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LETTER TO THE EDITOR

S100b PROTEIN LEVELS IN ACUTE ISCHEMIC EVENTS

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Dear Editor:

We read with great intrest the article "The value of S100b protein measurement for differential diagnosis of acute ischemic stroke in geriatric population" written by Mr Uncu et al. and published in your journal's 2012-4 issue (1). The authors aimed to demonstrate the value of S100b protein in the differential diagnosis of acute ischemic stroke and transient ischemic attack. They concluded that S100b protein can be used in the differential diagnosis of acute ischemic stroke in the early stage. We appreciate that the authors shared their experience with us. We believe that this article will act as a guide for further studies regarding stroke, which is an important problem in the geriatric population.

The elderly population is increasing with increasing life expectancy throughout the world; this brings an increase in disease, which is more prevelant in people over the age of 65 (2). One of the disease groups that increases with older age is neurological diseases, and the most dangerous disease of this group is stroke. Stroke is an important cause of morbidity and mortality for geriatric patients (3,4). Although risk factors for stroke like advanced age, female gender, high blood pressure, diabetes, and atrial fibrillation are observed in the majority of patients, stroke also may occur in patients with no risk factors (5,6). Early diagnosis is just as important as treatment and management in stroke, which presents as a neurological emergency (7).

S100b is a protein that is detected in the blood after conditions such as ischemia and necrosis, is discarded from kidneys, and has a half-life of 120 minutes. The time between the realization of the event or the injury and blood sampling may affect the measurement results of S100b protein (8). Muller et al. showed that S100b measurements that are performed in the third hour after the ischemic event are unreliable and affect the results of the study (9).

We believe that if the time of the blood sample collection and selection of the transient ischemic attack patient group had been performed more carefully, more objective results could have been obtained in this study. Therefore, we would like to touch on this point. The results of the blood samples, which were described by the authors as being collected after a 12 hour fasting period and within 72 hours of the attack, are lower than expected because of the short half-life of S100b protein. Also in this study, the patients who were diagnosed with transient ischemic attack were selected from the neurology polyclinic; this caused a longer time between attack and diagnosis, and caused the S100b protein level to be lower than expected. If both ischemic stroke and transient ischemic attack groups had been selected from patients who had been admitted to the emergency department, and blood samples had been taken in the emergency department, the S100b results would have been at an optimal level.

We appreciate the authors' their valuable presentation and offer our respects.

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