BACKGROUND: Incidence, prevalence, and clinical impact of blunt cerebrovascular injury (BCVI) are unknown. There are no standardized recommendations for screening. REVIEW SUMMARY: A databank of 306 patients with a history of trauma was searched for all subjects with a proven or suspected concomitant BCVI. All patients had undergone MRI for the evaluation of traumatic and vascular cerebral lesions. The diagnosis of BCVI relies on angiographic and/or ultrasound findings. By way of illustration, the case histories of the patients are reported. Eleven subjects (3.6%) were identified. In 8 patients (2.6%), the diagnosis of BCVI can be regarded as proven; in 3 patients (0.98%), a diagnosis of BCVI is probable. The patients could be sorted into the following categories: (i) patients with BCVI and early strokes, (ii) patients with BCVI and late strokes, (iii) patients with early strokes and no detectable BCVI/vessel abnormality, (iv) patients with occult BCVI. Evidence of cerebral ischemia/stroke was present in 9 patients (82%, or 2.9% of all patients). In all patients with stroke, it was the major or sole cause of disability. CONCLUSIONS: BCVI and BCVI-related strokes are not rare. The time window for the development of ischemic complications is highly variable and may be longer than is currently assumed. Even if clinically silent, a diagnosis of BCVI has medicolegal implications and may influence therapy and prognosis in later life.
Because of the association of BCVI and motor vehicle accidents, screening is suggested in these patients, and ultrasound could be a practical tool. Although there is substantial suspicion for BCVI in individual trauma patients suffering from stroke, the diagnosis cannot always be proven.