



## Pathology & Biology Section – 2004

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### **G75 Delayed Jejunal Rupture in a Three-YearOld Child After Minor Blunt Impact**

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After attending this presentation, attendees will understand role of history, scene information, autopsy, and histologic examination in differentiating ischemic from traumatic lesions of the small bowel. Be aware of an infrequent cause of traumatic death in children (delayed jejunal rupture). Review what is known and what is controversial about aging lesions by histology. Be cognizant of the pitfalls and controversies in establishing accident versus homicide as manner in similar cases.

This presentation will impact the forensic community and/or humanity by reviewing an unusual cause of traumatic death in children. Invite the forensic community to consider a difficult question of manner of death in this case and similar cases, using the tools of scene investigation, autopsy findings, histology, and attempted dating of traumatic intra-abdominal lesions by histology.

Histologic examination of tissue from the intestinal wall, to determine whether ischemia or impact is the primary cause of necrosis, may allow differentiation between accidental death and child abuse. A healthy three-year-old girl arrived at an emergency department with a report of head injury. The child described to nurses and investigators how she tripped and fell down three concrete stairs while running after a ball. No significant head injury was found, and no evidence of abuse was detected at that time. Three days later, the child complained of gradually increasing nausea and abdominal pain, and died suddenly. Autopsy revealed ischemic small bowel with perforation. Microscopic findings showed inflammation with both fresh and remote hemorrhage. Possible etiologies included three-day-old child abuse with blunt impact to abdomen, fresh child abuse with blunt impact to abdomen, and delayed jejunal rupture due to ischemia after minor blunt impact to abdomen. The characteristics of ischemic versus traumatic lesions are discussed. Controversies in determining aging of lesions are reviewed, along with the issues for the examining pathologist.

#### **Delayed Jejunal Rupture, Histologic Dating of Lesions, Forensic Pathology**