Objective: The toxicologic impact of ingested metallic lead is low, but an increased absorption of lead in children is described (1).

Case report: Two children (6-year-old girl, 8-year-old boy) without symptoms were presented on 30 May 2009 because they had eaten lead beads from a bag for joint-bedding (Fig.1). The PIC Erfurt recommended an abdominal X-ray after 48 hours and further measures in dependence of its result. The radiography on the next day showed beads in the small and large intestine (Fig. 2 and 3) and were still visible after 5 days in the boy. The lead blood levels increased to 275 µg/L in the boy and 230 µg/L in the girl (Tab. 1 and 2), respectively. Both lead blood levels were above the Human Biomonitoring levels of HBM I (100 µg/L) or HBM II (150 µg/L), respectively (2). The oral treatment with 2,3-dimercaptopropane-1-sulfonate (DMPS) was in-patiently started for the first days. Afterwards, the DMPS treatment was continued out-patiently and well tolerated. However, after 17 days, the administration of DMPS was interrupted because of coxsackie virus infection in both children. At that time, the lead blood levels were already decreased considerably (Tab. 2 and 3). Furthermore, the lead beads were not seen radiologically any more and the children remained free of symptoms of lead poisoning at all the time of monitoring.

Conclusions
The ingestion of small lead particles by children can due to a relevant rise of the lead blood level. The passage through the bowel can be delayed and should be controlled radiologically (3). The treatment with an chelating agent should be considered.

References: