Five-year mortality rate in an ophthalmic ward in Zimbabwe

Objective: To determine the mortality rate in the ophthalmic ward at the Sekuru Kaguvu Hospital Eye Unit (SKHEU), Zimbabwe, from January 2009 to December 2013 and to identify the causes of death.

Design: A hospital-based clinical audit.

Methods: Data from completed hospital death notification forms and medical records of patients who had died in the ward during the review period were collected that included age, gender, diagnoses, date of admission, date of death and cause of death. The data were analysed using Epi Info7 software.

Setting: The audit was conducted at SKHEU, the largest tertiary eye unit in Zimbabwe. It comprises an ophthalmic ward with 30 beds and caters for about 900 patients per year. Patients are admitted via the Out-patients Department where about 30 000 patients are seen yearly. SKHEU is part of the Parirenyatwa Group of Hospitals, which is one of the four major referral hospitals in Zimbabwe.

Results: Of the 4722 ophthalmic admissions at SKHEU during the 5-year study period, there were 15 (0.3%) deaths, with a male:female ratio of 3:2 giving a mortality rate of 0.3% and an average of 3 deaths per year. The highest number of deaths was in 2009 when 7 deaths occurred, whilst the lowest number was 1 death in 2010 and 1 in 2013. Of the 15 deaths, 4 (26.7%) were children < 12 years old and 11 (73.3%) were adults; of whom 12 (80%) patients had orbital malignancies, 2 (13.3%) had orbital cellulitis and 1 (6.7%) had ocular trauma. The orbital malignancies included ocular surface squamous neoplasia (OSSN), retinoblastoma and non-Hodgkins lymphoma (NHL). The most common probable cause of death was OSSN which accounted for 9 (60%) of the deaths.

Conclusion: The mortality rate at SKHEU was 0.3%, with approximately 3 deaths occurring per year. The most common attributable cause of death was OSSN.

Introduction

Mortalities arising from pathologies of the eye are relatively uncommon compared with other medical specialties. In a resource-constrained low- and medium-income setting, ophthalmic mortality rates are higher and often attributable to avoidable and potentially treatable causes such as severe infections and orbito-ocular malignancies. In contrast, in developed economies where facilities are available and access barriers to optimal eye care have been largely overcome, the rates are lower and mainly owing to unavoidable causes.

The objectives of the present study were to determine the mortality rate in the ophthalmic ward at the Sekuru Kaguvu Hospital Eye Unit (SKHEU), identify the possible causes of death and suggest interventions for reducing mortality in the eye ward.

Methodology

Permission to conduct the study and ethical clearance were obtained from the hospital and the local Institution Review Board and the Joint Research and Ethics Committee. The completed hospital death notification forms (form BD12) of patients who had died in the ward between 01 January 2009 and 31 December 2013 were reviewed. The data collected included the deceased’s name, age, gender, diagnosis, date of admission and date of death. The information gathered was used to retrieve admission records which were reviewed.
The admission register was used to collate annual admissions during the study period. The data were analysed using EpiInfo7 software.

Results

Of the 4722 ophthalmic admissions at SKHEU during the 5-year study period, there were 15 (0.3%) deaths. The 5-year mortality rate at SKHEU was therefore 0.3%, with an average of 3 deaths per year. Figure 1 shows annual admissions during the study period, and Figure 2 shows the number of deaths per year in the ward during the same period.

There were 9 male patients and 6 female patients, giving a male:female gender ratio of 3:2.

The ages of the deceased ranged from 1 month to 94 years, with a median age of 38 years. Of the 15 deaths, 4 (26.7%) were children < 12 years old and 11 (73.3%) were adults. Of the 4 children, 2 (50%) had retinoblastoma and 2 (50%) had orbital cellulitis.

Overall, 12/15 (80%) patients had orbital malignancies, 2/15 (13.3%) had orbital cellulitis and 1/15 (6.7%) had ocular trauma with a ruptured globe. All the orbital malignancies were primary tumours arising from local orbital structures. Ocular surface squamous neoplasia (OSSN) was the most common probable cause of death, accounting for 9/15 (60%) deaths. The other orbital malignancies were retinoblastoma (2/15 [13.3%]) and non-Hodgkin’s lymphoma (1/15 [6.7%]). The probable causes of death are listed in Figure 3.

Discussion

The mortality rate of 0.3% observed in the ophthalmic ward at SKHEU over the period 2009–2013 is similar to that reported at the same institution from 1984 to 2008 by Masanganise et al. and has therefore remained constant over the past 30 years. This statistic could suggest that service delivery at SKHEU has been consistent for the past 30 years. The mortality rate at SKHEU is comparable to the rates of 0.3% and 0.4% reported respectively by Eze et al. and Fafowora et al. from two independent tertiary eye centres in Nigeria. In contrast, Ayrton et al. reported a mortality rate of zero in the ophthalmic ward of a tertiary eye centre in
This page contains a document discussing mortality rates in ophthalmic wards, with a focus on retinoblastoma. The text includes details about the incidence of retinoblastoma in different countries, the mortality rates, and the challenges in managing these cases. The document also highlights the importance of early detection and treatment to reduce mortality. Further sections discuss the causes of infection-related ophthalmic mortality, the role of awareness campaigns, and recommendations for improving ophthalmic care.

**References**