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Poster Session V

Central nervous system infections

ASSESSMENT OF THE MANAGEMENT OF BACTERIAL MENINGITIS IN THE ADULT EMERGENCY ROOM

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OBJECTIVE: In 2008, French guidelines on the management of bacterial meningitis were published. We aim to assess the management of bacterial meningitis in the adult Emergency Room of the University Hospital of Poitiers in order to identify and to correct factors associated with inappropriate practices.

METHODS: We conducted an observational monocentric retrospective study by reviewing patient charts with suspected acute meningitis from January 2010 to December 2011. The variables with potential influence on delay for management of patients were analyzed with simple linear regression. Time durations are expressed as median(min-max).

RESULTS: Ninety five patients were included. Thirty six patients (37.9%) received an antibiotherapy for meningitis. Among them, only 12 patients received corticotherapy and only 3 before or at the same time than antibiotics. Of these 36 patients, 15 (42%) had an appropriate choice of antibiotics and dosing. A cerebral CT scan was inappropriately done before lumbar puncture in 25 patients (26.3%). The median (min-max) delay of lumbar puncture was 5h51 (1h09-26h20) and the median (min-max) delay of administration of antibiotherapy was 6h31 (1h04-17h48). A meningitis diagnosis as a motive of admission ($p = 0.019$), the presence of nuchal rigidity ($p = 0.007$) and a high number of clinical signs of meningitis ($p=0.046$) were significantly associated with earlier lumbar puncture, whereas performing cerebral CT scan significantly delayed lumbar puncture ($p = 0.003$). There was a trend ($p=0.06$) toward a shorter delay in performing lumbar puncture in presence of fever. Neither impaired consciousness nor the time of the week (weekend and night vs. week days and daytime) had an influence on the delay for performing lumbar puncture. None of these factors influenced the delay of administration of antibiotherapy. However, discordance between diagnosis made in the emergency room and definite diagnosis significantly delayed the administration of antibiotherapy (4h52 (1h04-15h48) vs 8h10(1h12-17h48)($p=0.03$)) but had no influence on the time before performing lumbar puncture.

CONCLUSIONS: Our study suggests that an early and correct diagnosis highly influences the delay to perform lumbar puncture and to initiate antibiotics. Therefore, efforts should be aimed on improving the rate of early diagnosis in order to improve the management of bacterial meningitis in emergency room. Prediction rules and biological markers could help to have an early diagnosis. A new comparative study will be done to measure the impact of a bundle of care on our practice.