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| **SUID and Rotavirus** |
| **Vigo, Alessandro**1; **Cavani, Giannalisa**2; **Costagliola, Giulia**1; **Ferrero, Elisa**1; **Noce, Silvia**1 *1 - Department of Paediatrics, Center for Pediatric Sleep Medicine and SIDS, Regina Margherita Children’s Hospital, Città della Salute e della Scienza, Turin, Italy. 2 - S.C. Igiene e Sanità Pubblica - ASL TO1 Sorveglianza Inadempienze Vaccinali e RVI.* |
| **Introduction** Rotavirus infection is the most common cause of severe gastroenteritis worldwide, with a high impact on mortality (5% of child death annually). Despite virus widespread diffusion, the relationship between Sudden Unexpected Infant Death (SUID) and Rotavirus infection remains unclear. We describe two cases of Sudden Unexplained Deaths collected by the Center for Pediatric Sleep Medicine and SIDS in Turin, with positivity at Rotavirus antigen detection and suggestive autopsy.  **Material and Methods** Active Surveillance on SIDS  **Results** Both infants arrived to Emergency Department (ED) in cardiorespiratory arrest, where they died about thirty minutes after arrival, in spite of advanced life support. Both were born from families of foreign origin, did not have familiarity with sudden death and appeared well-being just before the day of death.Case 1 was a two months old infant, male, brought to ED by his mother who, lying at the side in the bed where he was sleeping, noticed that he was not breathing and did not react to stimulation. Five hours before the infant had been administrated hexavalent vaccination, and cried inconsolably all morning long. On ED examination, medical staff noticed mild abdominal expansion and performed complete blood cell count, electrocardiogram (asystolia) cultural examinations (from stool specimen for Salmonella, Shigella, Campylobacter), detection of Respiratory Syncitial Virus in nasal swab and Adenovirus and Rotavirus antigen in the faeces; the last one resulted positive. Autopsy revealed on macroscopic examination intestinal haemorrhage and ileum distension, on microscopic examination leukoencephalitis, lymphocytic meningitis and hepatitis. The ileum showed lymphoreticular hyperplasia and lymphocytic infiltration (sign of a possible intussusception); huge hemorrhagic infiltration was found in mesenteric nodes. In anamnesis, the infant was born preterm with respiratory distress syndrome at birth; he was admitted to Neonatal Intensive Care Unit for 25 days, where he presented also abdominal tenderness, (antigen detection of Rotavirus and Adenovirus: negative). After discharge he presented no clinical problem and grew adequately. Case 2 was a fifty days old infant, female, found in cardiorespiratory arrest by Emergency Medical Service called by parents as the infant became cyanotic immediately after wake-up. The infant was to her grandmother’s house; previously she had been breast fed and then fell asleep. Autopsy revealed dilated loops of bowel, with decreased parietal thickness; on microscopic examination lymphocytic infiltrate of small, large bowel and nodes. Post mortem detection for Cytomegalovirus, Epstein Barr Virus, Herpes virus, Enterovirus, Parvovirus and Adenovirus on pericardial fluid specimen and meningeal swab resulted negative; antigen detection for Adenovirus and Rotavirus in the stools was positive. In anamnesis she was born full term, small for gestational age, with meconium-stained amniotic fluid. Her mother kept smoking during pregnancy. Pathological anamnesis was silent and the infant had shown adequate growth.  **Conclusions** Rotavirus infection is the first cause of diarrhoea worldwide, but can also cause severe enteritis in infants without any clinical sign, eventually leading them to death. As a consequence autopsy is confirmed as an unavoidable examination and Rotavirus antigen detection should be included in protocols designed to investigate all cases of Sudden Infant Death. |
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| **CONTACT** | |
| Name: | **Alessandro** |
| Lastname: | **Vigo** |
| E-mail: | **avigo@cittadellasalute.to.it** |
| Country: | **Italia** |
| Institution | **Department of Paediatrics, Center for Pediatric Sleep Medicine and SIDS, Regina Margherita Children’s Hospital, Città della Salute e della Scienza, Turin, Italy** |
| Cellphone: | **+39368487832** |
| City: | **Turin** |