



Donation-Transplant process and rejection of corneal graft: case-control studies

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ABSTRACT

Thesis project developed with the *Stricto Sensu* Post-Graduation Program in Nursing of the Nursing Department from the Federal University of Rio Grande do Norte. **Objective:** To relate the cases of graft rejection after the transplant, according to the different classification levels of the corneal quality in a reference service in the state of Rio Grande do Norte. **Method:** An epidemiological study with a quantitative approach, of the case-control type, descriptive and analytical. The research protocol was approved by the Research Ethics Committee of the Federal University of Rio Grande do Norte. The data collected will be subjected to statistical analysis by logistic regression to relate the cases of corneal transplant rejection with the different classification level of the material to be transplanted.

Descriptors: Corneal transplant; Risk factors; Graft rejection; Epidemiology.

PROBLEM-SITUATION AND ITS MEANING

The transparency of the cornea depends on its relative dehydration state, on its avascularization, and on the uniformity of its structure. Due to the lack of blood vessels, this tissue depends on the watery liquid, on the tears, and on the limbal vascularization for its nutrition. Eye diseases and injuries can cause harms, opacification, scars and anomalies in the cornea. The main therapeutic measure available for the corneal disorders that do not respond to the clinical treatment is the corneal transplant or the keratoplasty⁽¹⁻³⁾.

The corneal transplant is a surgical procedure subjected to rejection risks, resulting from diverse mechanisms. The studies show that survival from keratoplasty depends on multiple factors, many of which are not fully understood⁽²⁾.

In this perspective, this study is justified by the need to expand the production of longitudinal studies, with respect to verifying the effects of the factors which predict graft rejection, in order to generate data that support an improvement in the public policies, health care, the elaboration of institutional protocols, and which guarantee the quality of the corneal tissue donation-transplant process. It is expected that the results of this study bring a relevant scientific contribution on the theme, with respect to the implementation of care measures which guarantee the safety of the care provided to the patient, receiver of the corneal tissue, in order to minimize the harm related to modifiable risk factors for graft rejection.

HYPOTHESIS

The factors related to the corneal tissue donation-transplant process are linked to cases of graft rejection after the transplant.

OBJECTIVES

To relate cases of graft rejection after the transplant with the different classification levels of corneal quality as excellent, good, fair, or bad, in a reference service in the state of Rio Grande do Norte.

To determine the epidemiological and clinical profile of the patents who underwent a corneal transplant and rejected the graft.

To verify the influence on graft rejection of the factors of the donation-transplant process.

To evaluate the magnitude and effect measures (odds ratio) in the relations established between corneal graft rejection and the corneal classification level.

METHOD

An epidemiological study with a quantitative approach, longitudinal, of the case-control type, descriptive and analytical. It is a case-control study conducted in the hospital which will include transplanted patient with corneal graft insufficiency and their respective controls in a reference service of Rio Grande do Norte. The research protocol was approved by the Research Ethics Committee of the Federal University of Rio Grande do Norte, under co-substantiated opinion No.2,454,077, in conformity with the requirements established by Resolution No.466, of December 12th, 2012, by the National Health Council of the Ministry of Health.

To compose the sample, the case-group was made up by medical reports of patients in

which the graft rejection diagnosis was identified in December 2016, and the control-group by other medical reports of the patients who did not present rejection as outcome.

After collecting the data, they will be organized in templates with the creation of a database, arranged for descriptive and inferential analysis procedures. The *Statistical Package for the Social Sciences (SPSS)* software, version 20.0 will be used for the descriptive analysis. The significance level to be adopted will be 0.05.

The main variables under analysis will be the following: graft rejection (dependent variable) with independent variables (qualification of the corneal quality, age of the receiver, age of the donor, gender of the receiver, gender of the donor, eye diagnosis, previous eye surgery, lens condition, intra-surgery complication, time intervals between death-enucleation, death-preservation, death-transplant, enucleation-preservation, enucleation-transplant and preservation-transplant).

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PROJECT DATA

Thesis project of the *Stricto Sensu* Post-Graduation Program in Nursing/Nursing Department/Federal University of Rio Grande do Norte. Qualification examination on 06/20/2017, passed.

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