**ISOLATION OF A METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) IN AN AFRICAN GREY PARROT (PSITTACUS ERITHacus ERITHacus)**

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**INTRODUCTION**

- **Methicillin-resistant *Staphylococcus aureus*** (MRSA) is a specific strain of *Staphylococcus aureus* that has developed antibiotic resistance to penicillins, including methicillin and other β-lactamase-resistant penicillin antibiotics. This strain MRSA was first discovered in the UK in 1961 and is now widespread, particularly in the hospital setting (1).
- In household pets, MRSA infections are uncommon but are on the rise (2), possibly because of the increased prevalence of human MRSA in the community.
- The effect of routine contact with household pets on the global epidemiology of MRSA is still unknown (3).

We report a clinical case in a domestic pet bird, an african grey parrot (*Psittacus erithacus erithacus*), that harboured this particular bacteria, suffering finally a fatal septicemia.

**CLINICAL CASE**

- **A** 3 month old african grey was presented in the clinic with clinical symptoms of sickness (figure 1) and marked hypothermia, diarrhea, dyspnea and anorexia. During clinical approach, we took several radiographs, in wich we saw evidences of liver and spleen hypertrophy. (figure 2)
- **During** the emergency treatment for dehydration, the animal show symptoms of respiratory distress and died suddenly.

Necropsy was performed and tissue samples were taken for histopathologic investigations. Gross and microscopic pathological changes included multifocal abscesses in liver, lungs (figure 3 and 4), kidneys and severe enteritis.

**Histopathology** shows cloudy degeneration of the liver parenchyma and severe vascular ectasia, with necroinflammatory foci full of G+ cocci (figure 5) and lungs (figure 6).

In the renal parenchyma we found also cloudy degeneration of renal tubular epithelium with intertubular hemorrhage and septic thrombi in the glomerulus (figure 7).

- **Gram** stains from liver and kidneys revealed large quantities of Gram positive cocci and multifocal bacterial thrombi.
- *Staphylococcus aureus* MRSA was isolated from all lesions.
- **The** antimicrobial susceptibility for this strain showed marked resistance to Amoxicillin, Amoxicillin-Clavulanic Acid, Penicillin, Clotrimoxazol, Amikacin, Gentamycin, Apramycin and Tetraciclins.
- **Tissue** samples were submitted to the laboratory to check for viral diseases like polyomavirus, circovirus, herpesvirus and adenovirus. All test were negative with polymerase chain reaction (PCR).

**DISCUSSION**

The owners had never suffered diseases from this agent but transmission of MRSA between animals and humans is possible and has been reported (1,2,3,4,5,6,7).

This article suggests that pet birds can act as reservoirs of MRSA, which can pose a public health risk to owners and veterinary staff (2,7), as well as limit the options for antimicrobial drug treatment of MRSA infections (1,3).

Staff in veterinary clinics could have an increased risk of carrying MRSA because of contact with infected animals and antimicrobial drugs in their work environment (3,6).

**REFERENCES**