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### HYPOACTIVE DELIRIUM CAUSED BY PULMONARY EMBOLUS IN AN ELDERLY ADULT

*To the Editor:* Delirium is frequently observed in individuals aged 65 and older (10–30%).<sup>1</sup> Delirium has an acute onset—within hours to days—and exhibits a fluctuating course. Delirium is characterized by distorted attention, reduced awareness of the environment, alteration in at least one cognitive area (disturbed memory, orientation, language, perception), and change in sleep cycles.<sup>2</sup> Because of the wide range of clinical presentation, clinicians often do not identify or misdiagnose cases of delirium individuals; hypoactive delirium presenting with lethargy, confusion, and indifference to the environment is the most difficult to diagnose subtype, despite being the most commonly occurring type in elderly adults.<sup>3</sup>

#### CASE REPORT

An 87-year-old woman was brought to the geriatric department because of forgetfulness (not recognizing her children), being introverted, distractibility, indifference to the environment, lack of appetite, refusal to take medications, and hallucinations such as seeing her deceased husband in the room for the previous 2 days. She had no known cognitive deficiency. Physical examination showed a heart rate of 102 beats per minute, respiration rate of 18 breaths per minute, and a body temperature of 37.4°C. All systemic examinations were normal. Assessment of mental condition revealed cognitive and perception problems with disturbances of memory and orientation. Psychomotor activity was found to be poor, and she gave short answers to questions during the interview and refused to talk. Based on these clinical findings and symptoms, the newly developed clinical picture was thought to be hypoactive delirium, and she was admitted to the geriatric service.

Examination immediately after admission revealed a sinus rhythm electrocardiogram with no pathological characteristics. She had leukocytosis (13,000/ $\mu$ L). Biochemistry showed normal liver, thyroid, and kidney functions, with



**Figure 1.** Thorax tomography: Filling defects at the main and segmental branches of pulmonary arteries consistent with embolus.

no electrolyte imbalance. Urinalysis showed no evidence of infection. No pneumonic consolidation or effusion was detected on chest X-ray. Brain tomography ordered to exclude cranial pathology due to acute mental alteration revealed no pathological findings. Sedimentation was 90 mm/h (normal <15 mm/h), C-reactive protein was 115 mg/L (normal 0.1–8.2 mg/L), and lumbar puncture performed to exclude aseptic meningitis and encephalitis was normal. On the fifth day, she was persistently encouraged to mobilize because she did not want to get out of bed and wished to sleep continuously, but she developed exertional dyspnea and syncope. D-dimer was 13,115 mg/L (normal 0–0.5 mg/L), so thoracic tomography was ordered. Filling defects at the main and segmental branches of the pulmonary arteries consistent with embolus were observed on both sides, being more prominent on the right side, and minimal pleural effusion was observed on the left side (Figure 1). Lower extremity venous Doppler ultrasonography findings were consistent with subacute deep vein thrombosis in the left lower extremity. She was started on 1 mg/kg of enoxaparin sodium twice daily, with the addition of warfarin on the third day. On the fifth day of anticoagulation therapy, the delirium was completely resolved, and she was discharged. During outpatient follow-up, warfarin treatment was regulated to maintain an international normalized ratio level of 2.5–3.5, and she developed no new delirium.

#### DISCUSSION

Delirium is associated with poor functional capacity, likelihood of admission to a nursing home, mortality, morbidity, and admission to the hospital.<sup>4,5</sup> Hypoactive delirium is the most commonly encountered subtype in elderly adults. Unlike the other subtypes, individuals behave as if they are sedated and do not harm themselves or others; as a consequence, clinicians often do not identify such individuals or misdiagnose them with depression or dementia. Simple conditions such as untreated urinary system infection, constipation, and pain may cause delirium in elderly

adults, although life-threatening conditions such as myocardial infarction and stroke can also cause it.<sup>6</sup>

Pulmonary embolus (PE) may not always cause typical symptoms as dyspnea; it is asymptomatic (32% of cases) or may present with atypical symptoms as acute confusion, chest and back pain, and syncope.<sup>7</sup> Rarely, one of the atypical clinical presentations of PE may be delirium, as mentioned in this case report, and PE should be investigated in elderly adults presenting with delirium, even in the absence of typical symptoms. In conclusion, while assessing the etiology of delirium, clinicians should remember that one of the acute conditions leading to development of delirium is PE, particularly in elderly adults.

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## BILATERAL ORAL NODULES AFTER THE USE OF A DERMAL FILLER CONTAINING POLYMETHYLMETHACRYLATE MICROSPHERES IN AN OLDER WOMAN

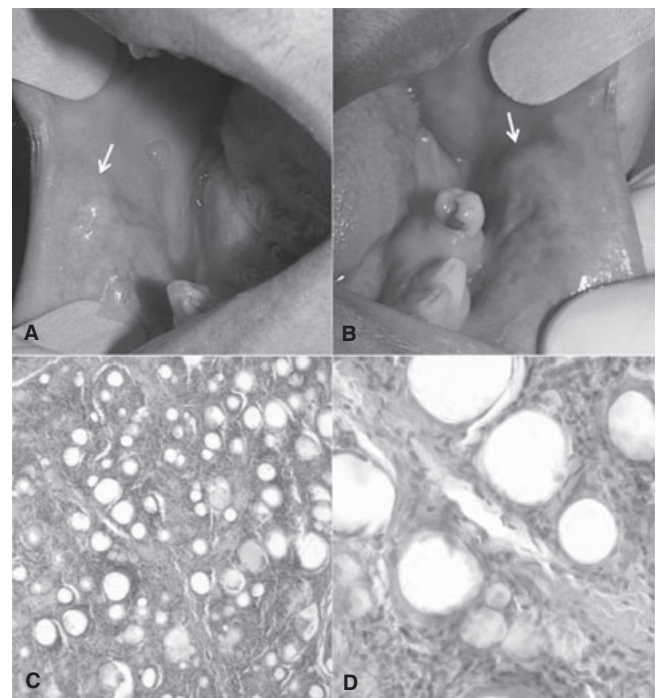
*To the Editor:* An older woman presented at the Clinic of Stomatology, Federal University of Ceará (Sobral, Brazil) complaining of hardened intraoral nodules present for

7 days. In the clinical report, she reported that the nodules arose spontaneously, with facial redness, swelling, and fever. She reported the use of 500 mg of paracetamol (at 6-hour intervals for 3 days) for fever control.

Initially during the anamnesis, the woman did not recall any dental or medical procedures that she thought were related to the appearance of the lesions and denied any drug allergies. During the extraoral examination, a slight swelling of the face, especially in the region of nasolabial and labial commissures, was observed. Intraoral examination detected firm nodules in the buccal mucosa bilaterally, with normal skin color and without mobility (Figure 1A,B).

After the initial consultation, an incisional biopsy in the right oral mucosa was performed under local anesthesia, and the surgical specimen was sent for histopathological analysis. Soon after the procedure, the woman reported that she had used facial filler material (polymethylmethacrylate) 9 years before. Thus, the main clinical hypothesis was foreign body reaction resulting from the use of this material. She was prescribed corticosteroids (20 mg prednisone) for 5 days as postoperative medication.

Histopathological analysis showed fragments of conjunctive tissue exhibiting exuberant presence of small, round vacuoles, all of approximately the same size, consistent with the exogenous material that had been used (polymethylmethacrylate), permeated with mononuclear



**Figure 1.** Intraoral examination (A, right side; B, left side) showing irregular bilateral nodules located in the buccal mucosa (arrow). (C) Histological sections show fragments of conjunctive tissue exhibiting exuberant presence of small vacuoles apparently all of the same size, consistent with exogenous material (hematoxylin and eosin (H&E)  $\times 100$ ). (D) High-resolution image of vacuoles compatible with exogenous material permeated by a moderate mononuclear cell infiltrate (H&E  $\times 400$ ).