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## A fibroma hindering the neck bending mechanism in a tortoise (class Reptilia, subclass Anapsida, order Testudines) (Chelonia)

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### ABSTRACT

A 7-year old tortoise was examined for the presence of a hard swelling, hindering the necessary neck bending mechanism. Surgical removal was the solution to regain the mechanism normality.

## 1. Introduction

Tortoises are oviparous reptile belonging to class Reptilia, subclass Anapsida, order Testudines (Chelonia). They are one of the most unique groups of vertebrates, and show a body plan and certain other features that are virtually unseen in any other group. Despite what is commonly believed, the shell is not an exoskeleton. It is a modified rib cage and is part of the vertebral column. The shell can be broken down into two components: the carapace and the plastron. The carapace comprises the dorsal portion of the shell while the plastron comprises the ventral. The entire body of of these vertebrates is shaped around the shell. The pelvic and pectoral girdles are uniquely located within the ribcage[1]. An outer covering of keratinized scales or scutes derived from the epidermis and an inner layer of horny plates produced in the dermis. The trunk region of the vertebral

column is fused to the inner surface of the carapace. The cervical vertebrae are loosely articulated allowing the neck bending necessary when the head is withdrawn into the shell. Thereby, considerable protection from predators is provided[2].

## 2. Clinical history

A 7-year old, 1 050 g body weight male African tortoise, exhibited a hard, loose hazel-nut size swelling under the neck skin, hindering the withdrawal of the head into the shell (Figure 1A), presented as a clinical case to the faculty. From the history, the swelling was discovered since 6 months and appeared smaller in size with gradual enlarging till reached 2 cm × 2 cm which was associated with the inability to withdraw the neck as usual inside the shell.

Surgical removal of the swelling was performed under the effect of ketamine HCl at a dose rate 22–44 mg/kg body weight intramuscularly injected in the leg muscles[3] in combination with local infiltration of 1 mL of the local anesthetic xylocaine (0.5%). Firm and loose spherical mass of a hazel-nut size, enveloped in a dense fibrous capsule was detected after the skin incision with subsequent removal (Figure 1B). The skin incision was stitched. Recovery was satisfactory and uneventful.

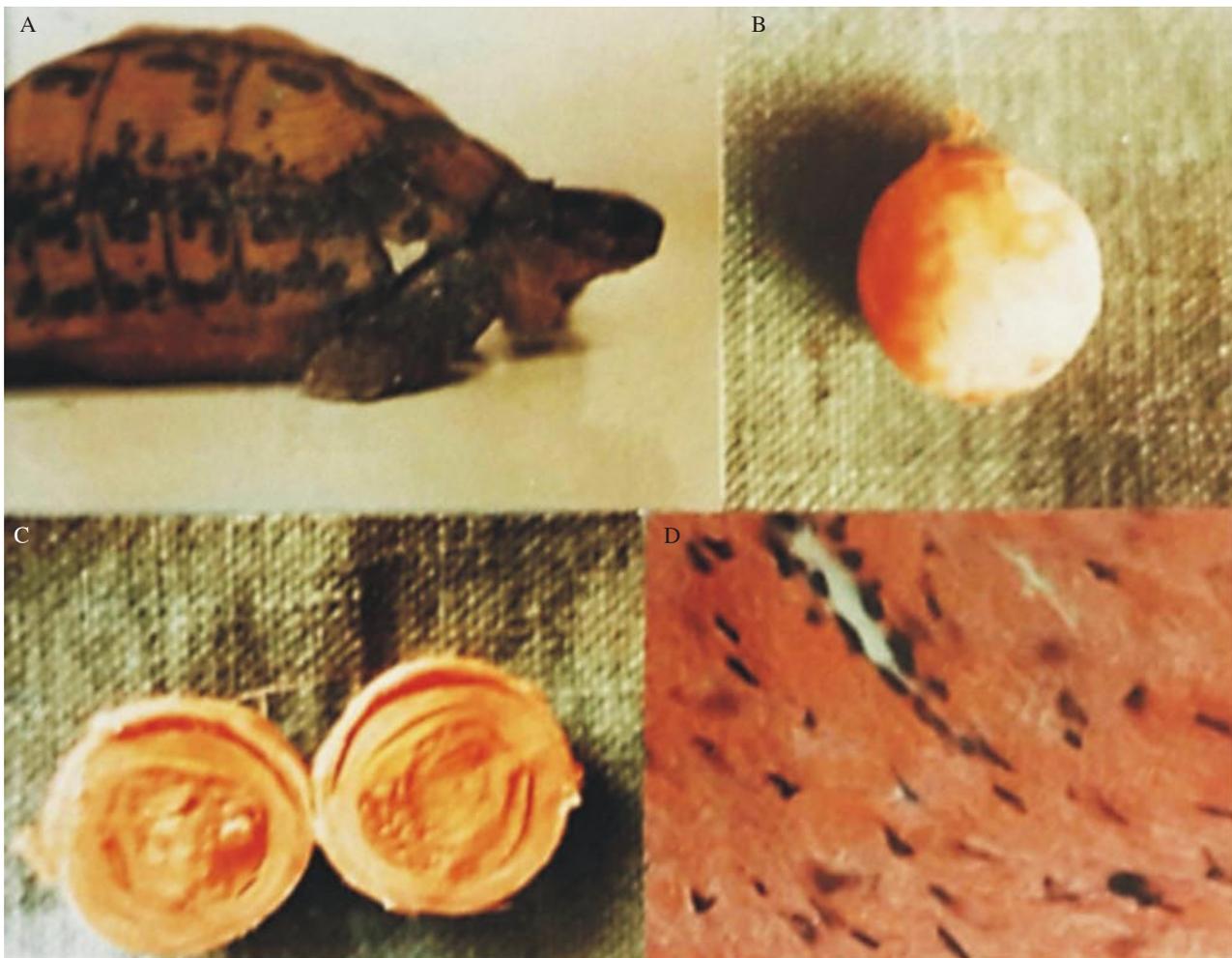
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**Figure 1.** A tortoise showing a hard, loose hazel-nut neck swelling (A), the removed firm spherical mass enveloped in a dense capsule (B), the sagittal cut surface of the mass showing fibrous consistency (C), and histopathology showing spindle shaped fibrocytes, fibroblasts and mature collagen fibers (haematoxylin and eosin,  $\times 40$ ) (D).

At necropsy, the sagittal cut surface of the swelling appeared fibrous in consistency (Figure 1C). Histopathology, the swelling consisted of spindle shaped fibrocytes and fibroblasts forming spiral bundles. Mature collagen fibers were found interposing among the bundles (Figure 1D). Definitive diagnosis was benign fibroma.

### 3. Discussion

The case report contributed to the possible sites of neoplasms in such species of reptile that greatly affects the mechanism of protection. There are several reports on neoplastic disease of family Testudinae, however, other regions have been involved[4,5]. Other reports have dealt with therapy and surgery of such conditions which were very satisfactory as in this report[6,7].

### Conflict of interest statement

We declare that we have no conflict of interest.

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