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Folate Deficient Neuropathy

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I read with interest the review entitled 'Vitamin B₁₂ and Geriatrics: Unanswered Questions' by Thompson and Freedman [1]. Only scant reference was made, however, to the neurological complications of folate deficiency. Recently, I briefly reviewed 30 cases of neurological disease in patients with normal serum vitamin B₁₂ and low serum folate who responded to folic acid, in some cases after failing to respond to vitamin B₁₂. Ten had dementia, 19 had a neurological syndrome indistinguishable from sub-acute combined degeneration of the cord and 10 had a peripheral neuropathy [2]. Although it can occur at any age – I recollect striking mental improvement in a young woman with severe postpartum depression when the accompanying megaloblastic anaemia was treated with folic acid – it is much more common in the elderly. Twenty-two of the 30 cases reviewed were aged 60 or over.

Chanarin [3] states that 'although some of the cases reported are persuasive that folate deficiency does indeed produce a neuropathy, the data fall short of proof. Even so, the response to folate was so striking in these cases that I would strongly plead that folate metabolism as well as vitamin B₁₂ metabolism should be investigated when the above neurological findings remain unexplained in the elderly. I fully agree with the authors that in cases of doubt the patient should have the benefit of treatment. This however must be with the vitamin that is lacking in the blood. The two deficiencies must be clearly differentiated. In one patient [4], the folate-responsive neuropathy was precipitated by vitamin B₁₂ administration, thus providing the exact antithesis to the well-recognised aggravation by folate of vitamin B₁₂-deficient neuropathy.

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