1365

DOES THE PAIN SCALE TYPE INFLUENCE THE ASSESSED PAIN INTENSITY IN PAINFUL SICKLE CELL CRISIS IN THE PEDIATRIC EMERGENCY DEPARTMENT?

E. Courtois¹, L. Al Lawati¹, L. Tostivint¹, B. Quinet², E. Lesprit², C. Batard¹, B. Castello¹, C. Bouvatier¹, C. Velly¹, N. De Suremain¹, R. Carbajal¹

¹Pediatric Emergency Department, Armand Trousseau University Hospital, AP-HP, ²General Pediatrics Department, Armand Trousseau University Hospital, AP-HP, Paris, France

The Visual Analog Scale (VAS) is the gold-standard for pain assessment. Since it cannot always be used, staffs often assess pain with other scales in children with Painful Sickle Cell Crises-(PSCC) visiting the Emergency Department-(ED).

Objectives: To compare the initial severity of PSCC in children presenting to the ED according to the used pain scale.

Methods: Retrospective study of all one-year visits to a pediatric ED for a PSCC. ED policy allowed triage nurses to use the pain scale they deemed the most suitable for each child.

Results: From May 2008 to April 2009, 189 visits concerning 87 children were registered. In 149 (79%) visits, an initial pain score was recorded. Triage nurses assessed pain using four scales. The mean (SD) age was 12.3 (3.1) years for 97 (65.1%) visits of children assessed with a 0-10 VAS or Numerical Rating Scale (VAS-NRS group), 5.2 (3.4) years for 45 (30%) assessments with 0-10 Faces Scale, 4.2 (4.0) for 5 assessments with 0-15 EVENDOL, and 2.2 (2.2) for 2 assessments with 0-8 Objective Pain Scale (OPS); ANOVA $p < 0.001$. In order to uniform all the assessment data, EVENDOL and OPS were transformed into a 0-10 scale. The median (interquartile) uniformed pain scores were 7.0 (6.0-8.0) for VAS-NRS, 4.0 (4.0-6.0) for Faces Scale, 4.0 (1.3-6.3) for EVENDOL, and 7.5 (5.0-10) for OPS; Kruskal-Wallis $p < 0.001$.

Conclusions Severity of pain in children with PSCC varied with the scale used. It is postulated that the Faces or the EVENDOL scale underestimate pain in PSCC.

1366

THE EVOLUTION OF PAIN DURING HOSPITALIZATION OF CHILDREN WITH PAINFUL SICKLE CELL CRISES

L. Al Lawati¹, E. Courtois¹, L. Tostivint¹, E. Lesprit², B. Quinet², C. Galeotti¹, J.-B. Armengaud¹, R. Carbajal¹

¹Pediatric Emergency Department, Armand Trousseau University Hospital, AP-HP, ²General Pediatrics Department, Armand Trousseau University Hospital, AP-HP, Paris, France

Relieving pain effectively in children with painful sickle cell crisis (PSCC) is a challenging clinical problem. Notwithstanding analgesic treatment, some hospitalized children for a PSCC seem to continue in pain.

Objectives: To describe the evolution of pain in hospitalized children receiving analgesics for a PSCC.

Methods: Retrospective study of all one-year hospitalizations for PSCC in a pediatric university hospital. Pain assessments were retrieved from patients' records. The minimum, mean and maximum pain scores per day of hospitalization were determined for each patient.

Results: From May 2008 to April 2009, 156 admissions for PSCC occurred. The median (interquartile; extremes) age of admitted patients was 9.9 (5.1-13.5; 0.3-18.3) years. The mean (SD; extremes) duration of hospitalization was 3 (2.8; 0-17) days. The mean (SD; extremes) pain score on arrival to the ward was 3.9 (3.3; 0-10). During the hospitalization period the intensity of pain decreased progressively from day 1 to day 7, thereafter there was an increase in the intensity of pain followed by a decrease on day 14. Figure shows the distribution of maximum pain scores for each day of hospitalization.

Conclusion: Daily maximum pain scores are high ($>5/10$) for about a quarter of children during the first 6 days of hospitalization for PSCC notwithstanding analgesic treatment. Improvement of current analgesic protocols seems necessary.

Fig. Maximum pain score during the first 14 days of hospitalization. Median, interquartiles and extreme values are shown

[Maximum pain score during 14 days of admission]

1367

CEREBRAL HAEMODYNAMICS AND CARBON DIOXIDE REACTIVITY AT CHILDREN DURING SEVERE NOSOCOMIAL PNEUMONIA

D. Dmytriiev, K. Dmytriieva, O. Katilov

Vinnitsa National Medical University,
Vinnitsa, Ukraine

Background: Most patients with severe nosocomial pneumonia (SNP) develop potentially irreversible cerebral dysfunctions. We hypothesized that cerebral haemodynamics and carbon dioxide reactivity would be impaired in children with severe nosocomial pneumonia and pathological electroencephalogram patterns.

Methods: After approval of the institutional ethics committee, 18 mechanically ventilated patients with severe nosocomial pneumonia and pathological electroencephalogram patterns underwent measurements of cerebral blood flow and jugular venous oxygen saturation before and after reduction of the arterial carbon dioxide partial pressure by 0.84 ± 0.72 kPa by perventilation. The cerebral capillary closing pressure was determined from transcranial Doppler measurements of the arterial blood flow of the middle cerebral artery and the arterial pressure curve. A *t* test for matched pairs was used for statistical analysis ($P < 0.05$).

Results: During stable mean arterial pressure and cardiac index, reduction of the arterial carbon dioxide partial pressure led to a significant increase of the capillary closing pressure from 24.2 ± 10.2 mmHg to 37.1 ± 13.2 mmHg ($P < 0.001$), with a consecutive decrease of blood flow velocity in the middle cerebral artery of $23.3 \pm 2.2\%/kPa$ ($P < 0.001$), of cerebral blood flow from 60.2 ± 29.1 ml/100 g/min to 38.1 ± 16.2 ml/100 g/min ($P < 0.001$) and of jugular venous oxygen saturation from $74.2 \pm 8.2\%$ to $64.1 \pm 10.0\%$ ($P < 0.01$).

Conclusion: In contrast to other experimental and clinical data, we observed no pathological.

1368

STETHOSOPES: POTENTIAL RESERVOIRS FOR THE SPREAD OF NOSOCOMIAL INFECTIONS

L. Brennan^{1,2}, K. Grundy³, M. Beckett⁴,
M.O. Connell³, A. Fitzgibbon³, M. Brennan⁴,
J. Lambert⁴, T. Clarke^{1,2,5}, A. Nicholson^{1,2},
A. Carroll^{1,2}, E. Molloy¹, M. Cafferkey^{3,4,6}

¹Royal College of Surgeons in Ireland,

²Paediatrics, The Children's University Hospital Temple Street, ³Microbiology, ⁴Infection Control Team, ⁵Paediatrics, The Rotunda Hospital,

⁶Microbiology, The Children's University Hospital Temple Street, Dublin, Ireland

Background: Infants in neonatal intensive care units (NICUs) are at increased risk of nosocomial infection (NI).

Aims: To determine stethoscope *Staphylococcus* (S.) contamination rates & anti-sepsis practices.

Methods: Stethoscopes of 12 medical students, 12 NICU physicians and at 12 incubator/cotsides were cultured for S. species (viruses, fungi and other bacteria not assessed). Positive cultures were reported as light, moderate or heavy growth. Students and physicians were surveyed regarding frequency of stethoscope anti-sepsis and charts were reviewed for evidence of NIs.

Results: Overall, 22/36 stethoscopes grew S. species. No meticillin resistant *S. Aureus* was isolated and 11/22 had a light growth of coagulase negative *Staphylococci* (CONS). There was a moderate/heavy growth CONS from; 3/12 student, 4/12 physician, 2/12 NICU stethoscopes. *S. Aureus* was isolated from 1 student stethoscope (heavy growth), 1 physician stethoscope (moderate