MICROSCOPIC INVESTIGATIONS OF URINE OF SICKLE CELL ANEMIC PATIENTS

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ABSTRACT

The present study was carried out to investigate the normal and abnormal microscopic constituents of urine of sickle cell anemic patients of district Amravati, MS India in order to study the physiological status of the kidney in such patients. In total 67 samples were investigated. The normal and abnormal cellular components like presence of RBCs, WBCs, Epithelial cells, Renal tubules cells, Bacteria, Yeast and Protozoan were studied. Noncellular components/crystals like Tyrosine, Cholesterol, A/T Phosphate, Leucine, B-Granule, Sulfa-amide, Mucus, Fibers Hyline, Uric Acid, Oxalate and Cystine were studied. Out of the total samples, RBC_s were found in 69.7% patients, WBC_s in 66.7% samples , Epithelial cells in 96.9% patients, Renal tubules cells in 39.4% patients, Bacteria in 10.6% patients and Yeast in 9.09% patients. different normal and abnormal crystal were observed in the urine sample of sickle cell anemia. Tyrosine was observed in 15 %, cholesterol in 16 %, phosphate in 40%, sulphamide in 11%, mucus in 2%, while hyline crystals were found in 53% patients ,uric acid in 34% , oxalate in 53% and cystine in 5% Sickle Cell Anemia urine samples. Thus present study shows that SCA patients of district Amravati, MS India are under the threat of Glomerulonephritis, urinary tract infection, urinary tract inflammation, Heavy proteinuria, tubular necrosis etc. We propose the proper management of the disease to protect this very important and vital organ.

KEY WORDS: Sickle Cell Anemia, Microscopic Study, Urine, Crystal, Cellular Components