Inj Prev: first published as 10.1136/ip.2010.029215.231 on 1 March 2011. Downloaded from http://injuryprevention.bmj.com/ on June 17, 2024 by guest. Protected by copyright.

0231 SERUM S100-B AS A TOOL TO PREDICT COMPUTED CRANIAL TOMOGRAPHY FINDINGS IN MILD BRAIN INJURY

D Zongo*, R Ribereau-Gayon, F Masson, E Lagarde *Correspondence: PPCT (Prevention et prise en charge des traumatismes) ISPED-Bordeaux, INSERM U897 - Case 11 Universite Victor Sgalen Bordeaux 2 146 rue Leo Saignat 33076 BORDEAUX 33076, France*

10.1136/ip.2010.029215.231

Background Minor head injury (MHI) has a high incidence and implies a risk of brain injury. Cranial computed tomography (CCT) is recommended for early detection of these lesions. However the indication of CCT is based on non specific clinical symptoms. Protein S100-B was then suggested as a promising tool to identify those patients with no risk of cranial injury.
Objective To evaluate S100-B as a screening tool in the management of MHI.
Methods Patients attending Bordeaux emergency department with an isolated MHI were consecutively included during 15 months. Blood samples were drawn within 6 h after head injury to assess S100-B level.
Results 1559 patients were included. CCT was indicative of cranial injury in 112 patients (7%). At the threshold of 0.10 g/l, S100B has a sensitivity of 99% (95% CI 95 to 100),

a specificity of 12% (11–14) and a negative predictive value (NPV) of 99% (97–100) as compared with CCT results. 12% of the patients has a S110-B level below this threshold and therefore could have been discharged with CCT. A threshold of 0.12µg/L proved however to be the best compromise between sensitivity (99%), specificity (20%) and a NPV of 99.7% (98–100) with CCT potentially avoided for 19% of the patients.

Discussion Early determination of S100-B blood levels is highly sensitive to detect CCT abnormalities. The threshold of 0.12 µg/L was the best compromise between sensitivity and specificity in our study.

Inj Prev: first published as 10.1136/ip.2010.029215.231 on 1 March 2011. Downloaded from http://injuryprevention.bmj.com/ on June 17, 2024 by guest. Protected by copyright.