

Intentional Use of Known Allergens for Self-Harm Behavior

Uso Intencional de Alergénios Conhecidos para Comportamentos Autolesivos

Keywords: Adolescent; Drug Hypersensitivity/complications; Ibuprofen/adverse effects; Self-Injurious Behavior

Palavras-chave: Adolescente; Comportamento Autolesivo; Hipersensibilidade a Medicamentos/complicações; Ibuprofeno/efeitos adversos

Intentional self-harm represents a challenge for health-care professionals.¹ Non-suicidal self-injury includes behaviors such as skin scratching, cutting, burning and hitting oneself.¹ Contributing factors include genetics, psychiatric conditions, and social influences.¹ About 18% of United States high school students engage in non-suicidal self-injury, rising to 24% among female adolescents.² In Portugal, evidence suggests a rising prevalence of self-harm among adolescents.³

Deliberate use of allergens for self-harm is remarkably rare in the literature. Reported cases include suicide attempts using penicillin, peanut butter, canned fish or peach juice ingestion.^{4,5} No cases of self-harm lacking suicidal intent with known allergens were found.

Non-steroidal anti-inflammatory drugs (NSAIDs) hypersensitivity affects 0.6% - 5.7% of the population,⁶ and they are widely available without a medical prescription. We report the case of an adolescent with ibuprofen hypersensitivity, who intentionally used this drug for self-harm.

We present a 13-year-old female with an intellectual developmental disorder, regularly assessed in child and adolescent psychiatry (CAP) appointments and under regular psychotherapy. She had a dysfunctional family environment, recurrent conflicts, and poor school performance, suffering from bullying along with difficulties integrating with peers.

She was referred to the allergology clinic for suspected ibuprofen hypersensitivity, following three reproducible episodes of generalized urticaria and palpebral angioedema immediately after ibuprofen intake. To confirm the diagnosis, we performed an open (both the patient and the clinician know what substance is being administered) oral provocation test (OPT) with ibuprofen, positive after a cumulative dose of 370 mg, with eyelid/retroauricular urticaria and labial angioedema within 90 minutes. Total NSAIDs avoidance was recommended, except for paracetamol (posteriorly tolerated) and nimesulide, following a negative open OPT.

Subsequent CAP evaluations revealed she had been developing intentional self-harm behaviors, specifically forearm self-mutilation, without suicidal ideation, due to anxiety. Four months after hypersensitivity confirmation, she presented twice to the emergency department with generalized urticaria and angioedema, without any apparent precipitating factor. Later on, the intentional intake of

ibuprofen in those episodes was admitted by the patient, as a reaction to family disfunction. Assessment by social services led to patient institutionalization.

This case highlights an adolescent with a psychiatric background who used a known allergen for non-suicidal self-harm, rarely reported but a potentially overlooked behavior. Its true prevalence is unknown due to under-recognition or mislabeling as accidental exposure. Preventive measures are crucial, including early identification of self-injurious tendencies in allergic patients, particularly those with risk factors for severe reactions, monitoring of psychiatric comorbidities, patient education and personalized emergency plans. Collaboration between allergists, psychiatrists, and other healthcare providers is essential for proper management.

PREVIOUS AWARDS AND PRESENTATIONS

This case was previously presented as a poster at the 5th National Congress of Immunoallergology of Hospital da Luz, organized by the Allergy and Immunology Department of Hospital da Luz Lisboa, held on May 24th, 2024.

AUTHOR CONTRIBUTIONS

AA, ARP: investigation, writing – original draft preparation.

JG, ERG: conceptualization, investigation, writing – review & editing.

All authors approved the final version to be published.

PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in October 2024.

DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

LEGAL GUARDIAN CONSENT

Obtained.

COMPETING INTERESTS

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