



My Head is Getting Bigger: Macrocephaly with Cause Shown on CT Head - Clinical Image

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Keywords

Macrocephaly, Big Head, Bruxism, Clinical Image

A 19-year-old man with a BMI of 23.8 kg/m² (5 ft 7 in; 152 lbs) presented with the concern of 3 years of progressively enlarging head leading to an increase in hat size. The patient fulfilled the criteria for macrocephaly as his head circumference was 62 cm, which was above the 97th percentile for his age [1]. CT head revealed homogeneous bilateral hypertrophy of



Fig-1: Bilateral Hypertrophy of Temporalis? Muscles

CT head showing bilateral Temporalis muscle enlargement (blue marker)

the temporalis, masseter, and medial pterygoid muscles with no evidence of a neoplastic process (Fig-1, Fig-2, and Fig-3). While genetic syndromes can be a cause of out-of-range head circumference, familial and

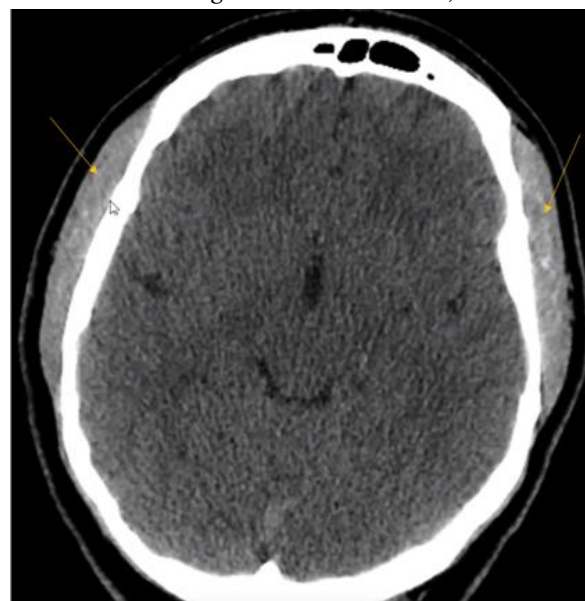


Fig-2: Bilateral Hypertrophy of Temporalis Muscles

CT head showing bilateral temporalis muscle enlargement (yellow marker)

environmental factors can contribute to variations [2,3]. In this case, the patient's history revealed a

Clinical Image

history of bruxism since adolescence, however, no other physical or developmental abnormalities were noted. As a result, our case demonstrates bruxism and subsequent masticatory muscle hypertrophy as another possible cause of macrocephaly.



Fig-3: Bilateral hypertrophy of medial pterygoid muscles
CT head showing bilateral medial pterygoid muscle enlargement (yellow marker) and masseter hypertrophy

Conclusion

Acquired progressive macrocephaly caused by bruxism, as evidenced by bilateral hypertrophy of the temporalis, masseter, and medial pterygoid muscles shown on the CT head.

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Informed consent has been obtained from this patient. No identifiable information about the patient will be included in this submission.

Author Contributions

Lillian Jundi participated in the literature review, drafting, and submission of the manuscript. Abha

Sathe participated in the literature review, drafting, and submission of the manuscript. Neuzil Lai took care of the patient, and participated in the data collection, critical review, and submission of the manuscript. Forshing Lui helped in taking care of the patient, participated in critical review and submission of the manuscript.

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Conflict of Interest

The authors have read and approved the final version of the manuscript. The authors have no conflicts of interest to declare.

Question

With the CT head of this patient as shown in the figures, what is the cause of the abnormalities leading to progressive enlargement of his head?

- A. Hydrocephalus
- B. Idiopathic acquired macrocephaly
- C. Overuse muscular hypertrophy due to bruxism
- D. Macrocephaly caused by bilateral cavernous malformations

Correct Answer: C

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