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Full Length Research Paper

Seasonal emergence of swine erysipelas in hilly state Nagaland, Northeast India

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Seasonal outbreaks of swine erysipelas have been reported in back yard pig farms in the Phek district of Nagaland, India. The alpha haemolytic isolate of *Erysipelothrix rhusiopathiae* was recovered on blood agar from the clinical samples. The organisms were confirmed microscopically, biochemical analysis as well as by polymerase chain reaction (PCR) amplification of 16S rRNA gene and sequence analysis. These Nagaland isolates (KT160358, KT160359) were closely related to the type spp. *E. rhusiopathiae* in phylogenetic analysis and forms the same clad with Chineese isolates of swine and murine origin indicating an epidemiological link. The isolates were found to be most sensitive to oxytetracycline and responded to treatment. Swine erysipelas occurred in Phek district in a season due to sudden change of weather and temperature. Pigs exposed to such predisposing factors probably favoured to propagation of already persisted organisms in pigs. This is the first confirmed case of *E. rhusiopathiae* infection from the NE states of Nagaland, India.

Key words: Swine erysipelas, *Erysipelothrix rhusiopathiae*, pig, polymerase chain reaction (PCR) Nagaland, India, Oxytetracycline.

INTRODUCTION

Erysipelothrix rhusiopathiae, belonging to the family *Erysipelotrichaceae,* is a non-motile, Gram-positive, non-sporulating, non-acid-fast organism distributed worldwide affecting wide variety of vertebrate and invertebrate species including man (Reboli and Farrar, 1989). Organisms in many occasions harbour by pigs in lymph nodes and shed along with feces, urine, saliva and nasal secretions (Lee et al., 2011). Affected pigs manifest the disease as (i) acute septic form, (ii) subacute urticarial form marked by reddish-purple rhomboid spots or "diamonds" in the skin, (iii) joint or arthritic form, and (iv) chronic cardiac form (endocarditis) (Reboli and Farrar, 1989).Various predisposing factors, change of environmental conditions and parasitic infestation lead to

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