

Diseases of



**PROSIMIANS (BEFORE APES),
NEW AND OLD WORLD
MONKEYS,
APES II**

Multifocal pyogranulomatous osteomyelitis



- It is described in **captive red-ruffed lemurs**
- It is associated with **lameness** and **skeletal muscle atrophy**.
- The disease is characterized radiographically as **multifocal lytic lesions** with **cortical thickening and sclerosis in the diaphysis of the long bones** of the fore and hind legs.

Multifocal pyogranulomatous osteomyelitis



- **Histologic lesions:**
- Earlier lesions contain woven trabecular bone, neutrophilic inflammation, and small foci of necrotic trabecular bone.



- More chronic lesions contain numerous foci of **necrotic bone**, **decreased production of woven trabecular bone**, and **chronic inflammation** consisting of macrophages, lymphocytes and plasma cells with few neutrophils, occasional granuloma formation, and fibrosis.

Periarticular hyperostosis



- It has been described **in black lemurs**.
- Lesions are characterized by **proliferative, periosteal, new bone formation** that is primarily associated with metaphyses.



- Periarticular osteophyte formation, degeneration of articular cartilage, and periarticular fibrosis surrounding joint capsules can also be present in advanced cases.

Periarticular hyperostosis



- The condition in black lemurs is associated with chronic renal disease.
- The condition is histologically similar to hypertrophic osteoarthropathy; however the latter typically affects diaphyseal while PH affects metaphyseal regions.

Encephalomyocarditis viruses



- The Encephalomyocarditis virus (EMCV) is a small, non enveloped, positive sense single-stranded RNA virus in the genus *Cardiovirus*, family *Picornaviridae*, with two known serotypes.



- It is spread worldwide and infects a huge range of vertebrate hosts with zoonotic potential for humans.
- The pig is the mammal most likely to be impacted on with the disease, but
- EMCV occurrence has also been reported in non-human primates and in a variety of domestic, captive and wild animals.



- At necropsy, a small amount of fluid transudate was observed in both thoracic and abdominal cavities (hydrothorax and ascites), but the main lesions were primarily limited to the cardiovascular system.



- Lungs were involved in most cases showing mild to severe pulmonary emphy-sema, moderate oedema and congestion with blood-tinged foam in the trachea.



- Because the pale necrotic heart muscle lesions that may be seen in fatal EMC infections are also seen in septic infarction or vitamin E/selenium deficiency, a definitive diagnosis requires virus recovery and identification.



- Heart, liver, kidney, and spleen collected from acutely dead animals or abortuses are the specimens of choice for virus isolation. Because EMC viruses are very stable, they may be recovered from frozen tissues.