Peromelia in Country Chicken

C. Soundararajan¹, K. Nagarajan, M. Arul Prakash and R. Ananda Raja

Department of Veterinary Parasitology, Madras Veterinary College, Tamil Nadu Veterinary and Animal Sciences University, Chennai -600 007, Tamil Nadu.

(Received : 10-03-2011; Accepted : 11-07-2016)

Abstract

Occurrence of peromelia in two country chicken aged six and eight weeks was observed. They both had legs with deformities in the extremities of the tarso-metatarsus. Being a first observation in country chicken of Tamil Nadu, India, the same is being reported.

Key words: Peromelia, Country chicken, congenital abnormality

Leg disorders in poultry are important welfare and economic issues for the poultry industry. They are more prevalent in broilers and turkeys than in layers (Kestin *et al.*, 2001). Mortalities, number of culls and condemnations due to leg abnormalities have been estimated to be 0.10–0.30 per cent of the total loss (Julian, 1995). The absence or rudimentary development or malformation of the feet is referred to as peromelia (Paul Cohrs, 2013). Critical review of literature revealed that the information regarding peromelia in chicken from Tamil Nadu, India was not yet reported. This paper reports the rare case of peromelia in country chicken from Tamil Nadu, India.

Materials and Methods

Six and eight weeks old country chicken at Thangamedu village, Erode district, Tamil Nadu were examined for the leg deformity. On gross examination, country chicken had leg deformities in the lower extremities (Fig 1 and 2).

Results and Discussion

In the present study, both legs in a country chicken had curled lower extremities of the tarso-metatarsus (Fig 1). Another chicken had curled lower and upper extremities of the tarsometatarsus joint (Fig 2). Anderson *et al.* (1995) and Ajayi and Mailafia (2011) reported the occurrence of polymelia in seven and nine week old broiler chicken respectively. Whereas, Azeez and Oyagbemi (2013) observed a case of polymelia with a rudimentary wing in an eight week old Nera black chicken (*Gallus domesticus*) and opined that it was a rare disorder with chromosomal aberrations, which were associated with congenital limb malformations.

Limb defects were relatively rare due to chromosomal aberrations such as segmental autosoamal monosomies or trisomies. The etiology of limb malformation included genetic factors, environmental agents or a combination of both (Newman *et al.*, 1999). Alam *et al.* (2007) reported that any alterations in the signaling centers due to genetic, toxic or environmental factors during limb development could cause congenital anomalies.

Deficiencies and/or excesses of vitamins (D, A, E, C, B-complexes), minerals (calcium, phosphorus) and trace elements influenced leg disorders, either in the field or under experimental conditions (Waldenstedt, 2006). Grains contaminated with *Fusarium* or *Aspergillus* species had been shown to increase the incidence of bowed and twisted legs and tibial dyschondroplasia (Krogh *et al.*, 1989).

Summary

It can be concluded that the rare case of peromelia in country chicken from Tamil Nadu, India was due leg deformities in the lower and upper extremities of the tarso-metatarsus joint.

References

Ajayi, I. E. and Mailafia, S. (2011) Occurrence of Polymelia in 9-Week-Old Male Broiler: Anatomical and Radiological Aspects. *J. Vet. Anat.*, **4**: 69-77.

¹Corresponding author : Email : drsoundarpara@gmail.com

C. Soundararajan et al.



Fig. 1: Peromelia in lower extremities of the tarso-metatarsus of both legs a country chicken.

Alam, M. R., Lee, J. I., Lee, H. B., Ko J. J., Lee, K. C. and Kim, N. S. (2007) Supernumerary ectopic limbs in Korean indigenous cattle: Four case reports. *Veterinarni Medicina* **52**: 202-206.

Anderson, W. I., Langheinrich, K. A. and McCaskey, P. C. (1985) Polymalia in broiler chicken. *Avian Dis.*, **29**: 244-245.

Azeez, O. I. and Oyagbemi, A. A. (2013) First report of polymelia and a rudimentary wing in a Nigerian Nera black chicken. *J. South African Vet. Assoc.*, **84**: 1082-84.

Julian, R.J. (1995) Population dynamics and diseases of poultry. In: Hunton, P. (Ed.), Poultry Production, World Animal Science, C9. Elsevier, Amsterdam, The Netherlands, pp. 525– 560.

Kestin, S.C., Gordon, S., Su, G. and Sorensen, P. (2001) Relationships in broiler chickens between lameness, live weight, growth rate and age. *Vet. Rec.*, **148**: 195–197.



Fig. 2: Peromelia in lower and upper extremities of the tarsometatarsus joint in a country chicken.

Krogh, P., Christensen, D.H., Hald, B., Harlou, B., Larsen, C., Pedersen, E.J. and Than, U. (1989) Natural occurrence of the mycotoxin fusarochromanone, a metabolite of *Fusarium equiseti*, in cereal feed associated with tibial dyschondroplasia. *Appl. Environ. Microbiol.*, **55**: 3184–3188.

Newman, S. J., Bailey, T. L., Jones, J. C., DiGrassie, W. A. and Whittier, W. D. (1999) Multiple congenital anomalies in a calf. *J.Vet. Diag. Invest.*, **11**: 368-371.

Paul Cohrs. (2013) Text book of special pathological anatomy of domestic animals. Elsevier Science.

Waldenstedt, L. (2006) Nutritional factors of importance for optimal leg health in broilers: A review. *Anim. Feed Sci. Tech.*, **126:** 291–307.

Indian Vet. J., January 2017, 94 (01) : 85 - 87

Autologus Full Thickness Skin Grafting for Degloving Wound in a Dog

Pankaj Jain¹, Apra Shahi, Dharmendra Kumar and Randhir Singh

Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry, Jabalpur-482001, Madhya Pradesh (India)

(Received : 26-02-2016; Accepted : 06-04-2016)

Abstract

A six months old female dog was brought to Teaching Veterinary Clinical Complex with a history of automobile injury leading to degloving wound in left hind limb below hock region with complete loss of paw. Loss of full depth of skin

¹Corresponding author : Email : pjain427@gmail.com

made routine surgical repair impossible. Wound bed was freshened and excessive granulation was removed surgically. Skin mesh graft was prepared after harvesting skin from left flank region and was sutured to wound bed using non absorbable silk sutures. Non adherent vaseline based chlorhexidine dressing was done. Animal showed uneventful recovery and hair growth