



# **Studies on Diagnosis of Some Urinary Tract Diseases in Sheep in Reclaimed Areas at Sohage Governorate**

Thesis presented by

**Nesreen El-Sayed Mohammed**

(B.V.Sc., Faculty of Veterinary Medicine, South Valley University, 2007)

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Animal Medicine (Clinical Laboratory Diagnosis).

Under the supervision of

**Prof. Dr. Adel El-Sayed Ahmed Mohamed**

Professor of animal medicine, Vice Dean for the community services and  
environmental affairs, Faculty of Veterinary Medicine, South Valley  
University

**Pro. Dr. Mohamed Nour EL-Din Ismail**

Professor of animal medicine

**Dr. Nehal Makram Awad**

Researcher, Animal Health Research Institute, Sohage regional lab

Department of Animal Medicine,  
Faculty of Vet. Medicine,  
South Valley University

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## SUMMARY

The current study was conducted upon randomly selected 113 sheep from different slaughterhouses in Sohage governorate included (Sohage, Balasfora and Akhmim slaughterhouses) aged from 6 months to 5 years from both sexes. According to the clinical examination, 83 sheep were found to be suffering from urinary disease were classified into (37 cases of nephrosis, 27 cases of nephritis, 17 cases of cystitis and 2 cases of urolithiasis). In addition, 30 animals selected apparently healthy and free from external parasites were used as control animals for our study. Water samples were taken from two reclaimed areas EL-Kawther and EL-kawamil at sohage governorate in which animals under study come to akhmim abattoir and balasfora abattoir respectively. The types of samples collected from each studied sheep were urine samples, whole blood, and serum samples. Another type of sample collected was kidney tissue of affected cases from slaughtered houses.

The water samples were collected from two reclaimed areas at Sohage governorate and the results of their analysis showed that the concentration of TDS in samples were below salinity level which determined by public health recommendation.

On each urine samples physical, chemical and microscopic examination were determined while, each blood sample with EDTA used for complete blood picture calculation and each serum samples used for detection of kidney function tests, total protein, albumin, globulin, and some electrolytes included (sodium, chloride, potassium, calcium, and

phosphorus). The kidney tissues used for histopathological examination by staining with H&E.

The results of the physical examination of urine revealed that there were turbidity, blood and abnormal color of urine. Furthermore, the chemical examination of the urine samples of diseased sheep proved the presence of protein, nitrite and acidic PH in some cases while, microscopic examination revealed the presence of casts, crystals, RBCs, WBCs and epithelial cells and absence of urobilirubin, bile pigment and ketone bodies. In this study we found two cases of urolithiasis and their chemical composition were ammonium urate and calcium oxalate.

In blood samples, there was a slightly decrement in the level of total erythrocytic count, PCV and Hb. and an increment in the levels of the total leukocytic count, neutrophils %, eosinophils %, urea, creatinine phosphorus, potassium while, there was a significant decrement in the levels of monocytes %, lymphocytes % and basophils %, calcium, sodium, chloride, total protein, albumin, and globulin.

The result of the obtained study revealed that the percentage of presence of renal disorders in male animals more than female ones and the percentage of presence of renal disorders in animals over two years more than smaller ones.

The results of gross examination of affected kidneys revealed that there were congestion, slight increase in size in case of nephritis, pale and enlarged in case of nephrosis while, histopathological examination revealed the presence of atrophy of glomerulus with marked fibrosis around the renal tubules, the renal tubules losing its epithelial lining, focal lymphocytic cellular aggregations, and renal calculi. Furthermore, hypercellularity of glomular tuft, presence of desquamation

of the tubular epithelium, the renal tubules showing cystic dilatation and inflammatory cellular infiltration.