

TITLE: DESCRIPTION AND ANALYSIS OF HBV AS ONE OF THE MAIN REASONS FOR DISCARDING CORNEA FOR TRANSPLANTATION IN BRAZIL.

AUTHORS: ITO, C.R.M.; SANTOS, A.P.; GONÇALVES, L.C.; MALVESTE, P.A.; OLIVEIRA, T.R.; CUNHA, M.O.; GOMES, R.P.; ARAUJO, K.M.; OLIVEIRA, V.F.; CARNEIRO, L.C.

INSTITUTION: INSTITUTO DE PATOLOGIA TROPICAL DE SAÚDE PÚBLICA/UFG, (R. 235, S/N - SETOR LESTE UNIVERSITÁRIO, GOIÂNIA - GO, CEP 74605-050, GOIÂNIA - GO, BRAZIL)

ABSTRACT

The contraindications for the donation of cornea for transplant, aim at precaution: only rabies, herpes simplex virus, bacteria, fungi, and retinoblastoma are transmissible through the cornea. The National Health Surveillance Agency of Brazil, establishes Good Practices in Tissues, aiming at the safety of tissues for therapeutic use, requires the serology of HIV I and II, HTLV I and II, HBV and HCV. The study estimates the prevalence in the number of corneal discards in Brazil by positive serology, demonstrating which is the serological marker that generates more discards. The data were extracted from the production reports of human tissue banks, on the website of the Brazilian Health Surveillance Agency, from 2009 to 2019. The analysis of proportions of reasons for non-acceptance of the cornea for transplantation, in the 10 years evaluated, resulted in 18% of the discarded corneas. According to the results obtained, the biggest reason related to discard in the period from 2009 to 2019 was the hepatitis B virus, considering the anti-HBc and HBsAg markers with their respective 2017 and 1345 discarding averages. The HCV marker had an average of discard equal to 676, followed by contraindications with 420 and HIV 1 and 2 with 341 discards on average. Hepatitis B (HBV) and hepatitis C (HCV) viruses are the most worrisome in transplants, due to their persistence for years in some individuals, even after cure, with an elevated level of infectious particles detected in the blood. The possible transmission of HBV in corneal transplants occurred after the detection of surface antigen (HBsAg), an indicator of active infection, in the corneal tissue of discard. In most eye banks in the world and Brazil, when anti-HBc is positive and HBsAg negative, the corneas are discarded. Some eye banks carry out additional investigations assessing the risk to determine eligibility for clinical use of the tissue. There is a high incidence and prevalence of anti-HBc in some countries, with rates above 10%. Antibody to hepatitis B surface antigen (anti-HBs) can help determine whether immunity has developed after the initial infection, but there is no international consensus on the acceptable level of immunity and criteria differ between centers and countries. In Brazil, legislation determines that it is up to the medical director of the eye bank to decide whether the tissue is eligible, and the numbers demonstrate the high rate of discarding by the reagent anti-HBc.

Keywords: Eye bank, monitoring sample, Hepatitis, contraindication, corneal discard.