MOBILE PHONE HEADACHE: IS THERE A RELATIONSHIP WITH ALTERED CSF PRESSURE?

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Background

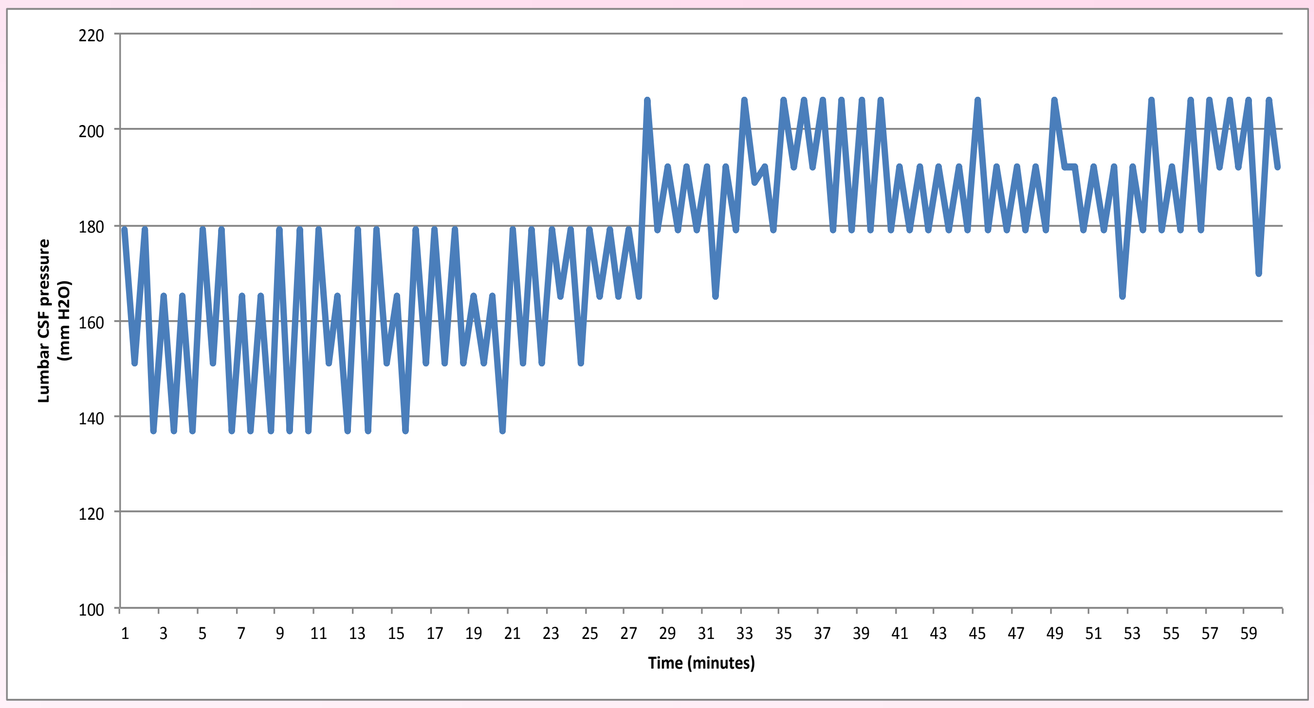
It has already been hypotesised the association between headache and use of mobile phone. Several studies focused on neurological disorders and electromagnetic fields, particularly on mobile phone use and headache. Nevertheless the results of these studies were inconclusive. We reported a case of a patient with headache triggered by mobile phone.

Case description

A 30-years-old man with a year-old history of isolated headache triggered by prolonged use of mobile phone. Neurological examination was normal. A provocative test revealed that a 30 minutes phone call triggered muffling and bilateral headache lasting some hours (VAS 6); moreover the use of hearphones provoked just muffling and mild head pain (VAS 3); whereas the use of fixed phone did not triggered the headache. Functional tests such as audiometry and impedence meter test and electrophysiologic tests such as auditory evoked potentials (AEP) were not altered. Brain MRI was normal, except for an empty sella. Moreover cerebral MR venography displayed a unilateral transverse sinus stenosis. Lumbar CSF short-term monitoring showed CSF pressure at the upper limit of the reference range (about 200 mmH_2O).

Discussion

This case provides evidence that headache is triggered by prolonged use of mobile phone. Indeed, the provocative test demonstrated a causal relationship between headache and use of mobile phone, while the use of fixed phone did not triggered the symptoms. Moreover, an improvement of headache was observed after lumbar puncture. Since there was the neuroimaging evidence of empty sella and unilateral transverse sinus stenosis, associated with mild CSF pressure abnormalities, we speculate that the altered CSF pressure may be the cause of mobile phone headache in this patient. This observation is consistent with some studies which reported the effects of small electomagnetic fields as possible triggers for mobile phone headache.



Short-term (1 hour) lumbar CSF pressure monitoring through spinal puncture

Conclusion

Our data confirm that headache attacks may be triggered by the prolonged use of mobile phone. Further studies are needed to investigate the role of small magnetic fields as possible cause of temporary increase of CSF pressure.

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