Vitamin K and Alzheimer’s

The possible role of vitamin K deficiency in the pathogenesis of Alzheimer’s disease and in augmenting brain damage associated with cardiovascular disease.

The incidence of Alzheimer’s disease (AD) increases with age and in carriers of the apolipoprotein E4 genotype. A relative deficiency of vitamin K, affecting the extrahepatic functions of the vitamin, is common in ageing men and women. The concentration of vitamin K is lower in the circulating blood of APOE4 carriers than in that of persons with other APOE genotypes. Evidence is accumulating that vitamin K has important functions in the brain, including the regulation of sulfotransferase activity and the activity of a growth factor/tyrosine kinase receptor (Gas 6/Axl). The hypothesis is now proposed that vitamin K deficiency contributes to the pathogenesis of AD and that vitamin K supplementation may have a beneficial effect in preventing or treating the disease. Vitamin K may also reduce neuronal damage associated with cardiovascular disease.