Abstract

This study was carried out to evaluate the state of the liver in dogs after partial hepatectomy by histopathological and clinicopathological examinations. Fifteen healthy male dogs were used in this study and classified into equal three groups. Dogs of group (I) served as control and exposed to laparotomy, dogs of group (II) were used for partial hepatectomy of left lateral lobe while those of group (III) were subjected to partial hepatectomy of the whole left lobe. Blood samples were taken at 1st, 2nd, 3rd, 4th, 6th and 8th weeks of surgery to determine: alanine aminotransferase, aspartate aminotransferase, alkaline phosphatase and glucose. After the 8th weeks, the dogs were sacrificed to obtain the liver for the histopathological and histochemical examinations. Group (I) showed normal liver structure. Group (II, III) showed signs of regeneration where hypertrophy of the hepatocytes and increase number of binucleated cells were evident. The hepatocytes nuclei were at different stages of nuclear activities. There were newly formed bile duct. The glycogen level in the liver decreased after resection. The intensity of the reaction to acid phosphatase, alkaline phosphatase, ATPase and SDH increased after resection. In conclusion, after partial hepatectomy the hepatic tissue try restore its original size through regeneration of the hepatocytes.

Key words
Histopathology, clinicopathology, hepatectomy, dog.

Introduction

Hepatic resection or partial hepatectomy is indicated in many conditions such as traumatic fracture of hepatic parenchyma (Kirk and Bistner, 1975), hepatic abscession (Martin, 1981). Primary or secondary tumors of hepatic and biliary ducts (Drazner, 1985) and in cases of liver hydatid cyst (Singh, 1987). Hepatic lobectomy is carried out nowadays to obtain a liver graft (Drazner, 1985).

Certain experimental hepatectomies were done following induced surgical conditions such as ischaemic remnant (Humphries, 1990).

Animal species in this issue

**Eastern Grey Kangaroo (Macropus giganteus)**

- **Kingdom:** Animalia
- **Phylum:** Chordata
- **Class:** mammalian
- **Infraclass:** Marsupialia
- **Order:** Diprotodontia
- **Family:** Macropodidae
- **Genus:** Macropus
- **Species:** M. giganteus

The Eastern Grey Kangaroo (Macropus giganteus) is a marsupial found in southern and eastern Australia, with a population of several million. It is also known as the Great Grey Kangaroo and the Forester Kangaroo. Although a big Eastern Grey male typically masses around 66 kg and stands almost 2 m tall, the scientific name, Macropus giganteus (gigantic large-foot), is misleading, as the Red Kangaroo of the semi-arid inland is, at 85 kg, larger.

The Eastern Grey is easy to recognize: its soft grey coat is distinctive, and it is usually found in moister, more fertile areas than the Red. Red Kangaroos, though sometimes grey-blue in colour, have a totally different face to Grey Kangaroos. Red Kangaroos have distinctive markings in black and white beside their muzzles and along the sides of their face. Grey Kangaroos do not have these markings, and their eyes seem large and wide open. Where their ranges overlap, it is much more difficult to distinguish between Eastern Grey and Western Grey Kangaroos.
Animal species in this issue

**Ostrich (Struthio camelus)**


The Ostrich, *Struthio camelus*, is a large flightless bird native to Africa. It is the only living species of its family, Struthionidae and its genus, *Struthio*. Ostriches share the order Struthioniformes with the kiwis, Emus, and other ratites. It is distinctive in its appearance, with a long neck and legs and the ability to run at maximum speeds of about 72 km per hour, the top land speed of any bird. The Ostrich is the largest living species of bird and lays the largest egg of any living bird.

The Ostrich is farmed around the world, particularly for its feathers, which are decorative and are also used for feather dusters. Its skin is used for leather and its meat marketed commercially.

Ostriches usually weigh from 63 to 130 kilograms. The long neck and legs keeps their head 1.8 to 2.75 metres above the ground, and their eyes are said to be the largest of any land vertebrate – 50 millimetres in diameter, they can therefore perceive predators at a great distance. The eyes are shaded from sun light falling from above.

The strong legs of the Ostrich, like those of other birds, are scaled and unfeathered. The bird has just two toes on each foot (most birds have four), with the nail on the larger, inner toe resembling a hoof. The outer toe lacks a nail. The reduced number of toes is an adaptation that appears to aid in running.
Burchell's Zebra is the most common type of zebrid mammal with a white/black coloring. The Chapman's variety of the plains zebra can be distinguished from Burchell's zebra by the presence of black and white to confuse their predators.

Burchell's zebras are 217 to 246 cm in length, with tail lengths of 47 to 56 cm. At the shoulder, their height is 110 to 145 cm. Males are slightly larger than females and usually have thicker necks as well.

With their distinctive black and white stripes, Burchell's zebras are easily recognizable. The patterns of their stripes differ from other species of zebras. Their stripes are especially wide becoming wider and more horizontal towards the flanks and rear of the body. The stripes on the neck to the forelimbs are vertical. These neck stripes continue in the mane which is short and sticks straight up. In most populations, the stripes extend to the belly where they meet. Stripes on the limbs are narrower and horizontal and continue until reaching the hooves. Facial stripes are ordered both horizontally and vertically creating beautiful patterns. Not all stripes are distinctly black and white. Some stripes may appear a faint brown or may leave a brown ‘shadow’ stripe in the white region.
Animal species in this issue

**Nile Monitor (Varanus Niloticus)**


The Nile Monitor (Varanus nilotictus) is a large member of the monitor lizard family (Varanidae).

Nile Monitors grow to about 1.5 to 2 m in length. They have muscular bodies, strong legs and powerful jaws. The teeth are sharp and pointed in juvenile animals and become blunt and peg-like in adults. They also possess sharp claws used for climbing, digging, defense, or tearing at their prey. Like all monitors they have a forked tongue, with highly developed olfactory properties.

Their nostrils are placed high on the snout, indicating that these animals are highly aquatic, but are also excellent climbers and quick runners on land. Nile Monitors feed on fish, snails, frogs, crocodile eggs and young, snakes, birds, small mammals, large insects, and carrion.

In South Africa they are commonly referred to as "leguaan," from the Dutch for iguana.