Hubungan antara kadar protein S100B dengan keluaran pasien cedera kepala ringan dan sedang = The relationship between S100B protein level and the outcome of patients with mild and moderate head injuries

Mery Krismanto, author

Abstrak

Latar Belakang: Protein S100B merupakan protein yang berikatan dengan kalsium pada sel-sel astroglial jaringan otak. Peningkatan kadar protein S100B dalam serum disebabkan karena aktivasi kerusakan astrosit dan sel glial, dan kerusakan integritas sawar darah otak. Beberapa studi prospektif terakhir, para ahli menghubungkan protein S100B dengan prediksi keluaran pasien cedera kepala.
Tujuan: Mengetahui hubungan kadar Protein S100B 6 jam pasca trauma terhadap skala keluaran GOSE 3 bulan pada penderita CKR dan CKS.
Metode: Penelitian ini bersifat deskriptif analitik dengan data dikumpulkan secara prospektif pada pasien cedera kepala ringan dan sedang yang dirawat di UGD RSCM.
Hasil: Dari 45 sampel, didapatkan kelompok yang paling banyak adalah laki-laki (65.7%), usia 15-20 tahun (45.7%), tingkatp endidikan SMA (48.6%), CT scan normal (54.3%), kadar protein S100B < 0.403 g/L (54.3%) dan GOSE >= 7 (71.4%). Terdapat hubungan yang bermakna antara derajat cedera kepala dengan GOSE, CT scan dengan GOSE dan kadar protein S100B dengan GOSE.
Kesimpulan: Protein S100B merupakan prediktor yang sensitif terhadap keluaran, dimana pasien dengan protein S100B tinggi memperlihatkan keluaran yang buruk dibandingkan pasien dengan kadar protein S100B rendah.
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Backgrounds: S100B protein is a protein that binds with calcium in brainastroglial cell. The increase in S100B serum level can be caused caused byastrocyte and glial cell damage and disturbance of blood brain barrier. Several prospective studies have elooked into the relationship of S100B protein with headinjury patents outcome.
Aim: To investigate the relationship between S100B protein level 6 hours aftertrauma and the outcome of patients with mild and moderate head injury using GOSE 3 months after trauma.
Method: This is an analytic descriptive study using data collected prospectivelyin mild and moderate head injury patients admitted to the emergency departmentof Cipto Mangunkusumo hospital.
Result: The majority of patients were male 65 7 aged between 15 20 yearsold 45 7 senior high school graduates 48 6 with normal CT scan 54 3 with S100B protein level 0 403 g L 54 3 and with GOSE 7 71 4. There was a significant relationship between the severity of head injury and GOSE CT scan finding and GOSE and S100B protein level and GOSE.
Conclusion: S100B protein level is a sensitive predictor for head injury patientoutcome in which patients with higher S100B protein level correlates with pooreroutcome.