



Occurrence of exudative epidermitis in pigs and its treatment

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Exudative epidermitis (EE) also known as greasy pig disease is an acute generalized disease of pigs caused by *Staphylococcus hyicus* (Sompolinsky 1950). The clinical picture of EE is characterized by exfoliation of the skin, excessive sebaceous secretion and the formation of a brownish coat of exudates that may cover the entire body. Morbidity can be up to 90% in infected herds. The infection is frequently treated with antimicrobial agents, but treatment is a problem because of the frequent occurrence of antimicrobial resistance in *S. hyicus* from pigs and subsequent treatment failure (Wegener and Schwarz 1993). As perusal of literature revealed scanty information on the occurrence of greasy pig disease in India, the present study was undertaken to isolate, characterize and carry out antibiotic sensitivity test of the bacteria associated with greasy pig disease of pigs.

The occurrence of exudative epidermitis in pigs maintained at the pig farm of NRC on Pig (ICAR), Rani, Asom was investigated. Ghungroo grower pigs (2 males and 4 females) were found affected and showed the evidence of skin infection. These affected animals were isolated and treated with 5 mg/day of enrofloxacin per kg of body weight delivered intramuscularly for 5 days. All of these animals responded well to the treatment. The heart blood and skin lesions were collected from all the affected animals prior to treatment and subjected to microbiological investigation.

Isolation and identification of *Staphylococcus* species: Heart blood and swabs from skin lesions obtained from the affected animals were inoculated on 7% human blood agar (Oxoid Columbia agar), MacConkey agar plates and were incubated aerobically at 37°C for 24 h. Gram positive, cluster forming, catalase positive and oxidase negative cocci were characterized as staphylococci according to standard methods (Cowan and Steel 1993). The isolates were characterized biochemically by using standard method (Devriese 1977, Cowan and Steel 1993).

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Antimicrobial sensitivity test: The *in vitro* susceptibility of isolates against various antimicrobial agents was determined by the standard disc diffusion procedure (Bauer *et al.* 1966). Antibiotic discs used were ampicillin, erythromycin, penicillin, streptomycin, ceftriaxone, oxytetracycline, gentamicin, chloramphenicol, enrofloxacin, norfloxacin, lincomycin, ciprofloxacin, cephalixin, sulphadiazine and co-trimaxazole.

All the affected animals showed the same progression of the disease, viz. a general loss of condition, exfoliation of the skin, excessive sebaceous secretion and the formation of a brownish coat of exudates that covered most part of the body especially around the face and shoulder region of the body. The skin of the affected animals became wrinkled with flaking of large areas which had a greasy feel. The present finding is almost similar with the findings of Wegener *et al.* (1994) who also described similar types of lesions in pigs suffering from exudative epidermitis.

Staphylococcus was isolated from all the samples (heart blood and swabs from skin lesions) of affected animals. The isolated *Staphylococci* were identified as *S. hyicus*. The present finding corroborates with the findings of Maddux and Koehne (1982) who also reported isolation of *S. hyicus* from pigs with exudative epidermitis.

All the isolates of *S. hyicus* were sensitive to ampicillin, penicillin, oxytetracycline, gentamicin, chloramphenicol, enrofloxacin, norfloxacin, ciprofloxacin, cephalixin, sulphadiazine and co-trimaxazole. The present finding is almost similar with the findings of various authors (Wegener 1994, Straw *et al.* 2006) who also observed similar results for *S. hyicus* isolated from cases of exudative epidermitis in pigs. On the contrary, all the isolates of *S. hyicus* were found resistant to ceftriaxone, erythromycin, and streptomycin. This finding also corroborated with the findings of Straw *et al.* (2006).

All the affected animals in the present study responded well to the treatment with enrofloxacin which was in agreement with the findings of Straw *et al.* (2006) who also reported successful treatment of exudative epidermitis of pigs with enrofloxacin.

SUMMARY

The occurrence of exudative epidermitis in pigs maintained under intensive farming system was reported. The organism associated with exudative epidermitis in pigs was identified as *S. hyicus*. The affected animals exhibited clinical signs such as exfoliation of the skin, excessive sebaceous secretion and the formation of a brownish coat of exudates over the body. All the isolates of *S. hyicus* were sensitive to ampicillin, penicillin, oxytetracycline, gentamicin, chloramphenicol, enrofloxacin, norfloxacin, ciprofloxacin, cephalexin, sulphadiazine and co-trimoxazole whereas they were resistant to ceftriaxone, erythromycin and streptomycin. The affected animals were effectively treated with parenteral administration of enrofloxacin.

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