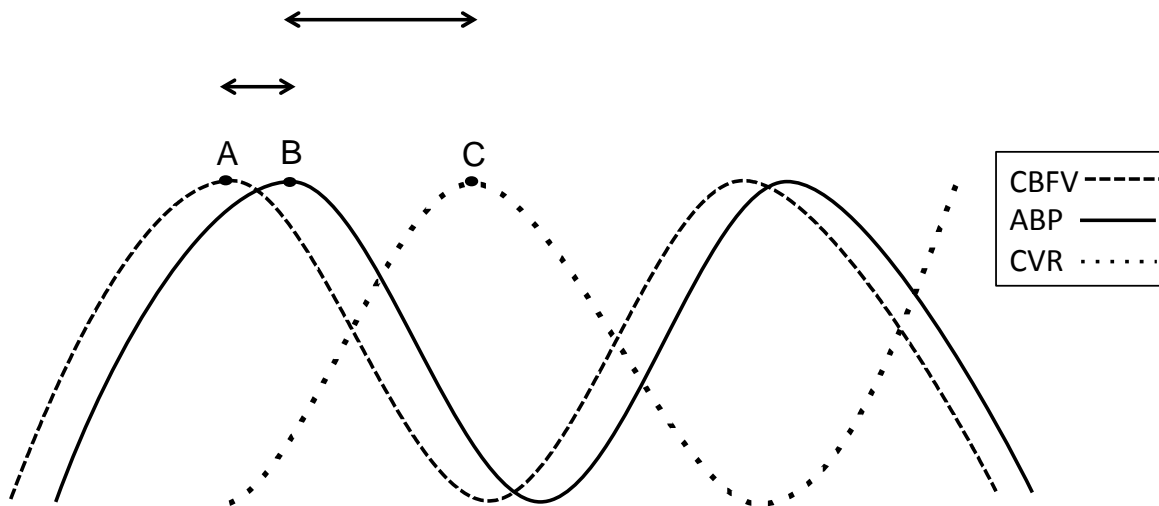


ONLINE SUPPLEMENT

Dynamic cerebral autoregulation is transiently impaired for one week after large-vessel acute ischemic stroke

Supplemental Figures



Supplemental figure 1. *Illustration of the concept of transfer function analysis.* An increase in arterial blood pressure (ABP, solid curve) leads to cerebral vasoconstriction and thus an increase in cerebrovascular resistance (CVR, dotted curve). This response takes about 2 seconds. As soon as vasoconstriction occurs, cerebral blood flow velocity (CBFV, dashed curve) decreases, as this effect is a direct result of the reduction in blood vessel diameter. The phase shift between CBFV and ABP is depicted as the distance between points A and B. A decrease in phase shift is thus a reflection of a delay in cerebral vasoconstriction (increased distance between point B and C) and can be interpreted as slower, less effective counter-regulation of the cerebral vasculature to oscillations in systemic blood pressure.[1]

1. Kuo TBJ, Chern C-M, Yang CCH, Hsu H-Y, Wong W-J, Sheng W-Y, et al.: Mechanisms underlying phase lag between systemic arterial blood pressure and cerebral blood flow velocity. *Cerebrovasc Dis* 2003;16:402–409.