



Effects of Energy Drinks on Children and Adolescents

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KEYWORDS

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ABSTRACT:

Introduction: Energy drinks are increasingly used by children and adolescents to improve their performance or drink without knowing their ingredients and side effects.

Objectives: To examine patterns of energy drink consumption by children and young people, attitudes towards these drinks, and any associations with health, such as cardiac rhythm abnormalities, chest pain or mood, and behavioural disorders.

Methods: Children and adolescents consume energy drinks are consumed. Frequently containing high and unregulated amounts of caffeine, these drinks have been reported to be associated with serious adverse effects and, adolescents with cardiac rhythm abnormalities, chest pain or mood, and behavioural disorders.

Results: In our children’s clinic in Prishtina in six-month period were admitted 28 children with tachycardia were admitted after consuming energy drinks. The reason for admission was chest pain and tachycardia.

Conclusions: Children and adolescents frequently consume energy drinks. Paediatricians should be aware of the possible effects of energy drinks in vulnerable populations and screen for consumption to educate families.

1. Introduction

Energy drinks are increasingly used by children and adolescents to improve their performance or to drink without knowing their ingredients and side effects. Energy drinks have no therapeutic benefit, and many ingredients are understudied and unregulated^{1,2}. The known and unknown pharmacology of agents included in such drinks, combined with reports of toxicity, raises concerns about potentially serious adverse effects in association with energy drink use. In the short-term, paediatricians need to be aware of the possible effects of energy drinks in vulnerable populations and screen for consumption to educate families^{3,4,5}. Long-term research should aim to understand the effects in at-risk populations. Toxicity surveillance should be improved, and regulations of energy drink sales and consumption should be based on appropriate research. Energy drinks are consumed by 30% to 50% of adolescents and young

adults^{3,7,8}. Frequently containing high and unregulated amounts of caffeine, these drinks have been reported in association with serious adverse effects, especially in children and adolescents, cardiac rhythm abnormalities, chest pain or mood and behavioural disorders^{6,9,10}.

Objectives To examine patterns of energy drink consumption by children and young people, attitudes towards these drinks, and any associations with health, such as cardiac rhythm abnormalities, chest pain or mood, and behavioural disorders.

To examine patterns of energy drink consumption by children and young people, problems such as difficulty sleeping, behavioural or mental health issues, such as increased aggression, anxiety, stress and depression.



2. Methods

In children`s clinic in Prishtina in six-month period were admitted 28 children with tachycardia after consuming energy drinks. The reason of admission were chest pain and tachycardia. ECG and echocardiography were performed in all children.

3. Results

In six-month period were admitted 28 children with tachycardia after consuming energy drinks. The reason of admission were chest pain and tachycardia. The age of children was from 7 to 17 years. The children were examined through a personal interview, clinical examination, conventional echocardiography, 24 h Holter ECG, and 24 h blood pressure monitoring. All children frequently use energy drinks. Six of them drink 4 to 5 energy drinks during the day. The most common symptoms that they had were chest pain, fast heart beats, anxiety and feeling uncomfortable. Most of them didn`t have knowledge about the ingredients of energy drinks and usually they drink them as refresh drinks. In 70% of parents, they consume the energy drinks as an everyday refresh drink at home, without knowing their side effects. The average rate of heart beats were 265 beats for minute. In 6 of the children the rhythm was converted using Verapamil and in the others the rhythm was converted itself.

4. Discussion

Energy drinks are frequently consumed by children and there are reports of morbidity associated with consumption. While most healthy adults can consume a single energy drink without any significant negative acute health effects, in children the long-term effects of chronic consumption have not been well studied. The European Cardiac Arrhythmia Society suggests that children under 14 years of age and children with underlying cardiac conditions should refrain from consuming caffeinated products and suggests for children over 14 years a maximal daily caffeine dosage of 2.5 mg per kg of bodyweight.

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