

Glosso-pharyngeal edema associated with rhabdomyolysis: A rare side effect of cannabis

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Abstract:

Association of head and neck edema with rhabdomyolysis syndrome has been described for intoxication with paraphenylene diamine and nonsteroidal anti-inflammatory drugs.

In this article, we report a case of a patient with history of cannabis dependence who had rhabdomyolysis after using cannabis associated with clonazepam.

He is a 23-year-old man, chronic cannabis smoker, admitted to ENT emergency department of 20 August hospital, University Hospital Center in Casablanca, for acute respiratory distress following a glosso-pharyngeal edema after concomitant use of cannabis and clonazepam and requiring use of an emergency tracheotomy. Biological assessment also showed rhabdomyolysis syndrome.

Allergic manifestations and side effects of cannabis continue to increase especially with increase in its use after its legalization in many countries. Treatment is essentially based on prevention by avoiding any contact with cannabis or its derivatives.

Key Words: cannabis; glosso-pharyngeal edema; rhabdomyolysis

Introduction:

Cannabis is one of the most widely used recreational drugs in the world. Recently, several countries have adopted measures to legalize use of cannabis for medical purposes, which mean that consumption is increasing significantly. This increasing consumption has made it possible to discover several undesirable effects of cannabis or its derivatives such as cannabinoid hyperemesis syndrome (CHS) described for the first time in 2004 [1], allergic manifestations of different degrees, rhabdomyolysis [2] and even association with certain vasculitis [3].

Association of cervico-facial edema with rhabdomyolysis syndrome has been described especially for intoxication with paraphenylene diamine [4] and nonsteroidal anti-inflammatory drugs [5].

To our knowledge, no case has been reported following intoxication with cannabis and / or benzodiazepines.

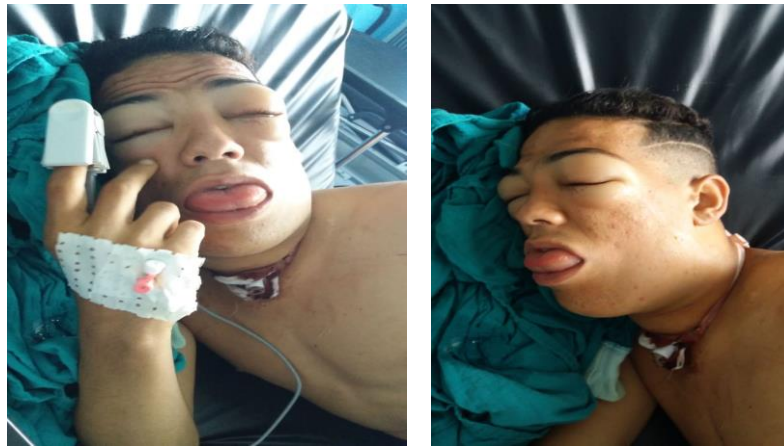
In this paper, we report a unique case of a patient with history of cannabis dependence who presented glosso-pharyngeal edema with

rhabdomyolysis after using cannabis associated to clonazepam.

Case report:

This is a 23-year-old patient, without particular pathological history apart from chronic cannabis use (by inhalation). Admitted to ENT emergency department of 20 August hospital in Casablanca for acute respiratory distress with glosso-pharyngeal edema.

History of his illness goes back to 18 hours before his admission after taking two clonazepam tablets while smoking cannabis by installation of vomiting, generalized pruritus, then occurrence of face edema and macroglossia which is become extensive obstructing upper airways and causing acute respiratory distress. On admission, patient was agitated, polypneic, desaturation (SpO₂=88%), tachycardia (130 bpm), blood pressure at 150/80 mmHg, afebrile at 37 °C, normal blood sugar at 0.99 g/dl. The patient received an adrenaline nebulization with intravenous injection of 120 mg of methylprednisolone without improvement, which necessitated use of emergency tracheotomy.



Then the patient was transferred to intensive care unit. Upon admission to intensive care, patient was conscious, SaO₂ = 97% in open air, respiratory rate at 18 cpm, hemodynamically stable, diuresis was preserved but with dark urine.

Biological assessment was carried out objectifying a rhabdomyolysis syndrome with a very high rate of CPK at 54000 IU/l and LDH at 2346 IU/l, with normal renal function (urea: 0.15 g/l and creatinine: 6,5 mg/l,

potassium concentration: 3.8 mEq/l). Toxicological assessment of urine confirmed presence of Tetrahydrocannabinol and benzodiazepines.

The patient received hyperhydration and methylprednisolone.

Evolution was favorable with clinical improvement and regression of cervico-facial edema as well as progressive biological normalization.



2nd day of hospitalization



One week after discharge

Discussion:

“Cannabis” is a generic term for various preparations (marihuana, weed, hashish, hash oil) obtained from Cannabis sativa plant (order: Rosales, family Cannabaceae) that contain high levels of cannabinoids. Its key psychoactive ingredient, tetrahydrocannabinol (THC), is well known for its antiemetic and appetite stimulating properties. Mechanism behind these effects as well as psychoactive effects that lead to recreational use are facilitated by its partial agonism of endogenous CB1 and CB2 receptors found mainly throughout central nervous system [6]. Today, no information is available on prevalence of cannabis allergy, but it is likely that this allergy will be a growing problem in future.

For about a decade, allergy to IgE-mediated cannabis appears to be increasing. Active and passive exposure to cannabis allergens can cause sensitization and / or allergy to cannabis. Clinical manifestations of cannabis allergy can range from mild to life-threatening (rhinoconjunctivitis, sometimes severe asthma, angioedema, palpebral Angioedema, Urticaria), often depending on route of exposure. In addition, sensitization to cannabis allergens can trigger various secondary

cross allergies, mainly for plant foods "cannabis-fruit / vegetable syndrome", which could also involve cross-reactivity with tobacco, latex and beverages alcoholic foods derived from plant foods [7, 8, 9, 10].

Currently, diagnosis of allergies related to cannabis is based on thorough anamnesis supplemented by skin tests (prick-tests) carried out with part of plant (flower, stem, leaf and / or extracts (artisanal extracts)). However, quantification of specific IgE antibodies and basophils activation tests can also be helpful in establishing correct diagnosis [7, 10, 11, 12, 13, 14, 15, 16].

In relation to rhabdomyolysis, a few cases have been reported in literature associating rhabdomyolysis to cannabis, notably in context of cannabinoid hyperemesis syndrome [17, 18].

Conclusion:

Currently, there is no cure for IgE-mediated cannabis allergy or cannabis-fruit / vegetable syndrome. Therefore, strict avoidance measures are of utmost importance.

These measures include completely stopping further drug abuse and preventing exposure to allergens involved in individual cross-reactive syndrome.

In any case, in event of an allergy to cannabis, study of cross-reaction with food allergy of vegetable origin, tobacco and natural latex is essential.

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