An Adolescent with Headache: The Power of Anamnesis

Um Adolescente com Cefaleia: o Poder da Anamnese

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Abstract

Headaches are a frequent reason for medical observation in adolescents. This clinical case illustrates the importance of careful anamnesis, both semiologically and biopsychosocial.

We describe a case of a 15-year-old male, with headaches during weekend sports matches. A migraine induced by physical activity was first diagnosed, and the trigger was suspended after medical recommendation, with the resolution of symptoms.

He later showed demotivation since he stopped extracurricular sports, adding that he fasted before the matches because of performance anxiety. No episodes were registered during physical education classes and headaches relapsed during the holidays when he skipped breakfast. A migraine induced by prolonged fasting was proposed, with follow-up confirming it.

A simple diagnosis can be made upon clinical interview, deeply impacting the patient´s quality of life. Addressing the adolescent's complaints helped unravel the diagnosis of the correct trigger factor and allowed him to return to his extracurricular activities with better management of his condition.

Keywords: Adolescent; Headache; Headache Disorders; Migraine Disorders

Resumo

As cefaleias são uma razão frequente para observação médica em adolescentes. Este caso clínico ilustra a importância de uma anamnese cuidadosa, tanto semiológica quanto biopsicossocial.

Descrevemos o caso de um rapaz de 15 anos, com cefaleia durante a atividade desportiva nos fins de semana. Inicialmente, foi diagnosticada uma enxaqueca induzida por atividade física, e o *trigger* foi suspenso por recomendação médica, resultando na resolução dos sintomas.

Posteriormente apresentou desmotivação após parar a atividade física extracurricular, mencionando que fazia jejum antes dos jogos devido à ansiedade de desempenho. Nenhum episódio foi registado durante as aulas de educação física, e as cefaleias recomeçaram durante as férias, quando ele acordava tarde e não comia o pequeno-almoço.

Colocou-se a hipótese de uma enxaqueca induzida por jejum prolongado, sendo o diagnóstico confirmado em acompanhamento posterior.

Um diagnóstico simples pode ser feito através da entrevista clínica, com impacto profundo na qualidade de vida do doente. Abordar as queixas do adolescente ajudou a desvendar o diagnóstico do fator desencadeante correto e permitiu o regresso às atividades extracurriculares com melhor gestão da sua patologia.

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Palavras-chave: Adolescente; Cefaleia; Enxaqueca; Perturbações da Cefaleia; Perturbações de Enxaqueca

Introduction

Headache is a common reason for evaluation in General Pediatrics appointments. It is the most common type of pain in children and young people, affecting health-related quality of life, school attendance, and social functioning.[1] Primary headaches in childhood and adolescence are most frequently tension-type headaches and migraines, and they can coexist with overlapping symptoms in clinical presentation.[2] Clinical work-up to the diagnosis and management of these patients in ambulatory settings pretends to exclude secondary causes, with specific targeted treatment as well as optimizing the removal of causative agents in primary headaches.[3-5] The following case refers to an adolescent evaluated in a General Pediatrics appointment.

Case Report

We hereby report the case of a 15-year-old male, previously healthy, sports athlete. The patient had been evaluated by a General Practitioner one year before, after recurring episodes of pulsating frontotemporal bilateral headache that used to worsen during physical activity. These episodes, of moderate intensity, used to last 2 to 6 hours when untreated and were associated with vomiting and photophobia. They were observed on weekends at sports game events and greatly impacted his physical performance. The adolescent denied other signs or symptoms. Ibuprofen was prescribed, decreasing the severity of pain but not the frequency of episodes. A cranioencephalic computed tomography was performed without abnormal findings. A diagnosis of migraine induced by physical activity was established and the patient was advised to avoid sports practice, with clinical improvement in the subsequent months.

After 8 months, the adolescent was referred to a General Pediatrics appointment for relapsing headaches in the early afternoon during the school holidays as well as for associated depression for quitting sports. The neurological exam showed no alterations, and a headache calendar was requested. At the follow-up appointment, no episodes had happened during physical education. On the other hand, the caregiver remembered that the anxiety of having a good athletic performance led him to skip breakfast before sports events. The hypothesis of migraine induced by prolonged fasting was raised and the adolescent was advised to restart sportive activity with the removal of the potential triggering factor. During the 12-month follow-up, one migraine episode occurred that resolved after eating. A global improvement in his life and health quality was stated.

Table 1. Diagnostic criteria for Primary Headaches according to the International Classification of Headache Disorders, 3rd edition

Migraine	Tension-type headache	Trigeminal autonomic cephalalgias	Other primary headache disorders
A - At least 5 episodes with criteria B-D	A - At least 10 episodes fullfiling criteria B-D	Share the clinical features of unilateral headache and, usually, prominent cranial parasympathetic autonomic features (lateralized and ipsilateral to the headache)	Includes a number of primary headache disorders that are clinically heterogeneous
B - Lasting 4-72 hours (untreated or unseccessfully treated)	B - Lasting 30 minutes to 7 days	Subtypes • Cluster headache • Paroxysmal hemicrania • Short-lasting unilateral neuralgiform headache-attacks • Hemicrania continua • Probable trigeminal autonomic cephalalgia	Primary Exercise Headache: • Headache precipitated by any form of exercise in the absence of any intracranial disorder • Diagnostic criteria • A - At least two episodes with criteria B and C • B - Brought on by and occuring only during or after strenuous physical exercise • C - Lasting <24 hours • D - Not better accounted for by another ICHD-3 diagnosis
C - At least two characteristics • unilateral • pulsating • moderate or severe intensity • aggravation by physical activity	C - At least two of these characteristics • bilateral location • pressing or tightening • mild to moderate intensity • not aggravated by routine physical activity		
D - At least one of these characteristics • nausea or vomiting • photophobia or phonophobia	D - Both of the following • No nausea or vomiting • No more than one of photophobia or phonophobia		
E - Not better accounted for by another ICHD-3 diagnosis	E - Not better accounted by another ICHD-3 diagnosis		

Discussion

The anamnesis of headache should focus on its characterization, identification of relieving or aggravating factors, exploration of potential triggers and response to therapeutic measures.[5] The presence of warning signs such as systemic symptoms, neurological deficits and changes in frequency or pattern of pain should suggest the exclusion of secondary causes.[6] A migraine without aura is a primary headache and its

diagnosis depends on clinical features (Fig. 1), which were all met by our adolescent. In teenagers, bilateral migraines with frontal pain and a duration of 2 hours are featured more frequently than in adults.[5-9]

Primary exercise headache is included in the International Classification of Headaches (ICHD-3) as a primary headache (Fig. 1), triggered by vigorous exercise. However, in the presence of diagnostic criteria for migraine, the latter diagnosis should be assumed.[5]

The prolonged fasting-induced migraine was proposed because of key signs of anamnesis: episodes on weekends after skipping breakfast and recurrence during the holidays, which is a period associated with sleeping in and having lunch later. Thus, the physical activity acted not as the trigger, but as a worsening factor when the migraine was already established. Prolonged-fasting-induced headache is more frequent in individuals with a prior history of headaches that fast for periods of more than 8 hours. It is not associated with sleep disturbances, caffeine deprivation, or hypoglycemia. In patients with a previous history of migraine, it should be defined as a migraine induced by prolonged fasting. The diagnosis is supported by the improvement of the headache after avoiding prolonged periods without eating and by the reversibility of the pain after eating.[5]

In this case, a complete clinical history, addressing every aspect of the adolescent´s social and familiar life, led to a different final diagnosis with improvement in his quality of life. During follow-up, the headache calendar is important for two major interventions: establishing the appropriate diagnosis according to ICHD-3 and identifying trigger patterns.

The patients should always be evaluated in their biopsychosocial context, focusing not only on treating the physical disease but not neglecting the impact on their mental health and social life. This case helps to remind health professionals that frequently we request complementary diagnostic exams because of their easy access and ability to exclude severe conditions forgetting the usefulness of a semiological approach to clinical evidence.

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