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CASE REPORT

Heavy coffee drinking and epilepsy

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Dietary habits have been rarely associated with seizure frequency in patients with epilepsy. We report a case of a man with a partial symptomatic epilepsy whose daily habit of heavy coffee drinking was associated with an increased seizure frequency. This patient witnessed a dramatic decrease in the frequency of his seizures after stopping coffee ingestion. Caffeine is a global stimulant and the reduction of its intake may help in the treatment of epilepsy.

Key words: epilepsy; seizure frequency; coffee.

INTRODUCTION

Pharmacologic treatment provides seizure control in approximately 80% of patients with epilepsy. The reasons why some patients do not achieve optimal results with antiepileptic drugs are still largely unknown[1]. Daily dietary habits, apart from the therapeutic use of the ketogenic diet, have been rarely correlated with seizure frequency. In this report, we describe the case of a patient whose habit of heavy coffee drinking contributed to an increase in the frequency of seizures.

CASE REPORT

A forty-year-old male patient with a hemispheric destructive brain lesion due to a peri-natal vascular insult (Fig. 1) is followed in the epilepsy clinic of our hospital. Despite a left hemiparesis, this patient has obtained a good cognitive and motor development and works in his local community. He has seizures since the age of eleven that are manifested by a simple partial seizure involving the left side of the body, at times evolving to a complex partial seizure followed by a convulsion. He underwent several antiepileptic treatments, but he

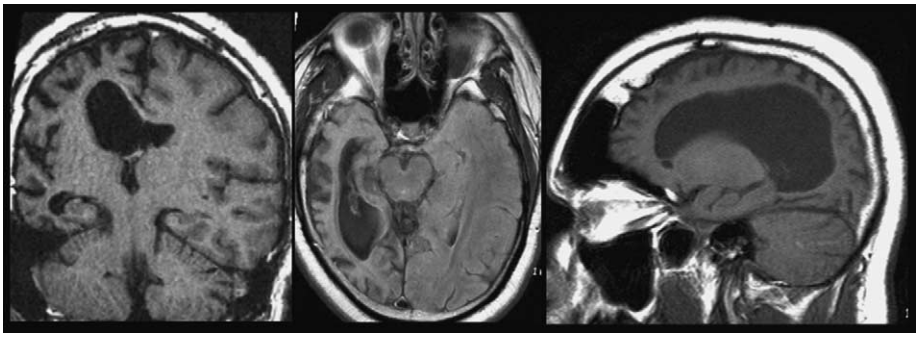

Fig. 1: Composite of MRI showing the diffuse atrophic lesion involving cortical and subcortical portions of the right brain hemisphere.

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never achieved a seizure-free status. He reports a frequency of roughly five simple partial seizures daily and at least one complex partial seizure weekly. He had throughout this time the habit of drinking a large amount of coffee, and lately he was ingesting up to 5 pints of coffee every day. Because of what he referred as 'nervousness', he spontaneously quit coffee drinking. He reports then that within one week after having stopped drinking coffee, the frequency of seizures dramatically diminished. He is currently with the same dose of carbamazepine and presents approximately one simple partial seizure daily. Since he stopped coffee drinking, six months ago, he no longer presents complex partial seizures or convulsions.

DISCUSSION

Adjuvant effects of daily dietary habits in seizure control are yet to be discovered. As this case suggests, ingestion of foods containing central nervous system stimulants may increase excitability of the epileptogenic zone. Caffeine is believed to act by blocking adenosine A_1 and A_{2A} receptors[2], functioning as a global stimulant. This can be responsible for increased neuronal repetitive firing and seizures may then supervene. Due to the widespread habit of coffee drinking, further attention must be taken to the possible effects of coffee drinking in seizure control. Presumably, reduction of the daily intake of coffee may sometimes help the treatment of epilepsy.

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