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WHAT IS YOUR DIAGNOSIS

IMAGING CLINICAL CASE

CASO CLÍNICO IMAGIOLÓGICO

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Herein is presented the clinical case of a 15-year-old adolescent boy who was referred to the Pediatric consultation with complaints of occipital tumefaction that had been growing since the previous year. No history of trauma was reported and swelling was not associated with pain or other symptoms. On examination, tumefaction was hard, rounded, approximately 2cm wide, apparently fixed to the occipital bone, with no inflammatory signs. Skull x-ray was requested, with the following result:

What is your diagnosis?

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DIAGNOSIS

Xray revealed occipital spur

Occipital spur is an exaggerated external occipital protuberance (EEOP), considered a normal feature in the medical literature. Although it can remain asymptomatic, pain may be present at rest or during neck movements. It often presents in late adolescence due to growth spurts and is more frequently found in males.[1]

Anatomically, the external occipital protuberance functions as attachment site of neck and back ligaments and muscles to the skeleton. In response to mechanical stress, these sites are prone to develop spiky bone growths, called enthesophytes. Enthesophytes are frequent radiographic findings in the asymptomatic aging population and are considered a normal event in the aging process, slowly developing over time.[2,3]

A recent Australian report2 analyzed skull x-rays of 1200 adults aged 18 to 86 years and reported a higher EEOP prevalence in young adults (18 to 30 years old). The same study reported that an increase in forward head protraction increases the likelihood of having EEOP. Contrarily to what was expected, increased age was associated with a decrease in enthesophyte size.

Although occipital spur is a benign entity, head tumefactions are a frequent cause of concern for children and parents. Occipital horns should be considered in the differential diagnosis of occipital protuberances. Occipital horn is a bony protuberance laterally located on both sides of the foramen magnum. It is a rare finding associated with mutations in a copper transporting ATPase (AP7A) and the underlying cause of more complex and severe diseases, such as Menkes disease. Occipital horn syndrome (OHS) is a mild presentation form of Menkes disease, characterized by connective tissue manifestations, as joint laxity and muscular hypotonia.[4]

In the present case, the mother reported that the adolescent spent most free time playing with the mobile phone or portable game devices, with neck and head flexion forward. The boy engaged in online games/social media on average five hours a day during weekdays, a number that rose to eight hours a day during weekends.

Caution should be exercised when drawing causal inferences between this entity and bad posture, as other factors could be associated with occipital spur development in this teenager. However, the association between use of mobile touchscreen devices and musculoskeletal problems has been previously reported in adolescents and adults, with prolonged smartphone use associated with neck and shoulder symptoms.[5,6]

Patients and parents should be informed about tumefaction's anatomic nature and aware that it may increase in size as the adolescent grows.

Conservative management is appropriate in these cases. If symptoms like pain or discomfort when lying down develop, surgical approach should be considered.[1]

There is no scientific evidence that mobile phone or tablet use was the underlying cause of occipital spur development in this case. Nonetheless, recommendations of good posture and limited exposure time to technologies should be reinforced, preventing development of future poor posture-related conditions.

ABSTRACT

Case report: The authors present the case of a 15-year-old adolescent boy with occipital spur noticed since the previous year and with progressive enlargement. No history of trauma or other associated symptoms was evident. Physical examination showed a hard tumefaction with no inflammatory signs and x-ray revealed occipital hyperostosis. The boy spent most free time playing with mobile gadgets, with poor body posture.

Discussion/Conclusion: Although considered a normal feature, occipital spur in adolescents and young adults may be linked to poor posture, for instance associated with prolonged use of handheld technology. Exaggerated technology use may be associated with several complaints and musculoskeletal symptoms should not be neglected.

Keywords: enthesophyte; hyperostosis; occipital bone; technology

RESUMO

Caso clínico: Os autores relatam o caso de um adolescente de 15 anos de idade com um esporão occipital detetado no ano anterior e em progressivo crescimento. Não existia história de trauma ou outros sintomas associados. O exame físico revelou uma tumefação dura sem sinais inflamatórios e a radiografia mostrou uma hiperostose occipital. O adolescente passava a maior parte do tempo livre a jogar em consolas portáteis, adotando posturas corporais inadequadas.

Discussão/Conclusão: Embora frequentemente considerada uma característica normal, a presença de esporão occipital em adolescentes e jovens adultos pode estar relacionada com má postura devido, por exemplo, ao uso prolongado de tecnologias móveis.

O uso exagerado de tecnologia pode estar associado a várias queixas e os sintomas musculo-esqueléticos não devem sem negligenciados.

Palavras-chave: entesófito; esporão occipital; hiperosteose, tecnologia

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