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TWO CASES OF TELEENCEPHALIC AND OPTICUS ASTROGLIOSIS IN LEAD
INGESTED CATTLE: PATHO-MORPHOLOGICAL OBSERVATIONS

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Two cows, aged 17 months and 19 months, which had taken lead (lead containing paint) at about 12 and 13 months of age respectively, were pathologically investigated. Neither cow showed any clinical signs, except severe visual impairment and extremely diminished pupillary reflex.

Chemical analysis of both the cows revealed high values of lead content in various parts of the body including the central nervous system.

The common principal histopathological findings consisted of telencephalic and opticus astrogliosis, occurrence of minute cytoplasmic inclusion bodies composed of fine-particle aggregated structures in the proliferative astroglia and presence of so-called "lead intranuclear inclusion bodies" in the renal tubular epithelial cells. The renal inclusion bodies were also composed of fine-particle aggregated structures.

The astrogliosis was of primary occurrence; it was considered that the astrogliosis occurred as a result of having a close and inseparable relation to the cytoplasmic inclusion bodies (inclusion body-astrogliosis).

There were some minute virus-like particles contained in the fine-particle aggregated structures in the central nervous system and kidneys.