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Cornea transplantation in Rio Grande do Norte: epidemiological and clinical aspects

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ABSTRACT

Aim: To determine the clinical and epidemiological characteristics as well as the distribution of patients who underwent or are in the waiting list for corneal tissue transplantation in a main medical facility for the referred service in the state of Rio Grande do Norte. **Methods:** An epidemiological, quantitative, cross-sectional, descriptive and analytical study comprising all the patients on the waiting list for transplantation (n=62 patients) and the ones who underwent corneal tissue transplant surgery (n=258) in a specialized health service center. **Results:** The profile of the patients presented differences in relation to gender and similarities in characteristics such as age, origin and condition indicator for transplantation. The “type of corneal disorder” variable stood out due to its statistical association with clinical and epidemiological variables. **Conclusion:** The clinical and epidemiological characterization of the population subject to cornea transplantation allows the identification and inference of possible risk factors for this procedure with a direct relation to their survival.

Descriptors: Corneal Transplantation; Free Tissue Flaps; Corneal Diseases; Epidemiology.

INTRODUCTION

The corneal transplant or keratoplasty is a procedure in which the cornea is wholly or partly replaced and it is the primary method for visual rehabilitation, as it successfully solves most of the causes for corneal blindness⁽¹⁾.

The prevalence of the diseases that are clinically indicated for transplantation varies according to the country and the population as a result of different public health conditions and existing socioeconomic levels. Epidemiological studies carried out in order to trace the profile of patients in the waiting list for keratoplasty, as well as the profile of patients who already underwent surgery, in different demographic areas, allow the comparison and analysis of the determinants for different outcomes^(2,3).

Thus, the identification of variables that affect the effectiveness of keratoplasty requires appropriate research, due to the growing rate of chronic and degenerative diseases that can cause corneal injury and result in a transplant.

GOAL

To determine the clinical and epidemiological characteristics as well of demographical distribution of patients in the waiting list and/or underwent corneal tissue transplantation, in a medical specialized service center in the state of Rio Grande do Norte, according to time, place and patients' characteristics.

METHOD

This is an epidemiological, quantitative, cross-sectional, descriptive and analytical

study, comprising all the patients on the waiting list for transplantation (n=62 patients/population A) and patients who already underwent corneal tissue transplant in a medical specialized center (n=258/population B). A census of patients on the waiting list for corneal transplantation (n=62 patients) was conducted for obtaining population A. Population B sample was not probabilistic and included all the corneal transplants performed in the medical center in the period between 2010 to 2014 (n=258 corneal transplants).

Data were collected from January to April 2015, through the use of two instruments built to systematize the collection of the necessary data. After being coded and tabulated, they were analyzed using the *Statistical Package for Social Sciences* (SPSS) software, version 20.0. The description of the variables and their distribution patterns were presented as frequencies and measures of central tendency, while for multivariate analysis, we applied magnitude effect measures (prevalence ratio) and association measures (chi-square test or exact Fisher) for a 0.05 significance level. We performed the inferential analysis between the variable "type of corneal disorder" and the others. The variable "type corneal disorder" refers to the type classification of corneal disorder according to affected layer (epithelium, stroma and/or endothelium) of the cornea.

This study was approved by the Research Ethics Committee of the Federal University of Rio Grande do Norte, under opinion nr. 876177.

RESULTS

We observed that the epidemiological profile of patients of the population A (n=62) presented a prevalence of individuals

of 50 years of age or older, of female gender (54.84%) and residing in Leste Potiguar middle region (66.13%). The clinical profile of population B patients (n=258) was characterized as male individuals (51.16%) with a mean age of 49.33 years, and 57.75% coming from the same region of the referred state. The average time in waiting list was analyzed for both elective and urgent transplants. The main indicator condition observed for the transplant was keratoconus.

For the population A, the "type of corneal disorder" variable showed a statistically significant association with respect to gender and age group variables, while for the population B, "type of corneal disorder" variable was associated with gender, age, previous surgery, retransplantation, and eye classification (phakic, pseudophakic and aphakic) and glaucoma.

CONCLUSION

By characterizing the clinical and epidemiological profile of corneal transplants, there is the possibility of identification and inference of possible risk factors for the procedure and its survival as we could observe through the association of the type of corneal disorder with gender, age, history of previous surgery in the eye to receive transplant, retransplantation cases, eye classification and the presence of glaucoma.

This way, we can problematize this reality, mark the care measures that must be provided and develop interventions aimed at collective and individual needs intrinsic to patients who require this surgery as a treatment option.

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