Letter to the Editor

Reply to acquired platelet dysfunction with eosinophilia: A false premise

To the Editor:

We thank Dr. Lee for his interest in our article on acquired platelet dysfunction with eosinophilia (APDE) in two patients.1 The two patients presented with multiple spontaneous cutaneous bruises on both lower limbs for weeks. The author commented that APDE as a disease entity is a false premise, as some of the patients who were reported as having APDE in the literature did not have eosinophilia.2 Thus, he consider our reported cases to be similar to idiopathic purpura with gray platelets (IPGP). However, one of the diagnostic criteria of IPGP conducted by Dr. Lee in 2019 is the presence of more than 20% gray platelets on the peripheral blood smear.3 Accordingly, the diagnosis does not fit our cases because we did not find any gray platelets on their peripheral blood smear. Moreover, laboratory examinations of both our patients revealed platelet dysfunction and eosinophilia. The abnormal bleeding and platelet dysfunction were resolved upon the disappearance of eosinophilia. Therefore, the diagnosis of APDE appears more suitable for our patients.

Dr. Lee notes that gray platelets are an uncommon feature on examination of peripheral blood smear, which is easily missed by an unprepared examiner. On the other hand, we suggest that clinicians be especially mindful of the possibility of eosinophilia in patients with abnormal bleeding. Even in the reported case series of IPGP defined by Dr. Lee, 90% of the patients presented with eosinophilia at diagnosis.1 A study has shown that eosinophil cationic protein can inhibit platelet aggregation resulting in platelet dysfunction.4 The protein can be synthesized in eosinophils and secreted in response to specific stimulation, such as allergic inflammation.5 Therefore, in addition to peripheral blood smear examination, detailed history taking, physical examination, and platelet function test are also important in patients with abnormal bleeding.

According to the diagnostic definition, APDE and IPGP are two disease entities. However, it is still unclear if they are the same disorder or overlapping disorders. In addition to abnormal bleeding, both of the aforementioned case series on APDE and IPGP showed that most of the patients had eosinophilia. Therefore, it is essential to confirm whether eosinophilia exists at diagnosis of APDE or IPGP and to conduct a thorough follow-up to establish whether eosinophilia is resolved when abnormal bleeding disappears. Interestingly, based on the findings of Dr. Lee, we consider that abnormal bleeding may not be directly associated with an increased number of eosinophils but may be associated with eosinophil-derived mediators triggered by an immune response. To better understand the relationship between APDE and IPGP, future studies are needed to elucidate the underlying mechanisms of these two entities.

Declaration of Competing Interest

There is no conflict of interest.

References


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