



Anaphylactic Reaction Caused by Pelargonium Sidoides (Case Report)

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ABSTRACT

Pelargonium sidoides is a native plant of the South Africa which is turned into a herbal remedy to treat respiratory tract infections by phytomedicinal studies. Although severe hypersensitivity reactions to this drug is reported to be very rare, the risk of interactions with anticoagulant (warfarin) and antiplatelet (aspirin) drugs must be kept in mind. We want to report a case of anaphylactic reaction with the need of mechanical ventilation in a patient who concurrently received P. sidoides and aspirin.

KEYWORDS

Anaphylactic reaction, pelargonium sidoides, intensive care, noninvasive mechanical ventilation

Introduction

Pelargonium species belong to the Geraniaceae family and is a native plant of the South Africa which is used by traditional healers as a medicine. After the antimicrobial effect of this remedy was recognized by the European scientists, it has been used in the treatment of respiratory tract infections and common cold symptoms. Although this remedy is widely used in the content of Europe and the USA, serious allergic reactions such as anaphylactic reaction are reported extremely rare¹.

This case report highlights the possibility of this rare but dangerous adverse reaction to *P. Sidoides* (Umcka®).

Case Report

A 71-year-old man without any personal or familiar history of allergy attended to the emergency department with dysphonia, dyspnea, respiratory insufficiency, generalized urticaria and widespread facial angioedema including swelling of the lips, tongue and uvula shortly after oral intake of Umcka. His past medical history was significant only for hypertension and diabetes mellitus. He was on a daily medication of bisoprolol, acetylsalicylic acid, metformin and gliclazid. He was recommended to use Umcka solution as he has presented symptoms of flu for a couple of days. The patient has used Umcka solution on a different time period than his daily routine medication for 3 days he did not present any allergic reactions. On the 4th day of this medication he has digested this drug simultaneously with an additional dose of Aspirin Plus® (acetylsalicylic acid + vitamin C) after which he has displayed the atopic reactions and attended to the emergency service. Physical assessment findings included tachypnea (32 breathe/min), tachycardia (126 pulse/min), hypertension (247/135 mmHg) and peripheral oxygen desaturation (SpO₂ 64%). His Glasgow Coma Score was 14, APACHE II score was 31 and multi organ dysfunction score (MODS) was 4. Alongside the atopic dermal lesions, cutis marmorata is also observed on the abdominal and extremity dermal surfaces due to impaired peripheral oxygen supply. While the chest radiogram on admission was unremarkable, auscultation of the chest revealed bilateral rhonchi with expiratory wheezing and bilateral basal crepitations.

The blood gas analysis revealed an acidotic state with pH 7.24, PO₂ 36 mmHg, PCO₂ 36 mmHg and SaO₂ %68. Following the administration of intravenous methylprednisolone (120 mg) and feniraminmaleat (20 mg), the atopic dermal reactions regressed within 6 hours. Although he was administered nebulized salbutamol sulphate/ipratropium bromide and fluticasone propionate the respiratory symptoms did not recover. After the ICU staff applied mechanical ventilation with non-invasive continuous positive airway pressure (NI-CPAP) mode in the emergency settings, the patient's SpO₂ quickly improved to %97. Afterwards he was moved into the ICU for close observation and monitoring. In the ICU his medical treatment was continued with daily administration of intravenous methylprednisolone and acetylcysteine and inhalation of nebulized salbutamol sulphate/ipratropium bromide and fluticasone propionate. Besides he was applied NI-CPAP intermittently for the following 3 days that he was observed in the ICU. After his symptoms has disappeared and general health status has been stabilized he was transferred to the ward on the 4th day and discharged the following day.

Discussion

Umckaloabo® is a herbal drug prepared from the extracts of the roots of *Pelargonium sidoides* which is a native plant of South Africa predominantly found in the Eastern Cape Province². The local traditional healers have used *Pelargonium spp.* in the treatment of respiratory tract infections, gastrointestinal and hepatic disorders, menstrual complaints and in wound healing³. This herbal medicine was first introduced to Europe as a "secret remedy" in the early 1900's and by the beginning of 1980's it was marketed in Germany in the name of Umckaloabo® as a treatment for bronchitis and symptoms of common cold. Finally in recent years, the use of this remedy has increased dramatically and had an annual sale rate of €81 million in 2006 in Germany². It is marketed in the European countries and the United States with various names as Umckabo, Umcka, Kaloba or Zucol⁴.

Phytopharmacologic studies have shown that *Pelargonium spp.* contain phenolic acids, coumarins, flavonoids and tannins

which have various degrees of antigenic properties⁵. On the other hand Umckaloabo is known to interact with anticoagulants and antiplatelet drugs such as warfarin and acetylsalicylic acid⁶. As the allergic reaction in this patient is observed 4 days after the initiation of the therapy and with the concomitant use of acetylsalicylic acid, this situation gives rise to the thought of the lethal risk of interaction between Umckaloabo and aspirin.

Furthermore Umckaloabo in the market name of Umca® in Turkey seems to be a safe drug with the information in the prospectus that severe hypersensitivity reactions such as facial edema, dysphonia and hypotension may be encountered very rarely. The literature contains very limited information about the incidence of allergic reactions to Umckaloabo. De Boer et al.⁷ analyzed a total of 34 case reports of allergic reactions associated with Umckaloabo in the period between 2002-2006 which were received from the Department of Pharmacovigilance of the German Federal Institute for Drugs and Medical Devices. While a mild degree of bronchospasm is reported in some of these cases, only 2 reports were associated with a severe allergic reaction with circulatory failure or anaphylactic shock. Furthermore none of these patients needed mechanical ventilatory support as we have reported. In this current case report the patient presented generalized urticaria and widespread facial angioedema including swelling of the lips, tongue and uvula, dysphonia, dyspnea and respiratory insufficiency. In contrast to the literature the severity of the respiratory insufficiency needed mechanical ventilation and was successfully treated with NI-CPAP.

In conclusion; we think that this rarely prescribed remedy Umckaloabo has an allergic potential and concomitant use of this drug with aspirin should strictly be avoided to prevent serious lethal reactions. Besides acute respiratory failure with the demand to mechanical ventilation is very rarely observed after oral intake of Umckaloabo and this situation can be successfully managed with NI-CPAP instead of an urgent intubation.

Conflict of Interest

Authors have no conflict of interest.

Authors' Contributions

All of the authors contributed to the medical management of the patient and preparation of the

manuscript. All of the authors have read and approved the content of the manuscript.

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