

Case report

Salmonellosis in a group of African elephants

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Clinical findings

The smallest elephant of a group of 3-5 yrs-old African elephants there were captured from the wild one year before, was reported to be showing lassitude, anorexia and constipation with a marked loss of weight. The animal had "an anxious expression", the trunk and ears were inactive and repeated crossing of the hind limbs suggested abdominal discomfort. Intermittently she pushed her trunk into her mouth and inflated the proximal third; a sign which appeared to be related to spasms of abdominal pain. Rectal temperature was 37.2°C, there was a complete absence of faeces and no evidence that there had been diarrhoea. Anorexia was complete, despite offerings of a large variety of greens and sweetmeats; water was refused.

At a later visit rectal examination was made. The rectum was dry, clinging and contained a little dark faecal material. After nine days, the animal developed diarrhoea and passed black, foul-smelling faeces, and rapidly became dehydrated. Despite fluid and antibiotic therapy (given under narcosis) the animal died 10 hours later. The only significant post-mortem finding was a severe enteritis with necrosis of the mucosa involving the whole length of the gut.

Cultural examination of faecal samples from the remaining five animals, two of which showed slight diarrhoea, revealed the presence of *Salmonella* and they were all given ampicillin powder orally for six days.

Laboratory diagnosis

S. typhimurium phage type Ia was isolated from samples taken from the elephant that died. *S. typhimurium* was isolated from two of the surviving elephants whilst from another *S. typhimurium* and *S. newport* were isolated and from yet another *S. typhimurium* in association with *S. heidelberg*. One elephant yielded no salmonellae.

Follow-up

After therapy and apparent recovery faecal samples from the elephants were examined. Three of the five samples yielded *S. typhimurium* but one only after incubation in selenite broth for 48 h. No further treatment was instituted but animals were retained in a paddock isolated from other animals until four consecutive negative samples were obtained. Scepticism of the value of antibiotic therapy in carrier animals is borne out by the present outbreak. Despite dosing with an antibiotic orally for seven days the animals continued to excrete salmonellae and yet ceased excreting these organisms after the treatment was stopped.