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Did René Descartes have a giant ethmoidal sinus osteoma?

The skull of the French philosopher René Descartes has been held in the National Museum of Natural History (Paris, France) since 1821.

Its authenticity has been confirmed by anthropological and historical investigations.¹

We did a CT scan of the skull, which showed a dense radio-opaque mass in the right ethmoidal sinus of 3.0 cm × 1.8 cm and 1440–1840 Hounsfield units (figure). This formation did not extend to the frontal sinus or the right orbit. After a comparison with modern radioanatomical and forensic cases, we propose a diagnosis of osteoma.

Osteomas are the most benign tumour of the paranasal sinuses with a point prevalence of 3%, a male preponderance, a peak incidence at age 30–50 years, and an average age at presentation of 50 years of age.² The most frequent site is the frontal sinus (75% of cases), followed by the ethmoidal sinus (14%), the maxillary sinus (8.5%), and the sphenoid sinus (2.5%).³ Two variants have been described: ortical osteomas (which are round or lobated with ivory-like density; as with Descartes), and cancellous osteomas (much less dense and consisting of lamellar trabeculation of cancellous bone and an abundant fibrofatty marrow).³ Various causes have been proposed including embryonic malformation, post-trauma formation, calcifying polyposis, and response to a chronic inflammation.² Due to the radiological presentation and gross morphology of the CT scan of Descartes, we excluded other diagnoses such as fibrous dysplasia of the right ethmoid, ossifying fibroma, and osteoblastoma.

If symptomatic (10% of cases⁴), osteoma presents with nasal obstruction, sinus dysfunction (congestion, pressure, excess of mucus, and change in sense of smell), lacrimal dysfunction (epiphora and dacryocystitis), epistaxis, facial pain, and headache; visual disturbance (diplopia) has been reported in a few cases.⁴ Biographers have not described such symptoms in René Descartes¹ apart from one possible isolated

episode of migraine with aura on the night of Nov 10, 1619 (characterised by sudden visual and auditory hallucinations);⁵ however, simple benign masses do not usually cause such phenomenon, especially in the first 24 h as seen in vascular headache.

Such an organic lesion probably had no role in the cause and circumstances of death of René Descartes, who died due to an acute pneumonia in Stockholm, Sweden, on Feb 11, 1650, at the age of 54 years.

We declare no competing interests.

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Department of Error

Dungan KM, Povedano ST, Forst T, et al. *Once-weekly dulaglutide versus once-daily liraglutide in metformin-treated patients with type 2 diabetes (AWARD-6): a randomised, open-label, phase 3, non-inferiority trial.* *Lancet* 2014; **384**: 1349–57—In this Article, the x-axis label of figure 2C was missing. Supplementary tables were missing from the appendix. These corrections have been made to the online version as of Oct 10, 2014, and the printed Article is correct.

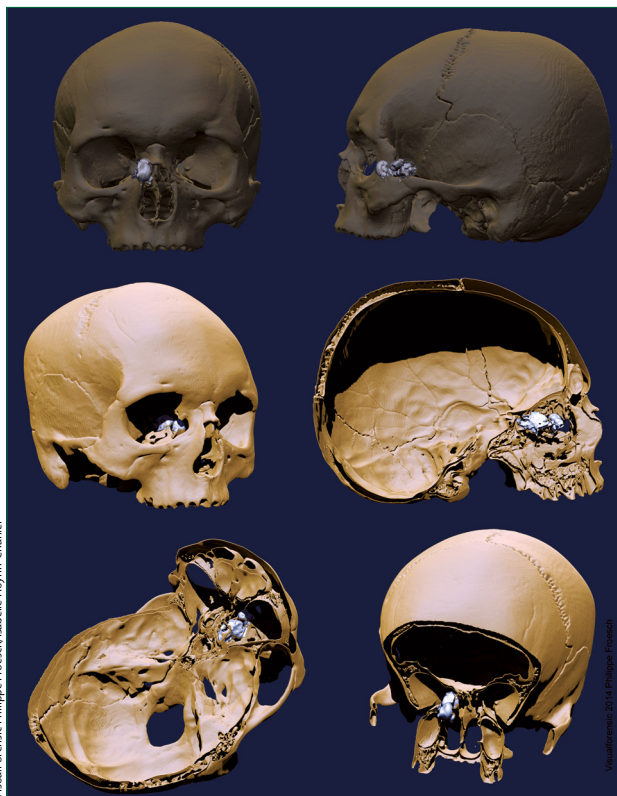


Figure: Six CT views of Descartes' skull, showing the ethmoidal sinus osteoma (grey)