Journal of Geriatric Cardiology (2017) 14: 420

Letter to the Editor · **Open Access** ·

Clopidogrel induced arthritis and fever

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J Geriatr Cardiol 2017; 14: 420. doi:10.11909/j.issn.1671-5411.2017.06.002

Keywords: Arthritis; Clopidogrel; Fever

A 67-year-old woman with a history of diabetes mellitus and smoking was admitted to our hospital with chest pain for one month. Her resting electrocardiogram and serial troponin I measurements were normal. As the coronary artery angiography performed in another hospital showed severe lesions in the left anterior descending artery, we planned to perform the intervention on the left anterior descending artery by stent. Before the procedure, clopidogrel (300 mg loading dose) was initiated. Unfortunately, the patients developed fever five hours after oral administration of the drug. For physical examination, she had a temperature of 39.7 °C, pulse of 108 beats/min, blood pressure of 120/70 mmHg and respiratory rate of 16 per min. She also complained a sever pain on the bilateral knee joints. She denied a rash, mucosal ulcers, nausea, diarrhea, odynuria, cough, recent travel, drug allergies, or a history of arthritis. The fever and the arthritis gradually resolved over four hours. The patient recalled that the same symptoms (fever and arthritis) had occurred before the coronary artery angiography a week ago. At that time, she also received a loading dose of clopidogrel (300 mg) before the procedure.

The laboratory examination showed normal white cell count and eosinophil count, liver and renal functions. Serum uric acid concentration (276 mmol/L) was normal. C-reactive protein (2.28 mg/L) and erythrocyte sedimentation rate (10 mm/h) were normal. Chest radiography was normal. Blood cultures were negative. Serum IgG, IgM and RF were normal. Therefore, the patient was diagnosed with clopidogrel induced fever and arthritis. We switched clopidogrel to ticagrelor, and the patient did not suffer from the same symptoms again.

Our patient suffered from fever and arthritis. Infectious fever and not-infectious fever should be considered as differential diagnoses. Based on the symptoms and laboratory examination, this patient had no infectious proofs. If we combined fever and arthritis together, the most common causes, such as autoimmune arthritis, infectious arthritis, reactive arthritis, and gout, should be considered. However, the physical examination and laboratory testing did not support these relevant diagnoses. Therefore, given the timing of symptoms in relation to the initiation of clopidogrel and occurrence of a similar arthritis and fever following a previous clopidogrel exposure, we suspect that our patient developed clopidogrel induced arthritis and fever.

Clopidogrel induced arthritis and fever was a very scarce drug side effect. These may be the manifestation of clopidogrel hypersensitivity.[1] There were several previously reported cases.[1–4] After reviewing these reports, the most common characteristics of clopidogrel hypersensitivity include (1) fever, (2) rash, (3) pruritis and (4) acute arthritis.

References

1 Matthew P, Doogue, Begg E, *et al*. Clopidogrel hypersensitivity syndrome with rash, fever, and neutropenia. *Mayo Clin Proc* 2005; 80: 1368–1370.
2 Sahil Agrawal, Joseph Harburger, Gary Stallings, *et al*. Clopidogrel-induced recurrent polyarthritis. *J Investig Med High Impact Case Rep* 2013; 5: 1–4.
3 Fernández-Ruiz M, Carbonell-Porras A, García-Reyne A, *et al*. Management of a hypersensitivity reaction to thienopyridines: prasugrel-induced fever and hepatitis resolved after switching to clopidogrel. *Rev Esp Cardiol* (*Engl Ed*) 2012; 65: 773–774.
4 Kawashiri SY, Taguchi M, Kawakami A, *et al*. Clopidogrel-associated acute arthritis. *Rheumatol Int* 2012; 32: 449–450.

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