Communication

[Comunicação]

Lead poisoning in cattle in southern Brazil

[Envenenamento por chumbo em bovinos no sul do Brasil]

S.D. Traverso¹, A.P. Loretti¹, M.A. Donini², D. Driemeier³

¹Departamento de Patologia Clínica Veterinária da UFRGS
Caixa Postal 15094
91540-000 – Porto Alegre, RS
²Prefeitura Municipal de Glorinha, RS

The importance of lead as a toxic metal and environmental pollutant has long been recognized. Its hazards to human and animal health have been reported worldwide (Oskarsson et al., 1992; Dwivedi, 1995; Cordeiro, 1996; Abreu et al., 1998). Lead poisoning is one of the most common toxicoses affecting domestic animals. Cattle have been the most frequently affected due to its high susceptibility and curious habits (Priester and Hayes, 1974; Blakley, 1984; Seimiya et al., 1991; Radosits et al., 1994). Isolated cases and outbreaks have been described, involving several species of animals and various types of lead sources such as paints, motor oil, batteries, fumes and dust from lead industries, lead arsenate insecticides, lead fishing weights, lead shot and bonfire ash (Aronson, 1972; Osweiler et al., 1971; Every, 1981; Shore et al., 1984; Galey et al., 1990; Preece, 1995; Stair et al., 1995; Waine, 2000). Paint has also been identified as the most common source of lead poisoning in small animals (Morgan, 1994). Although lead poisoning is common in other parts of the world, occurrences in Brazil have rarely been reported in horses (Mazeo et al., 1984) and in cattle (Ribeiro et al., 1999). This communication describes the clinical and pathological aspects of bovine lead poisoning, confirms its occurrence by lead analysis in southern Brazil, and describes the conditions, in which it has been observed.

In September 13, 2000, the Department of Veterinary Pathology of the UFRGS received a request for assistance from a local cattleman. Three out of 25 crossbred beef heifers, which were kept in a paddock with a large quantity of waste material were affected. These animals presented nervous signs such as severe depression (Fig. 1), muscular tremors, anorexia, normal body temperature, head pressing, teeth grinding, profuse salivation and blindness. All the affected animals died one week after the onset of clinical signs. Attempts of treatment with electrolytes and antibiotics were unsuccessful. One animal, which was euthanized on the sixth day after the onset of the disease because of its unfavourable prognosis, was necropsied. Specimens were collected and processed by standard histologic methods and stained by hematoxylin and eosin and Ziehl-Neelsen methods. Samples of whole blood collected with sodium heparin, milk, fragments of liver and kidneys, water and soil were analysed for lead concentration by atomic absorption spectrometry method as already reported (Stair et al., 1995).