

ABSTRACT

Background:

Refractive and ocular surface abnormalities as a result of diabetes mellitus is one of the leading causes of visual impairment and blindness in young patients globally, and this poses major public health concern in developing countries of which Ghana is not exempted. Diabetes in children and young adults is becoming a health problem in developing countries. There is a gap in literature so far as information on refractive and ocular surface abnormalities are concern in children and young adults with diabetes in Sub Saharan Africa (SSA).

General Aim:

To determine the prevalence of refractive errors, irregular corneal curvature and other ocular surface abnormalities in Ghanaian children and young adults who visit Korle Bu Teaching Hospital with diabetes.

Results:

A total of sixty-one (61) children and young adults participated in this study. Females were 64%. Mean age was 16.0 years (SD =3.1 years). Mean age at diagnosis was 10.3 years (SD = 4.0 years). Mean duration of diabetes was 5.7 years (SD =3.9 years). Majority (98%) had type 1 diabetes, while 2% had type 2 diabetes. Fifty-nine percent (59%) had normal vision, 39% had mild to moderate vision and 2% had severe visual impairment. Astigmatism was the highest (60.7%) type of refractive error observed in the study. Allergic conjunctivitis (32.8%) was the most common ocular surface abnormality. This is followed by dry eye syndrome with 18%, 4.9% for cataracts, and 9.8% with cornea infection. There was no association between duration of diabetes and type of ocular surface abnormality (p -value > 0.05).

Conclusion

Astigmatism and allergic conjunctivitis were the most common types of refractive error and ocular surface abnormality respectively. Duration of diabetes was not associated with the type of ocular surface abnormality.

Key words: Refractive errors, diabetes, ocular surface, abnormalities, children.