pleural fibrous mesothelioma

<sup>☆</sup> Please cite this article as: Domínguez RO, Cárdenas EM, Marulanda YHS, Bartolomé EL. Diaforesis recurrente, estado confusional agudo y mesotelioma pleural. *Neurología.* 2017;32:484–485.



**Figure 1** (A) Simple chest radiography showing a large radiopaque mass on the left hemithorax, very close to the mediastinum. No pleural effusion was found. (B) Mesothelioma with typical cells and fibrosis (haematoxylin and eosin stain  $\times 1000$ ).

associated with occasional episodes of hypoglycaemia<sup>6</sup>; these episodes were responsible for long-term diaphoresis and ACE. Low glucose levels triggers an exaggerated adrenergic response which may cause behavioural disorders and profuse sweating. Insulinoma causes similar symptoms but is associated with hyperinsulinaemia.<sup>7</sup> Benign or malignant mesothelioma and other types of tumours produce a peptide with similar structure and activity to insulin (insulin-like growth factor 2).<sup>8</sup> Diaphoresis and ACE in elderly patients may be helpful for early diagnosis and treatment of some types of tumours.

### Conflicts of interest

The authors have no conflicts of interest to declare. The study and figures were approved for publication by the Training and Research Committee at our hospital. Confidentiality of patient data was preserved.

### References

1. Viera AJ, Bond M, Yates SW. Diagnosing night sweats. *Am Fam Phys.* 2003;67:1019–24.
2. Tani Y, Tateno T, Izumiyama H, Doi M, Yoshimoto T, Hirata Y. Defective expression of prohormone convertase 4 and enhanced expression of insulin-like growth factor II by pleural solitary fibrous tumor causing hypoglycemia. *Endocr J.* 2008;55:905–11.
3. Scarpi E, Maltoni M, Miceli R, Mariani L, Caraceni A, Amadori D, et al. Survival prediction for terminally ill cancer patients: revision of the palliative prognostic score with incorporation of delirium. *Oncologist.* 2011;16:1793–9.

4. Inouye SK. Delirium in older persons. *N Engl J Med.* 2006;354:1157–65.
5. Tucker G. The diagnosis of delirium and DSM-IV. *Dement Geriatr Cogn Disord.* 1999;10:359–63.
6. Graadt van Roggen J, Hogendoorn P. Solitary fibrous tumor: the emerging clinicopathologic spectrum of an entity and its differential diagnosis. *Curr Diagn Pathol.* 2004;10:229–35.
7. Maguire D. Lesson of the month 2: An unusual presentation of hyperinsulinaemic hypoglycaemia with possible underlying diagnosis of glucose-sensitive insulinoma or islet cell hyperplasia. *Clin Med (Lond).* 2015;15:495–6.
8. Kantarova D, Sagova I, Stancik M, Sadlonova J. Hypoglycemia associated with non-islet cell tumors. *Neoplasma.* 2015;62:841–5.

R.O. Domínguez<sup>a,c,\*</sup>, E.M. Cárdenas<sup>b,c</sup>, Y.H.S. Marulanda<sup>b,c</sup>, E.L. Bartolomé<sup>a,c</sup>

<sup>a</sup> *Servicio de Neurología, Hospital Sirio Libanés, Buenos Aires, Argentina*

<sup>b</sup> *Servicio de Medicina Interna, Hospital Sirio Libanés, Buenos Aires, Argentina*

<sup>c</sup> *Facultad de Medicina, Universidad de Buenos Aires, Buenos Aires, Argentina*

\*Corresponding author.

E-mail address: [dominguezraulo@yahoo.com.ar](mailto:dominguezraulo@yahoo.com.ar) (R.O. Domínguez).

2173-5808/

© 2015 Sociedad Española de Neurología. 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/>).