Epidemiological profile of eye diseases in an emergency center complex in Campinas, Brazil

ABSTRACT

Purpose: To trace the epidemiology of eye diseases seen in the emergency eye care center in Campinas, Brasil.

Methods: A cross-sectional, observational, retrospective survey was conducted involving patient records assisted in the emergency room in January of 2014. The factors analyzed were age, gender, origin of patient and nosological entities.

Results: A total of 1063 patients were attended. 55.9% were male and 44.1% female. Mean age was 37 years old. Of this sample, 18.2% were ocular trauma, 16.9% infectious conjunctivitis, 7.8% keratitis, 7.6% hordeolum, 7.5% ocular allergies, 4.7% subconjuntival hemorrhage, 3.9% blepharitis and meibomitis, 3.6% pterygium, 3.4% corneal ulcer and 26% other diagnosis.

Conclusion: The most frequent etiology was ocular trauma. The majority of patients were male in economically active age and their main origin was from admittance of emergency eye care center.

Key words: Epidemiology; Eye diseases; Urgencies; Ocular trauma.

INTRODUCTION

Ophthalmological emergencies are important causes of worker absenteeism due to incapacity or disability. According to the World Health Organization (WHO), approximately 55 million ocular traumas per year cause loss of working days.1-3 Thus, the knowledge of the prevalence of the ophthalmological urgencies provides information to plan preventive strategies, to establish health policies, to analyze and direct the service where the research is being conducted.3

The Emergency Department of Ophthalmology of the Complexo Hospitalar Ouro Verde (Hospital Complex Ouro Verde) in Campinas, São Paulo State, Brazil, attends the free demand of patients with ocular complaints, and also referrals from primary and secondary units of Campinas city and nearby cities. Therefore, it is an important source of data that reflects the regional epidemiology, since there is little information available.

This study aimed to delineate the epidemiology of eye diseases seen at this Emergency Eye Care Center.

METHODS

A cross-sectional, observational, retrospective survey was conducted. We reviewed the charts of the patients seen during the month of January, 2014 at the emergency eye care center of the Ouro Verde Hospital Complex and studied how many patients were attended at the general emergency room of the Hospital, and, of these, how many were referred to the ophthalmology emergency room.

Data collected included age, which were divided in 3 groups to be comparable to other studies analyzed (under 16 years old; between 16 and 45 years; and over 45 years), gender, origin of referral and diagnosis (divided in ocular trauma, infectious conjunctivitis, keratitis, hordeolum, ocular allergies, subconjuntival hemorrhage, blepharitis and meibomitis, pterygium and corneal ulcer). We included foreign body in the ocular trauma category and did not separate open from close ocular trauma. The lower prevalence etiologies were classified as other diagnosis.

This study was approved by the Research Ethics Committee.
from the Municipal Hospital Dr. Mário Gatti, Campinas, São Paulo State, Brazil.

The Microsoft program Excel 7, was used for processing and analyzing the data.

RESULTS

Patients attended in the emergency room represented 5.1% of the 20,957 patients attended the general emergency room. Of these, 194 had ocular trauma (18.2%) with 132 foreign bodies (12.4%) and 62 other ocular traumas (5.8%); 180 infectious conjunctivitis (16.9%); 83 keratitis (7.8%); 81 hordeolum (7.6%); 80 ocular allergies (7.5%); 50 subconjunctival hemorrhage (4.7%); 42 blepharitis and meibomitis (3.9%); 39 pterygium (3.6%); 37 corneal ulcers (3.9%) and 277 were classified as other diagnosis (26.9%) (Table 1). There were 592 male patients (55.9%) and 466 females (44.1%).

The first group (under 16 years old) had a total of 158 patients (15.1%). The second group (from 16 to 45 years old) had 520 (49.7%) and the third group (above 45 years old) had 367 (35.2%). The lowest age in the study was one year-old and the highest was 84 years-old. The mean age was 37.4 years-old.

Regarding the referral origin of the patients, 766 (73.5%) were from the emergency eye care center admittance of our service and 276 (26.5%) were referrals from other locations (other hospitals in Campinas and nearby cities).

DISCUSSION

In general, the majority of appointments at the emergency department of ophthalmology are ocular traumas and infections.1, 4, 5

According to the bibliographic research data, the incidence of ocular trauma varied from 21.6% to 65% worldwide.6-9 Similarly, ocular trauma (18.2%) was the most prevalent cause of attendance at our emergency eye care center followed by infectious conjunctivitis (16.9%). Previous studies have demonstrated that the most prevalent cases happened in young male patients (35.4% - 43%).8-11

The high prevalence of infectious conjunctivitis found in this study reflects the inappropriate use of the Hospital’s Emergency Department, since conjunctivitis and eyelid inflammations are conditions that can be treated in a primary and secondary level, which are responsible for resolving 87.5% of the cases.4, 12

Since the creation of the public health system in this country, the emergency services were always concentrated in hospitals. The flow of these patients remains guided by self choice, which results in crowded emergency rooms and, consequently, poor quality in assistance.12, 13 This study confirms the conjecture that the lack of hierarchy and the misuse of the public health system still persist today.

In one of the studies, it was noted that the prevailing age of patients seeking ophthalmology service was between 20 and 30 years.1 In other, was noted similar age prevalence between 15 and 29 years.6 In this study, the prevailing age was between 16 and 45 years, confirming that the economically active population is the most prevalent (49.6%).

In all the studies that were analyzed, male patients prevailed.2, 3, 7, 14 Similarly, our study showed male patients as more predominant (56%), although in a very close proportion to female patients.

This may be associated with a lower prevalence of trauma compared to other studies, since there is a relation between ocular trauma with foreign body and male gender.7

Etiologies that cause red eye forces the person in a work environment to look for an emergency service, whether it is because of work security policies or by his own will, in order to discard an infectious-contagious or epidemic etiology and have a medical-legal note certifying his condition.

Based on that, and on the social-economic changes in the country, we can presume that with greater inclusion of women in the labor market, there was an increase of female patients attended at the ophthalmological emergency rooms.

The study of prevalence in this hospital reflects the profile of emergency eye care in the city of Campinas, since this emergency room caters its own free demand and referrals from other primary and secondary units in Campinas and nearby cities.

Similar to other studies, ocular trauma (18.2%) was the most frequent etiology, followed by a close number of infectious conjunctivitis (16.9%). The patients that were most prevalent in this hospital were males in an economically active age.

Considering that our institution is the main venue for ophthalmology urgencies in Campinas, this study reflects the epidemiological profile of urgencies in our city.