OCULAR FEATURES IN PATIENTS WITH SICKLE CELL DISEASE SEEN AT KENYATTA NATIONAL HOSPITAL

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ABSTRACT

Background: Sickle cell diseases are a category of inherited blood disorders, which affect the structure of haemoglobin. The patients manifest with many systemic and ocular changes which may include defects in the sight. The ocular disease results from vascular changes involving the conjunctiva, iris, choroid and retina. Therefore the eyes offer a unique opportunity for direct observation of the vaso-occlusive process in sickle cell disease.

Objective: To document ocular features in patients with sickle cell disease (SCD) at the Kenyatta National Hospital (K.N.H).

Design: A cross sectional and prospective case study carried out at the haematology clinic and wards of K.N.H. Only patients whose Hb electrophoresis results showing HbSS/HbSF were evaluated.

Setting: Kenyatta National Hospital wards and outpatient haematology clinic.

Method: Consecutive sampling method was used for the recruitment of cases. Complete medical history, physical evaluation and laboratory investigation pertinent to the study were taken.

Procedure: Examination of the eyes was done using a torch, a slit- lamp biomicroscope, a 90D lens, direct and indirect ophthalmoscope after dilatation. A 3-mirror lens was used for suspicious cases. The fundus photographs were taken from subjects with clinical findings for documentation.

Measurable values: Age, sex, province of birth, ocular signs and symptoms noted. Also documented were results of physical examination and laboratory tests including total blood count, Hb electrophoresis and types of medications given to the patients.

Data processing: Data was pooled, screened, entered and analysed using the SPSS version 11 and the results presented in graphs, tables and pie charts.

Results: In the 6 months of the study a total of 101 sicklers were enrolled, 41 males and 60 females with male to female ratio of 0.7:1. Cases age range was 1 to 41 years, mean age group of 11-20 years, while Western Kenya province constituted 90% of all cases. The tribal distribution showed that; 76% were Luo, 10% Luhya, 5% Kisii and 9% the rest of other tribes. Age pattern at diagnosis were; less than 1 year 44%, 1-10 years 53% and 11-20 years 3%. The major symptoms included pain in 84%, jaundice 51%, fever 50%, and joint swelling 33%. Visual acuity was normal in 70% of studied cases, while abnormalities were documented in the ; conjunctiva 82%, disc 26.7% and retina 37%.

Conclusion: A total of 101 patients of all ages were studied for six months. The majority of the patients did not have ocular features of SCD. The results show more females than males, age group 0-10 years more than other age group was found to be affected. The Luo, followed by the Luhya, were documented more than other tribes. The common systemic complaints during crises were pain, jaundice and fever.

The most common ocular complaints were eye discoloration followed by grittiness or a foreign body sensation, decreased vision and eye pain. The most common ocular finding was conjunctival alteration followed by retinal vascular changes, peripheral retinal changes, and disc changes.