

Gross Anatomical Studies on Femur of Hoary-Bellied Himalayan Squirrel (*Callosciurus pygerythrus*)

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Abstract

The present study was conducted on the femur of an adult Hoary-Bellied Himalayan Squirrel (*Callosciurus pygerythrus*) which died due to road accident in the campus of College of veterinary sciences, Khanapara, Guwahati. The animal was collected immediately after death, and processed and then femur was removed, and a gross anatomical study was made on it. It was the longest bone of the skeleton. The head of the femur bent medially of the Hoary-Bellied Himalayan Squirrel (*Callosciurus pygerythrus*). It was situated in between the greater trochanter and lesser trochanter. The head of the femur was spherical and smooth with a shallow fovea capitis. The greater trochanter, the lesser trochanter and trochanter tertius were prominent. The greater trochanter had a small point on the lateral surface of the cranial part for muscles to originate. The trochanteric fossa was deep. The distal extremity was divided into two portions, namely the medial and lateral condyles through a intercondyloid fossa. The medial and lateral epicondyles had roughened surfaces. The supracondyloid fossa was not evident.

Keywords: Gross anatomy, femur, Hoary-Bellied Himalayan Squirrel

Hoary-Bellied Himalayan Squirrel (*Callosciurus pygerythrus*) is small, brown and black squirrel which is found in riverine and mixed forest of North Bengal and North East India (Menon, 2003). They transmitted the seed from one place to another which helps in ecology. They are killed by some group of people for their meat. However, literature on the anatomy of femur of Hoary-Bellied

Himalayan Squirrel (*Callosciurus pygerythrus*) of Assam could not be traced. Hence, the present investigation has been undertaken to elucidate the same.

Materials and Methods

The present study was conducted on the femur of an adult Hoary-Bellied Himalayan Squirrel (*Callosciurus pygerythrus*) which was died due to road accident in the campus of College of veterinary sciences, Khanapara, Guwahati. The animal was collected immediately after death, and the skeleton was processed as per the method of Young (1980). Then the femur was removed and gross anatomical studies was made on it.

Results and Discussion

The femur of Hoary-Bellied Himalayan Squirrel (*Callosciurus pygerythrus*) was place obliquely downward and forward. It was longest bone of skeleton. It had a body and two extremities, proximal and distal extremity. The body of the femur was cylindrical at the middle. It had four surfaces and two borders. The surfaces were lateral, medial, cranial and caudal surfaces. The two borders were medial and lateral. The lateral, medial and cranial surfaces were smooth and continuous with each other while caudal surface was wide. And rough at distal extremity. The trochanter tertius was situated at the proximal one third of the lateral border.



Fig. 1: Photograph showing the femur of Hoary-Bellied Himalayan squirrel along with lesser trochanter (A), Head of the femur (B), greater trochanter (C), trochanter tertius (D), lateral condyle (E), intercondyloid fossa ((F) and medial condyle (G).

The proximal extremity had the following structures *viz.*, head, greater trochanter, lesser trochanter and trochanteric fossa. The head of the femur of Hoary-Bellied Himalayan Squirrel (*Callosciurus pygerythrus*) was bent medially (Fig. 1). The head of the femur was spherical and smooth with a shallow fovea capitis (Fig. 2).

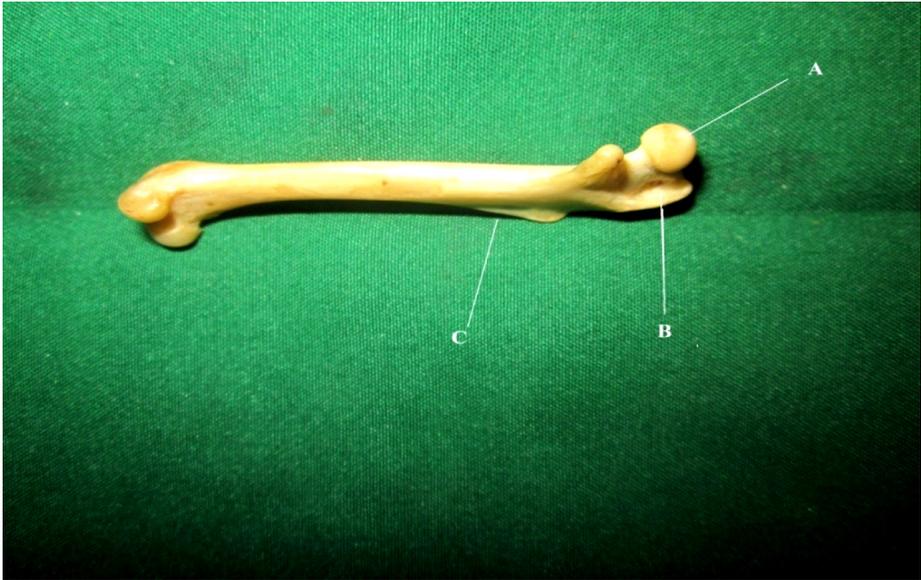


Fig. 2: Photograph showing the shallow fovea capitis (A), intertrochanteric fossa (B) and crest extended from trochanter tertius (C) of femur of Hoary-Bellied Himalayan squirrel.

It was situated in between the greater trochanter and lesser trochanter and supported by a distinct neck. These findings were in accordance with the findings of Ajayi *et al.* (2012) in New Zealand White Rabbit. The greater trochanter had a small point cranio-laterally for muscles to originate. The trochanteric fossa was deep and present in between the head of Hoary-Bellied Himalayan Squirrel and greater trochanter. The lesser trochanter and trochanter tertius were well developed while a crest extended from the trochanter tertius distally towards the shaft. These results were corroborated with the findings of Vitorovic *et al.* (1998) in Ground squirrel.

The distal extremity is broad. The trochlea of the distal extremity was divided by an intercondyloid fossa into medial and lateral condyles. The medial and lateral epicondyles had roughened surfaces. The supracondyloid fossa was not evident. Similar findings were recorded by Demirkan *et al.* (2007) in Chinchilla.

Summary

It was the longest bone of the skeleton. It had a body and two extremity i.e. proximal and distal extremity. The proximal extremity had the following structures *viz.*, head, greater trochanter, lesser trochanter, trochanteric fossa and trochanter tertius. In distal extremity, the trochlea divided into two portions, namely the medial and lateral condyles through an intercondyloid fossa whereas supracondyloid fossa was not evident.

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