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(Abstracts)

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Monday, January 20th, 2003

COMPLICATIONS AND CAUSES OF DEATH IN PEDIATRIC SURGERY

A01.

Why Do Children Die in Pediatric Surgery Today?

*Horcher E., Maier E., Rebhandl W., Weninger M.** (Division of Pediatric Surgery and *Division of Neonatology and Intensive Care, Department of Pediatrics, University Hospital Vienna)

Background: Despite improvement of surgical technique and intensive care medicine perioperative death still occurs. The causes of mortality have changed over the last decades: delay in diagnosis, complications during transportation and insufficient perioperative therapy have changed to new factors like antenatal diagnosis, very low birth weight (VLBW) < 1000 g, multimorbidity, complications due to intensive care medicine and infection.

Methods: All surgical patients between 1994–2001 have been analysed retrospectively. 10,891 operative procedures have been performed in our unit. 82 patients, treated at the pediatric surgery unit and the neonatal and pediatric intensive care unit, died during this period. These patients were analysed retrospectively for surgical failures, complications and cause of death.

Results: 29 patients had only minor surgical interventions such as hernia repair or central venous lines. Death was not related to surgery but to "pediatric" complications such as cerebral hemorrhage, respiratory insufficiency, pulmonary hypertension and multi-organ failure. 11 patients died with diseases not compatible with life: tracheal agenesis, severe cardiac malformation, chromosomal

aberrations, progressive disease (tumorprogression, biliary atresia, muscle dystrophy). 25 deaths are related to severe complications after major operations and/or underlying disease or VLBW. 10 patients were < 600 g, 9 between 600–1000 g, 3 between 1000–1500 g. In 13 patients death was considered to be related by surgical mistakes in wrong decision for timing (NEC, GI perforation, CDH), operative procedure (compartment syndrome) or technical faults (hemorrhage). 4 patients died of anesthesiological complications.

Conclusions: Today death in pediatric surgical patients occurs of multifactorial etiology, mostly a combination of VLBW, additional malformations, sepsis and multiorgan failure. The overall mortality rate of 0.8% is very low compared to adult surgery and only 0.4% were related to surgical interventions. Pediatric surgeons are faced with rare and complicated cases, making decision difficult in these individualised treated patients. Quality control and assurance is an important tool to prevent "avoidable" deaths.

A02.

Cases of Death in Pediatric Surgical Patients. A Review over a 6-Year Period

Hübner U., Tafazzoli-Lari K., Back-Petersen F. (Lübeck, Germany)

Background: The mortality rate of newborns and children could be significantly reduced in all countries over the last decades. Nevertheless there are still some fatal courses we have to deal with. In our retrospective study we wanted to analyze the main causes of death in pediatrics and especially pediatric surgery.

Methods: We retrospectively analyzed all documents of 162 newborns and children who had a fatal outcome in a 6 year period. The inquiry was done in an university clinic in a region with about 1 million inhabitants. Under the emphasis of 31 cases with only or