Mild mechanical traumas are possible risk factors for cervical artery dissection.


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BACKGROUND AND PURPOSE: Cervical artery dissection (CAD) is a common cause of ischemic stroke in younger aged subjects. Retrospective studies suggest cervical manipulative therapy (CMT) and preceding infections as extrinsic risk factors for CAD. In a case-control study, we assessed a questionnaire with 7 mild mechanical traumas as potential trigger factors for CAD, including CMT and recent infections. PATIENTS AND METHODS: Forty-seven consecutive patients with CAD were compared with 47 consecutive patients of similar age with ischemic stroke due to etiologies other than CAD. Patients underwent a standardized face-to-face interview. We assessed head or neck pain and recent infection <7 days before symptom onset, as well as the following mechanical trigger factors <24 h and <7 days prior to symptom onset: (1) heavy lifting, (2) sexual intercourse, (3) mild direct or (4) indirect neck trauma, (5) jerky head movements, (6) sports activity, and (7) CMT. RESULTS: We found no association between any single one of the above risk factors and CAD. CMT (CAD, n = 10; non-CAD, n = 5) and recent infections (CAD, n = 18; non-CAD, n = 10) were more frequent in the CAD group but failed to reach significance. However, the cumulative analysis of all mechanical trigger factors revealed a significant association of mechanical risk factors as a whole in CAD <24 h prior to symptom onset (p = 0.01). CONCLUSION: Mild mechanical stress, including CMT, plays a role as possible trigger factor in the pathogenesis of CAD. CMT and recent infections alone failed to reach significance during the present investigation, presumably due to the relatively small sample size of the study cohort. (c) 2007 S. Karger AG, Basel.

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