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CASE REPORT

A Case of Mange Infestation in a Flock of Pigs in Ebonyi State, Nigeria

Lekko, Y.M.[1*]; Unanam, E.S.[1]; Ezema, K.U.[2]

[1]Department of Veterinary Medicine, Faculty of Veterinary Medicine, University of Maiduguri, PMB 1069, Maiduguri, Borno State, Nigeria.[2] Veterinary Teaching Hospital, Faculty of Veterinary Medicine, University of Maiduguri, PMB 1069, Maiduguri, Borno State, Nigeria. *Corresponding author: Email: ylekkomadaki@gmail.com; Tel No:+ 2347036410350

SUMMARY

On the 6th of July 2015, a swine farmer at Ikwo, Ebonyi State, reported a case of ‘’loss of hair coats, continuous scratching of their skins on fences, iron bars and pen floors, with resultant wounds on their surfaces. Skin scrapings from some of the pigs with gross skin lesions was taken for diagnosis. Digestion of suspected scraping materials with 10 % potassium hydroxide, then centrifugation followed by an examination of sediment under a microscope. Injuries seen are found in the ears, head, neck region, shoulders, leg and back region of those pigs. The lesions seen are reddening of the infested area, crusts, hyperkeratosis, and fall of hairs from the area with wrinkled, thickened, rough, raised and thick asbestos-like skin and pruritus. Microscopically the parasites seen appear approximately 500 µm long, with fingerprint-like striations on the cuticle, short and stubby legs, numerous setae and pegs, and with a dorsal patch of tooth-like spines. Treatment with Ivermectin 300mg/kg subcutaneously, stat and repeated at days 14 and Cypermethrin (pour-on) 10mL of 0.1% solution yielded tremendous improvement.

Keywords: mange, pigs, Sarcoptic mange, *Sarcoptes scabiei*, Ivermectin

INTRODUCTION

Parasitic infestation especially mange mite infestation in pigs constitute an important economic aspect of pig farming. (Damriyasa *et al*., 2004; OIE, 2016). Sarcoptic mange infestations in pigs are caused by the mite *Sarcoptes scabies var. suis* which causes high morbidity and mortality in wild animals and farm animals (Walton and Currie, 2007; Dagleish *et al*., 2007; Chhabra and Pathak,

2011; Laha *et al.*, 2015; OIE, 2016). In pigs experimentally infected by the parasites there is development of excoriations on the luminal surface of the ear after seven days of initial infestations, between third and eight weeks of infections, the developed encrusted lesion in the ears produce pruritis followed by focal erythematous skin lesions with eosinophilia and allergic reactions (Laha *et al.*, 2015). Injuries can be seen in the ears, head, neck region, shoulders, leg and back region of those pigs. The lesions were characterised by reddening of the infested area, the formation of crusts, hyperkeratosis, and fall of hairs from the area with wrinkled, thickened, rough, raised and thick asbestos-like skin (Das *et al.* 2010; Laha et al., 2015). The observed clinical sign seen in natural disease is pruritis which can be noticed by When pigs are rubbing their skin against the pen house wall (Loewenstein *et al*. 2006 Das *et al.* 2010; Laha *et al.*, 2015: OIE, 2016). The hypersensitive form of the disease is mostly accompanied by pruritis while the chronic form is Fill with red papules characterised by crust (Rambozzi *et al.* 2007). Prevalence has been reported from different parts of the world Mbeya Region, Tanzania, 2 % pigs, have been found to be infected with *S. scabiei var.suis* (Braae *et al.* 2013), Ghana 38.2 % pigs have been reported as infested with Saroptes suis (Permin *et al*., 1999), Germany has been recorded as 45.4 % (Damriyasa *et al*., 2004), Alonso de Vega *et al*., (1998) reported 37 % of the 1,318 slaughtered pigs of southeastern Spain examined were found positive *for S. scabiei var. suis* infestations. The ear scrapings of 33.7 % pigs of northeastern Spain were diagnosed as positive for S. scabiei var suis infestations out of 818 pig samples examined (Gutierrez *et al*.,1996. Parasite transmission from a domestic animal that has been infected to humans happen during close contact and causes serious pruritus and irritation in humans and result in hypersensitivity reaction from the mites and their products. Infants and immunocompromised adults are more susceptible to the disease (Walton and Currie 2007; Grahofer *et al.*, 2018). Disease severity are naturally self-limiting but cases of persistent infection that takes more extended period have been reported. (Gallegos *et al.*, 2014; Grahofer *et al*., 2018). There is lack of information about the state of parasite Prevalence in Nigeria hence the need for this case report.

CASE REPORT

On the 6th of July 2015, a swine farmer at Ikwo, Ebonyi State, reported a case of ‘’loss of hair coats, continuous scratching of their skins on fences, iron bars, and pen floors, with resultant wounds on their skins’’. He had rubbed condemned oil on the pigs without response. On-farm visit, the pigs presented were emaciated, alopecia, raised skin and stunted growth. The farm housings and hygiene level were below standard. Each pen was overstocked.

SIGNALMENT

Special ---------- Swine
Breeds ---------- Large white and Durock
Sexes ---------- Males and Females
Ages ---------- 2 month’s old weaners, growers and adults
The number in flock --------- 70 pigs
Numbers affected ------- 70 pigs

CLINICAL SIGNS

Clinical signs seen includes Alopecia, Stunted growth, Scales on the skin, Scratching of skin on the pen walls and feeding troughs and Redness of skin.

Plate 1: Arrows show affected pig (Duroc) with scales on the skin and ear lobes

MATERIALS AND METHODS

Laboratory Diagnosis

Skin scrapings from some of the affected pigs with gross skin lesions were taken and submitted to State Veterinary Clinic, Ministry of Agriculture and Natural Resources, Abakaliki, Ebonyi State, for digestion and identification of parasite, which was carried out as described by Soulsby, (1986).

RESULTS

Lesions seen are found in the ears, head, neck region, shoulders, leg and back region of those pigs. The injuries seen are reddening of the infested area, crusts, hyperkeratosis, and fall of hairs from the area with wrinkled, thickened, rough, raised and thick asbestos-like skin and pruritus. Microscopically the parasites seen appear approximately 500 µm long, with fingerprint-like striations on the cuticle, short and stubby legs, numerous setae and pegs, and with a dorsal patch of tooth-like spines.

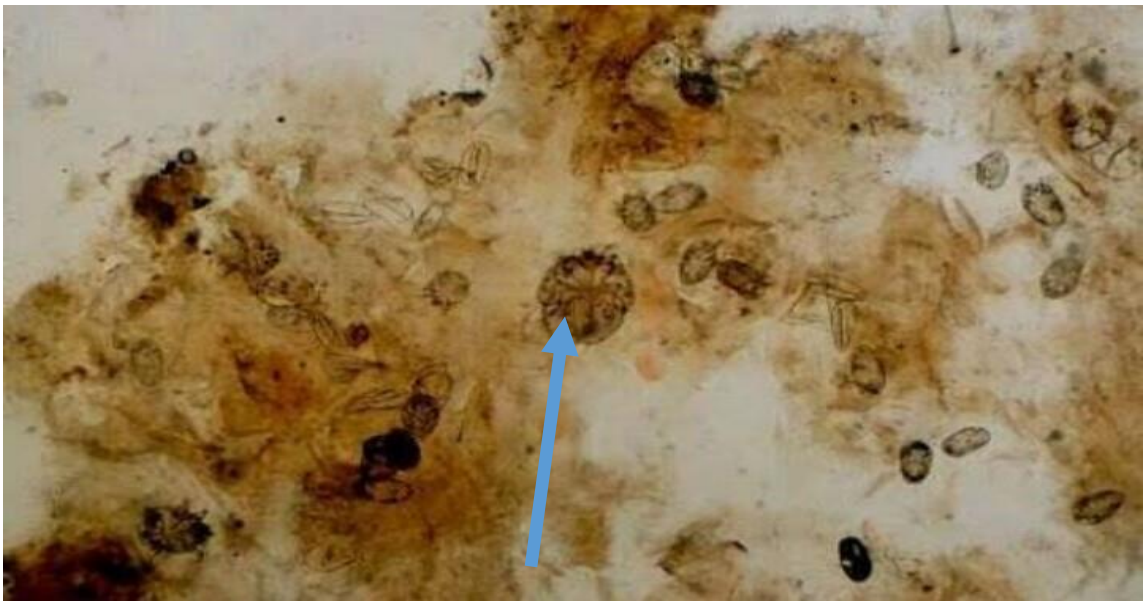

Plate 2: Arrow shows *Sarcoptic scabei* at x10 magnification

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TREATMENT

Inj. Ivermectin 300mg/kg., SC., stat and repeated at day 14

Inj. Multivitamin 100mg/kg [1ml/10kg bwt] x 3/7 im., s.i.d

Cypermethrin (pour-on) 10mL of 0.1% solution

DISCUSSION

Lesions seen are found in the ears, head, neck region, shoulders, leg and back region of those pigs. The injuries seen are reddening of the infested area, crusts, hyperkeratosis, and fall of hairs from the area with wrinkled, thickened, rough, raised and thick asbestos-like skin and pruritus. These lesions were similar to those reported by (Das *et al*., 2010; Laha *et al.*, 2015; OIE, 2016). The observed clinical signs observed in these study were pruritis, as a result, affected pigs showed rubbing of the skin against the wall of the pen, as reported by other authors (Loewenstein *et al*., 2006; Das *et al*., 2010; Laha et al., 2015; OIE, 2016). The diagnosis was performed as described by Soulsby,1986; OIE, 2016). Microscopically the parasites seen appear approximately 500 µm long, with fingerprint-like striations on the cuticle, short and stubby legs, numerous setae and pegs, and with a dorsal patch of tooth-like spines. Treatment carried out was similar to the reports of (Chellapandian *et al.*, 2004;Maiti *et al*., 2004; Das *et al*., 2010; Laha et al., 2015; OIE, 2016; Grahofer *et al.*, 2018) who after brushing over the thick scab with wire brush apply Cypermethrin Kumar et al., (2005) then followed by subcutaneous injections of Ivermectin at 300 mg/kg body weight which was repeated after two weeks. The symptoms of pruritis and scratching were disappeared from day 21 post-treatment.

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