HISTOPATHOLOGICAL STUDIES OF SPONTANEOUS KIDNEY LESIONS IN GOATS (*Capra hircus*)

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ABSTRACT

The present investigation was carried out to study the spontaneous occurrence of various pathomorphological and histopathological alterations in the kidneys of goats. Examination of kidneys from a total number of 500 goats ranging from 1 to 6 years of age were conducted . Out of 500 animals, 46 (9.2%) cases were found to be affected with various pathological conditions. The fatty degeneration was one of the pathological conditions encountered highest in kidney, i.e. 1.6% followed by vascular abnormalities (1.4%), interstitial nephritis (1.2%), glomerulonephritis (1.0%), amyloidosis (0.8%), nephrolithiasis and calcification (0.6%), hypertrophy and hypoplasia, renal infarction, embolic nephritis, and pigmentation each (0.4%),and hydronephrosis and pyelonephritis (0.2%).

INTRODUCTION

There has been a gradual increase in meat consumption and butchers have been complaining of short supply of animals suitable for slaughter. Large number of animals are rejected on ante mortem examination. Even at post-mortem examination a large number of organs including kidneys are rejected because of multifarious lesions. Kidney deals with one-fifth volume of total blood every minute and this effectively illustrates the close unity of working of the cardiovascular and renal system (Bhatia, 1973). The present work was taken up to elucidate the pathological abnormalities encountered in the kidney of apparently healthy goats.

MATERIALS AND METHODS

The materials for studies were comprised of kidneys obtained from non descript type goats slaughtered at the cantonment board Abattoir , Mhow (M. P).

A total number of 500 goats ranging from 1 to 6 years of age were examined for kidney lesions. Immediately after slaughter, the entire kidney was examined in *situ* for gross abnormalities, if any by standard routine histological and staining methods .

RESULTS AND DISCUSSION

Amongst 500 goats kidneys examined 46 (9.2%) cases were found to be affected with various pathological conditions. Out of 46 cases , fatty changes in 8 cases (1.6%) was observed followed by Vascular abnormalities in 7 (1.4%), interstitial nephritis in 6(1.2%), Glomerulonephritis in 5(1.0%), Amyloidosis in 4(0.8%)., nephrolithiasis in 3(0.6%), Calcification in 3(0.6%) , hypertrophy in 2 (0.4%) , infarction of kidney in 2 (0.4%), embolic nephritis in 2 (0.4%) , pigmentation in 2(0.4%), hydronephrosis in 1 (0.2%) and Pyelonephritis in 1(0.2%) .

Various workers had carried out histopathological studies of kidneys of goats from different parts of the country and have reported pathological conditions to varying degree. In some cases our findings corroborate with Kataria (1965), whereas in some cases contradictory reports are available (Kiem *et al.*, 1997; Chatterjee *et al.*, 2002 and Ozmen, 2004). The variations in pathological conditions may be attributed to the conditions of slaughter of the animals, agro climatic conditions

of zone of collection of specimen, slaughter process and other physical condition of the animal. However the gross and microscopic findings were similar to findings of jones et al. (1996) with respect to various pathological conditions observed with kidneys.

Excessive feeding of certain minerals and mineral imbalance were credited for causation of urinary calculi. Higher incidences of nephrolithiasis were reported by Guven *et al*. (2003). Similarly a number of factors like increased alkalinity, injection of parathyroid extract, vitamin A deficiency, magnesium deficient diet and excess of vitamin D have been suggested from time to time as the probable cause of calcification (Runnels *et al*.,1960).

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