

## Evaluation of iron serum level in Alzheimer disease

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Madam, Alzheimer disease is the most common and important degenerative disease of brain.<sup>1,2</sup> Several theories have been raised for Alzheimer disease including genetic deficiencies, slowly-progressive viral diseases, neutrophilic factors deficiencies, amyloid, free radicals, mitochondrial deficiencies and glutamate poisoning.<sup>3,4</sup> One important phenomenon in these diseases is changes observed in copper and iron homeostasis.<sup>5,6</sup> Since iron serum level has been less considered in Alzheimer patients, this study aimed at evaluating the iron serum level in Alzheimer disease. In a one year case-control study, a group of patients with definite diagnosis of Alzheimer disease were evaluated by Global Deterioration Scale (GDS) for their disease severity, the serum ferritin level also has been measured by atomic absorption method in each individuals. We also measured the serum ferritin level in a group of controls. The serum ferritin level was compared between the case and the control groups, and also its relation with disease severity was assessed. Fifty patients with the mean age of  $71.34 \pm 6.69$  and 50 healthy persons, with the mean age of  $68.96 \pm 6.39$  were studied. The serum ferritin level was  $0.41 \pm 0.16$  ppm and

$0.46 \pm 0.20$  ppm, respectively ( $P=0.229$ ). There was no significant correlation between the serum ferritin level and the severity of Alzheimer disease ( $r=0.186$ ,  $P=0.195$ ). Mean iron serum level was  $0.41 \pm 0.16$  in Alzheimer patients and  $0.46 \pm 0.20$  in healthy subjects. There is not statistically significant difference between Alzheimer patients and healthy persons considering serum iron level. Mean serum iron level in patients suffering from grade 2 Alzheimers is meaningfully less than others.

### References

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