

HEADACHE IN ADOLESCENTS: COMMON CAUSES, CLINICAL FEATURES, RISK FACTORS, AND APPROACHES TO PREVENTION AND MANAGEMENT

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Abstract

Headache is one of the most common neurological complaints among adolescents and can significantly affect their academic performance, emotional well-being, sleep, and quality of life. During adolescence, headaches may be associated with primary headache disorders, particularly migraine and tension-type headache, as well as with lifestyle, psychological, and environmental factors. Sleep deprivation, academic stress, prolonged screen exposure, dehydration, irregular meals, and insufficient physical activity may contribute to the onset or worsening of headache symptoms. This article reviews the major types and causes of headache in adolescents, their characteristic clinical manifestations, important risk factors, and approaches to diagnosis, prevention, and management. Particular attention is given to distinguishing migraine from tension-type headache and recognizing warning signs that may indicate a secondary headache disorder. Early identification of recurrent or severe headaches and an individualized approach to management are essential for reducing the negative impact of headache on adolescents' health and daily functioning.

Keywords: adolescents, headache, migraine, tension-type headache, risk factors, diagnosis, prevention, neurological health, lifestyle, headache management.

1. Introduction

Headache is a common health problem among children and adolescents. Recurrent headaches can interfere with school attendance, concentration, sleep, social activities, and overall quality of life. In adolescence, the problem may become particularly important because of rapid physical, emotional, and psychological development.

According to the International Classification of Headache Disorders, headache disorders can broadly be divided into **primary** and **secondary** headaches.

Primary headache disorders include migraine and tension-type headache, whereas secondary headaches are associated with another underlying condition, such as infection, trauma, or disorders affecting intracranial pressure.

Among adolescents, migraine and tension-type headache are particularly important. Migraine in children and adolescents may differ from adult migraine: the pain is more frequently bilateral, whereas unilateral headache becomes more characteristic later in adolescence or adulthood.

2. Common Types of Headache in Adolescents

2.1. Migraine

Migraine is a neurological disorder characterized by recurrent attacks of moderate to severe headache. In adolescents, migraine may be accompanied by nausea, vomiting, sensitivity to light and sound, and a need to rest or avoid physical activity. According to ICHD-3, migraine without aura typically involves attacks lasting 2–72 hours in individuals younger than 18 years.

Common factors that may trigger migraine attacks include insufficient sleep, emotional stress, dehydration, skipped meals, excessive screen exposure, and changes in daily routine.

2.2. Tension-Type Headache

Tension-type headache is another common primary headache disorder. It is generally described as bilateral, pressing or tightening pain of mild to moderate intensity. Unlike migraine, it usually does not become worse with routine physical activity and is generally not accompanied by nausea or vomiting.

Stress, prolonged concentration, emotional tension, poor posture, inadequate sleep, and excessive academic workload may contribute to the occurrence of tension-type headaches.

3. Risk Factors and Lifestyle-Related Causes

Several factors associated with modern adolescent lifestyles may contribute to recurrent headaches. These include:

- insufficient or irregular sleep;
- prolonged use of smartphones, computers, and other digital devices;

inadequate fluid intake;
skipping meals or maintaining an irregular eating schedule;
academic and psychological stress;
insufficient physical activity;
prolonged sitting and poor posture;
excessive caffeine consumption;
emotional difficulties and anxiety.

Psychological and sleep-related problems may also coexist with primary headache disorders in adolescents and can contribute to greater headache frequency and severity.

Therefore, assessment of an adolescent with recurrent headaches should not focus only on the pain itself but should also consider sleep patterns, nutrition, hydration, school workload, emotional well-being, and daily screen time.

4. Clinical Assessment and Diagnosis

The diagnosis of headache in adolescents is primarily based on a detailed medical history and clinical examination. Important characteristics include the location and intensity of pain, duration, frequency, associated symptoms, possible triggers, and factors that relieve or worsen the headache.

A **headache diary** can be particularly useful for identifying patterns and potential triggers. It may include the date and duration of each episode, pain intensity, sleep duration, meals, fluid intake, screen exposure, stress, medications, and associated symptoms. ICHD-3 also highlights the usefulness of headache diaries in distinguishing migraine from tension-type headache.

Particular attention should be paid to headaches that are new, progressively worsening, associated with neurological symptoms, or accompanied by other concerning clinical findings. Such cases require appropriate medical evaluation to exclude secondary causes.

5. Prevention and Management

Management of recurrent headaches in adolescents should be individualized according to the type, frequency, severity, and underlying causes of the headache.

Lifestyle modification is an important component of prevention. Adolescents should be encouraged to maintain a regular sleep schedule, consume sufficient fluids, eat regular meals, engage in appropriate physical activity, and take regular breaks during prolonged screen use.

Stress-management strategies may also be beneficial, particularly for adolescents experiencing frequent tension-type headaches or headaches associated with emotional stress. Identification and management of coexisting psychological or sleep problems can be important because these conditions may negatively affect the course of primary headache disorders.

Medication should be used appropriately and under professional guidance, particularly when headaches are frequent or severe. Excessive use of acute headache medications can itself contribute to medication-overuse headache, making appropriate clinical assessment important.

6. Conclusion

Headache in adolescents is a multifactorial health problem that can substantially affect educational performance, psychological well-being, and quality of life. Migraine and tension-type headache represent important primary headache disorders in this age group, while lifestyle and psychosocial factors may contribute to their development and recurrence.

Early recognition, accurate clinical assessment, identification of individual triggers, and appropriate preventive strategies are essential for effective management. Particular attention should be given to sleep, hydration, nutrition, physical activity, screen use, and psychological well-being. A comprehensive and individualized approach can help reduce headache frequency and severity and improve the overall quality of life of adolescents.

REFERENCES

1. Tukhtamishv M. et al. Significance of mpMRI and prostate biopsy. Accuracy, necessity of combining these procedures //European Urology Open Science. – 2025. – T. 81. – C. S314.

2. Tukhtamishev M. et al. Approaches of obstructive pyelonephritis in septic, obese patients // European Urology Open Science. – 2025. – T. 81. – C. S7.