

status, for all patients and controls enrolled in the study, and have found that these two groups had similar BMI (mean \pm standard deviation, 27.4 ± 1.6 and 27.7 ± 1.4 , respectively; $p = 0.453$) and smoking status (a total of 3 and 2 smokers, respectively; $p = 0.641$). Likewise, we have identified no patients with atrial fibrillation in either group.

Varol and Ozaydin also mention the possible effect of hyperglycaemia on our mean platelet volume results. We have subsequently performed linear regression analysis to address the impact of blood glucose level on mean platelet volume, and have found that mean platelet volume was not significantly associated with blood glucose level in patients with sudden SNHL (β coefficient = -0.063 ; $p = 0.756$). Varol *et al.* state that some of our patients would have been pre-diabetic, because glucose levels were higher in the patient group than the control group. We were rigorous in our identification of diabetes in our study population. The higher glucose levels observed in our patients (compared

with controls) were probably associated with the acute stress caused by patients' sudden hearing loss.

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Mean platelet volume in patients with sensorineural hearing loss

Dear Sirs,

We read with interest the article entitled 'Impact of mean platelet volume on the occurrence and severity of sudden sensorineural hearing loss' by Sagit *et al.*¹ In this important study, mean platelet volume, a determinant of platelet activation, was found to be elevated in patients with sudden sensorineural hearing loss.

Sudden sensorineural hearing loss is a symptom of cochlear injury. Potential aetiologies include vascular diseases, viral infections, allergic reactions, autoimmune disorders, use of medication and traumatic rupture of the intralabyrinth membrane, all of which can be related to mean platelet volume (as one aspect of platelet function).² A complete blood count is a relatively routine and inexpensive test which includes assessment of mean platelet volume.³ Platelet function can also be affected by vascular risk factors including age, smoking, diabetes mellitus, hypertension, hyperlipidaemia, metabolic syndrome and obesity, as well as by deep vein thrombosis.⁴

Mean platelet volume has also been related to peripheral artery disease, atrial fibrillation,⁵ previous surgery, trauma, cancer, immobilisation, ulcerative colitis, coeliac disease and some medications.^{5,6} Inflammation plays a role in the pathogenesis of many diseases, such as Behçet's disease, in which mean platelet volume changes may occur.⁷ Obstructive sleep apnoea syndrome may be associated with increased cardiovascular morbidity and mortality, platelet activation and increased mean platelet volume. Non-alcoholic fatty liver disease may be associated with cardiovascular risk; after controlling for other factors associated with non-alcoholic fatty liver disease, a significant correlation has been found between this disease and mean platelet volume.⁴

Finally, standardised laboratory methods are essential. In the methods section of Sagit and colleagues' paper, the nature of their biochemical analysis was not made clear. Likewise, the methods section did not define the mean platelet volume measurement technique. Platelets exhibit a time-dependent swelling when blood samples are anticoagulated with ethylene diamine tri-acetic acid ('EDTA'), which does not occur in the presence of citrate. Thus, measurement of mean platelet volume in blood samples anticoagulated with ethylene diamine tri-acetic acid can be unreliable, since mean platelet volume increases significantly in a time-dependent manner following collection of blood samples prepared in this way.⁸ The optimal measurement time should be within 120 minutes of venepuncture, in order for comparison with reference ranges to be reliable.⁹

In conclusion, mean platelet volume may be affected by many factors which need to be considered. It is difficult to adjust for all the variables listed above. In the absence of information on other overt inflammatory markers, an initial mean platelet volume value, taken alone, may not give clinicians reliable information regarding chronic endothelial inflammation.

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