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Non-typhoidal salmonella infection (NTSI) acquired by contact with reptiles or amphibians: A case report

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Einleitung: Non-typhoidal salmonella infection (NTSI) is a significant cause of bacterial diarrhea (1), resulting in the majority of cases in a self-limiting gastroenteritis, however in risk populations it can result in serious complications such as: osteomyelitis, acute kidney injury, sepsis and meningitis (2;3).

Food-borne infections are the most common path of transmission, explaining why in general, infection-rate increases after the first year of life. A more uncommon path of transmission is becoming increasingly significant, especially in infants: It is estimated, that about 5% of salmonellae-infections in the US are caused by contact with reptiles or amphibians (4).

Patienten und Methoden: We present a three week old boy with silent medical history, admitted to our department due to irritability and colics, which began after weaning one week ago. While waiting, parents observed an apnea and cyanosis improving after prompt parental stimulation. The arriving medical staff could not observe any respiratory distress, further examination revealed a good general state. The blood draw showed leukopenia ($3.2 \times 10^3/\mu\text{L}$) and an unsuspecting CRP (0.38 mg/dL).

Hours after admission, the boy shifted to a more serious state, the subsequent examination revealed tachypnea, tachycardia and a mottled skin. We performed a lumbar puncture (abacterial, glucose 59 mg/dL and $3 \text{ leucocytes}/\mu\text{L}$), an urinary catheter (E. coli without leukocyturia) and a blood sample (CRP 11.67 mg/dL , procalcitonin $94.15 \mu\text{g/L}$, interleukin-6: 929.5 ng/L) and a blood culture (salmonella with unknown serotype).

Ergebnisse: The path of transmission initially stayed unknown, the newborn was breast-fed in the first two and with formula milk since one week. Further, salmonellae were not detected in the parent's fecal specimen. The AGES detected no salmonellae in the formula milk. Further serotyping revealed a salmonella montevideo, being rare and often associated with reptiles and amphibians (5). The father than reported, that he owned bearded dragons, both died unexpected one week before birth. We assumed a disease transmission by surface contamination.

Intravenous antibiotic therapy (ampicillin and cefotaxime) was continued for three weeks. He was dismissed in an excellent state of health and with an age-adequate neurological status.

Schlussfolgerungen/Diskussion: Salmonellae infections can be acquired by contact with reptiles or amphibians and should be a differential diagnosis for newborn sepsis (Cave leukopenia and apnea).

References:

- (1) World Health Organization (WHO). Fact sheet: "Salmonella (non-typhoidal)". (Last 01/2020) [https://www.who.int/news-room/fact-sheets/detail/salmonella-\(non-typhoidal\)](https://www.who.int/news-room/fact-sheets/detail/salmonella-(non-typhoidal))
- (2) H.L. Wilson, K.J. Kennedy, C.R. M. Moffatt: „Epidemiology of non-typhoid Salmonella infection in the Australian Capital Territory over a 10-year period“. First published: 02 October 2017 <https://doi.org/10.1111/imj.13625>
- (3) R. Craig Davis, MD: "Salmonella Sepsis in Infancy". Am J Dis Child. 1981;135(12):1096-1099. doi:10.1001/archpedi.1981.02130360004003
- (4) H. Böhme, A. Fruth, W. Rabsch: "Reptilien-assoziierte Salmonelleninfektionen bei Säuglingen und Kleinkindern in Deutschland/Reptile-associated Salmonellosis in Infants in Germany". Georg Thieme Verlag KG Stuttgart New York. DOI 10.1055/s-0028-1112156
- (5) Editorial team (eurosurveillance@ecdc.europa.eu), S Bertrand, R Rimhanen-Finne, F X Weill, W Rabsch, L Thornton, J Perevoscikovs, W van Pelt, M Heck: "Salmonella infections associated with reptiles: the Current situation in Europe". Euro Surveill. 2008 Jun 12;13(24).