

Short Communication

FIRST REPORT OF POLYMELIA IN SHAKINI BREED CHICKEN FROM NEPAL

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Polymelia is a congenital anomaly (birth defect condition) which is associated with extra limbs or supernumerary limbs in human and animals. Congenital anomalies are associated with genetic factors (transgenes, chromosomes), environmental agents (infection, toxins, teratogens, fertilization techniques, management) or a combination of factors (Keeler *et al.*, 1981; Newman *et al.*, 1999). In supernumerary ectopic limb (SEC) anomaly, accessory limbs are attached to the various body regions (Fourie, 1990; Hiraga *et al.*, 1989). These accessory limbs are usually smaller than the normal limbs and have stiff joints and sparse muscles with innervations (Pohlmeyer, 1974).

Polymelia is reported from human, cattle, deer, dolphin, frog, cat, dog and poultry but is extremely rare in swine (Hiraga & Demis, 1993; Ramdan *et al.*, 1998; Talamillo *et al.*, 2005). Polymelia in birds is very rare. Only a few cases of polymelia in chicken are recorded from different parts of the world. A Nera black chicken (*Gallus domesticus*) with polymelia and rudimentary wing was reported from Nigeria in 2008 (Odunayo *et al.*, 2013). A chicken with polymelia was reported from Kitam village, Sikkim, India in 2012 (10 News WTSP Tampa Bay). In Egypt amputation of polymelia in a layer chicken was done in 2014 (Abu-Seida, 2014).

For the first time polymelia in shakini breed chicken (*Gallus domesticus*) is recorded in Nepal. There is no previous report on such deformity in domesticated fowl in Nepal. The chicken with polymelia is ten days old and is detected in the author's neighborhood in Pokhara valley, midwestern region of Nepal during the month of December, 2014. Physical examination of the chicken revealed well developed extra limbs consisting of the femur, tibiofibula and the phalanges which are attached to the upper region of the coccygeal area of the chicken. The limbs are smaller than the normal limbs with equal digits but are non-functional. The chicken looks normal and seems to have no problem with the supernumerary limbs so far.

Keywords: polymelia, supernumerary limbs, Shakini breed, Nepal



PHOTO 1. Polymelia in a chicken.



PHOTO 2. Polymelia in a chicken.

It is not clear whether the present case of polymelia is due to genetic or environmental factors. Although a rare occurrence, subsequent identified cases of polymelia in poultry should be further investigated using x-ray, ultrasonography and genetic diagnostic techniques.

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