Leukocytoclastic vasculitis induced by lercanidipine

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Leukocytoclasticvasculitis (LCV) is a hypersensitivity vasculitis. It may be secondary to infections, drugs, collagen tissue disorders, and malignities(1). Drug-induced LCV represents approximately 10-15% of LCV cases (2). Calcium channel blockers are little involved in this skin impairment. In fact, only few cases of LCV induced by amlodipine and diltiazem LCV were reported (3-5).

We report herein an exceptional case of LCV induced by lercanidipine (LER). It was notified in the Tunisian National Centre of Pharmacovigilance.

An 87-year-old woman was treated with flecainide and bisoprolol during ten years for cardiac disease. In 2016, she started LER (10 milligram per day). Seven months later, in January 2017, she developed a polymorphic and pruritic cutaneous eruption limited to forearms and legs. A symptomatic treatment (dermocoticoids and antihistamincs) was initiated without improvement of the eruption. Skin examination showed an erythematous maculopapular eruption, necrotic and purpuric lesions and ulcerations. The rest of the physical examination was normal. Laboratory findings showed an accelerated erythrocyte sedimentation rate and a high level of C-Reactive Protein (82mg/l), the serum protein electrophoresis was normal. The diagnosis of vasculitis was suspected by dermatologists. A skin biopsy was performed and revealed characteristic perivascular neutrophilic infiltrates, a leukocytoclasis and extravasated erythrocytes in favour of LCV. The responsibility of LER was suspected and this medication was stopped. The other drugs were continued. The pruritus and cutaneous lesions started to subside few days later after the drug cessation. Symptoms had completely resolved in two weeks.

LCV is the inflammation of small blood vessels.Its clinical features are generally a palpable purpura on gravity-dependent body parts. Also it can occur as urticaria, ulcers, nodules or haemorrhagic bullae (6). It is diagnosed by histopathological evaluation of the biopsy from the lesion.

LCV is idiopathic up to 50% of the cases. Infections and drugs are the most common triggers for secondary LCV. Drug-induced LCV is approximately 10-15% of cases (2). Merkel PA had defined drug-induced LCV as “any case of inflammatory vasculitis in which a specific drug is established as a causal agent of disease when other forms of vasculitis are excluded” (7). The onset is typically 1 to 3 weeks after drug initiation (2).

The exact pathogenesis of drug-induced LCV remains unclear, but studies suggest that the offending drug may act as a hapten, which stimulates antibody production and immune complex formation. These immune complexes are subsequently deposited in postcapillaryvenules leading to complement activation and vascular damage (8).

More than 100 drugs are implicated as causes of drug-induced LCV. Commonly, offending drugs include antibiotics such as beta-lactams, erythromycin, clindamycin, vancomycin, sulfonamides, and other molecules such as furosemide, allopurinol, NSAIDs, amiodarone, gold, thiazides, phenytoin, beta-blockers, TNF-alpha inhibitors, selective serotonin reuptake inhibitors, metformin, warfarin, valproic acid, among many others (2).

In our case, the responsibility of LER was retained in front of the onset of the reaction after a compatible delay (seven months after beginning the treatment), and mainly the improvement of the condition after drug withdrawal. According to Naranjo probability scale, the score was 4 (9).

In literature, calcium channel blockers are little involved in this skin impairment. After a MEDLINE search (vasculitis, drug-induced vasculitis, leucocytoklasis, calcium channel blockers, lercanidipine, amlodipine, nifedipine, diltiazem), we have only found few cases of LCV induced by amlodipine and diltiazem(3–5). Concerning LER, only one previous case of an enalapril-LER combination induced LCV was reported (10). But, no cases are available on drug-induced LCV associated with LER only. Thus, this is the first reported case of LCV induced by LER.

The drug-induced LCV therapeutic approach is based on antigen removal and the treatment of the cutaneous lesions. Withdrawal of the precipitating drug and minimization of stasis by compression, elevation, and use of non steroidal anti-inflammatory drugs are employed. Antihistamines, systemic corticosteroids or other immunosuppressant may be required when the cutaneous lesions are progressive (6,8).

This report is, to the best of our knowledge, the first case of LCV induced by LER. Considering the wide use of LER in hypertensive population, prescribers should be aware of the possibility of occurrence of cutaneous LCV as a side effect of this drug.

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