Síndrome DRESS causado por alopurinol y desencadenado por COVID-19

Allopurinol-induced DRESS syndrome triggered by COVID-19

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ABSTRACT

Drug reaction with eosinophilia and systemic symptoms syndrome (DRESS Syndrome) is caused by many different aetiological factors. We present the case of a 56-year-old woman who started allopurinol treatment about 3 weeks before. She presented with fever, hypotension, tachycardia, generalized maculopapular cutaneous rash, facial edema and axillar, inguinal and cervical enlarged lymph nodes. Complementary diagnostic exams: slight lymphocytosis, eosinophilia, acute renal failure, elevated hepatic enzymes. Swab for SARS-CoV-2 was positive. Serologic tests for another virus were negative. Histopathological analysis was compatible with DRESS syndrome. SARS-CoV-2 could also be taken into account when suspected DRESS syndrome.

Keywords: DRESS, eosinophilia, rash, allopurinol, COVID-19

Palabras clave: DRESS, eosinofilia, erupción, alopuinol, COVID-19

INTRODUCTION

Drug reaction with eosinophilia and systemic symptoms syndrome (DRESS syndrome) or most recently named as drug-induced hypersensitivity syndrome (DIHS) is usually followed by a variety of clinical manifestations, like fever, rash, lymphadenopathy, eosinophilia, and a wide range of mild-to-severe systemic presentations[1]. It is caused by many different aetiological factors, however, to our knowledge, the presentation of a DRESS syndrome secondary to allopurinol intake and triggered by COVID-19 infection is infrequent.

CASE REPORT

A 56-year-old woman was admitted to the emergency department (ER) due to diarrhea (about 6 daily liquid injections) without blood or mucus, associated with a generalized maculopapular rash, facial edema and fever (ear temperature 38,9ºC), with partial response to antipyretics, without predominance of time. She started alopurinol treatment 3 weeks before. On physical examination, she presented fever (ear temperature 38.6ºC), hypotension with mean arterial pressure <65mmHg, tachycardia (127 bpm) and besides a generalized maculopapular cutaneous rash on more than 75% of her body surface area that did not spare the palms or the feet, accompanied by facial edema and axillar, inguinal and cervical enlarged lymph nodes (Figures 1 and 2).

Among the complementary diagnostic exams performed at admission, there was a slight lymphocytosis (11,36 10^9/L), eosinophilia (2,3 10^9/L), acute kidney injury (serum creatinine 4,3 mg/dL and blood urea nitrogen 124 pg/dL, estimated glomerular filtration rate (GFR) 14mL/min/1,73m^2), elevated liver enzymes (AST 956 IU/L, ALT 745 IU/L, lactate dehydrogenase (LDH) 637 IU/L) and elevated high sensitivity troponin (1654 pg/mL). Arterial blood gases showed metabolic acidaemia and hyperlacticaemia. Swab for SARS-CoV-2 was positive. Serologic tests for herpes virus, cytomegalovirus (CMV), Epstein-Barr virus (EBV), human beta-herpesvirus 7 (HHV-7), human immunodeficiency virus (HIV), and hepatitis B and C virus were negative. A skin biopsy was performed, and histopathological analysis showed dermis with polymorphic inflammatory infiltrate and predominantly mononuclear and eosinophilic cells dispersed, perivascular, suggestive of DRESS syndrome. Allopurinol was immediately discontinued, and we started a therapy with intravenous corticosteroids (prednisolone 1mg/ kg/day). The rash was progressively vanished (after more than 15 days), and the patient experienced a progressive general improvement.

DISCUSSION

DRESS syndrome is linked to a variety of drugs being the most common allopurinol, anticonvulsants, minocycline, sulfasalazine, disulfone, fluindione, proton pump inhibitors and strontium ranelate. It has a latency period between 2 to 6 weeks. The mortality rate is high (approximately 10%)[1].

According to scoring system for classifying DRESS cases (RegiSCAR), that is designed to grade as “no: <2 points”, “possible: 2-3 points”, “probable: 4-5 points” or “definite: ≥ 6points” case of DRESS Syndrome, our patient scored 9 points: fever ≥38.5°C (1), enlarged lymph nodes (1), eosinophilia (1), atypical lymphocytes (0), skin rash extent >50% body surface area (1), skin rash suggesting DRESS (1), biopsy suggesting DRESS (1), organ involvement (2), resolution ≥15 days (0), viral titers (HBV/HCV) negative (1)[2,3].

Frequently, clinical presentation is an extensive mucocutaneous rash that is usually followed by fever, and most commonly lymphadenopathy, hepatitis, haematologic abnormalities with eosinophilia and atypical lymphocytes. It involves several organs, being the severity of this syn-

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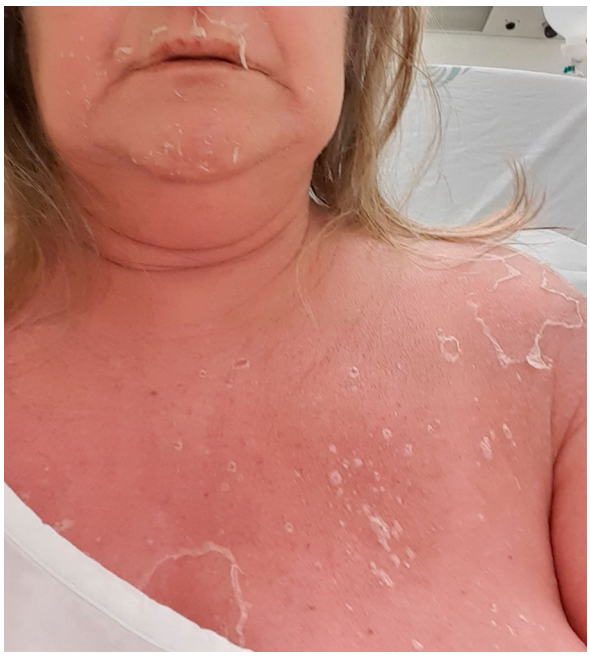
Figure 1. Generalized erythematous maculopapular rash with desquamation areas (leg).

Figure 2. Generalized erythematous maculopapular rash including lips.



drome related to this systemic involvement that can result in multi-organ failure, most commonly from fulminant hepatitis with hepatic necrosis[4].

Renal involvement is only present in about 11% of cases of DRESS syndrome, as was the case of our patient, however the most frequent drug to present renal involvement is allopurinol[1]. Several cutaneous alterations associated with COVID-19 have been described in the literature and, therefore, we must be aware when starting new drugs in this pandemic phase, in order to quickly diagnose this serious entity with high mortality[5].

CONCLUSION

DRESS syndrome is a complex disease, with usual involvement of multiple organs and associated with a variety of drug interactions, viruses and immune response. SARS-CoV-2 can be a new virus to take into account when DRESS syndrome is suspected.

CONFLICTO DE INTERESES Y FUENTES DE FINANCIACIÓN

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