

EXTENSION PROJECT: CATARACT SURGERY IN A PRIVATE CLINIC IN ANÁPOLIS – GO

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ABSTRACT

Cataract, an opacity of the crystalline lens causing visual impairment, is a global concern affecting millions of people, especially the elderly. Diagnosis involves detailed ophthalmologic examinations, such as ultrasound or optical biometry. Surgical removal of the opaque lens and implantation of an intraocular lens (IOL) are the definitive treatments. This study reports the experience of 13 medical, pharmacy, and nursing students from the Universidade Evangélica de Goiás who observed cataract surgeries during the first semester of 2023. They followed the surgical process, including anesthesia and the surgery itself, learning about neuroanatomy, pharmacology, and physiology. Data analysis was based on a qualitative approach, highlighting the importance of practical learning in healthcare education. This experience provided a rich learning environment and a deeper understanding of patient care, contributing to knowledge in the field of health and surgery. The study emphasizes the need for more cataract surgeries, highlighting the important role of the Brazilian Unified Health System (SUS) and the goal of eliminating blindness caused by this condition.

Keywords: Ophthalmologic surgical procedures; cataract; intraocular lenses; visual acuity.

INTRODUCTION

Cataract is defined as a partial or total opacity of the crystalline lens, which prevents normal light transmission, compromising visual integrity. It is commonly found in adults and the elderly and is considered the leading cause of treatable blindness worldwide (Brazilian Society of Ophthalmology, 2019).

The World Health Organization (WHO) estimates that approximately 40 to 45 million people worldwide are blind, with 135 million experiencing severe visual impairment (CBO, 2023). In Brazil, senile cataract affects approximately 17.6% of adults under 60 years, increasing to 47.1% among those aged 65–74 years and 73.3% in individuals over 75 years (Ávila, 2015).

Diagnosis is performed by an ophthalmologist through slit-lamp biomicroscopy with pupil dilation and additional tests such as potential visual acuity (PVA), funduscopy, retinal mapping, retinography, intraocular pressure (IOP) measurement, ocular

ultrasonography, and biometry. Biometry can be performed using two distinct methods: ultrasound biometry (ecobiometry) and optical biometry. Ecobiometry determines the intraocular lens power, while optical biometry evaluates the curvature of the eye (Alpins, 2008).

The definitive treatment is the surgical removal of the opaque lens and insertion of an intraocular lens (IOL), allowing visual rehabilitation and reintegration into social and work activities. The most common technique worldwide is phacoemulsification with IOL implantation (FACO) via a self-sealing incision. Postoperative monitoring is essential for optimal outcomes and requires proper use of eye drops and restrictions on physical activity (Stürme, 2009).

Approximately 540,000 cataract surgeries are estimated to be necessary annually in Brazil to meet current demand, with SUS performing at least 390,000 surgeries and the private sector responsible for the remainder. However, this number is sufficient only to eliminate established blindness; to prevent new cases, approximately 720,000 surgeries are required annually (Soares, 2020).

EXPERIENCE REPORT AND RESULTS

This study reports the experience of observing phacoemulsification surgeries, involving voluntary participation of 13 students from the Academic League of Tissue and Organ Transplantation (LATTO), representing nursing, pharmacy, and medicine courses at Universidade Evangélica de Goiás during the first semester of 2023.

The focus of the study was the observation of these surgeries under supervision of anesthesiologists, ophthalmologists, and nurses at Clínica de Olhos Anápolis, in Anápolis-Goiás. Students were actively involved in observing the surgeries, including preoperative preparations, and recorded detailed observations to document surgical procedures comprehensively.

Data collection combined objective information on the surgeries with students' subjective perceptions. Ethical principles were followed to ensure confidentiality. Data analysis used a qualitative approach to identify and explore relevant themes emerging from the experience, enriching understanding in the healthcare field.

During the experience, students reviewed anesthetic types and classes, enhancing content retention. Pharmacology discussions focused on key points such as

neurotransmitters, doses, sites of action, and medications including anticholinergics and epinephrine. Physiology discussions addressed the autonomic nervous system and pain transmission pathways, including ascending sensory pathways, conscious perception and cortical interpretation, and modulatory control of pain.

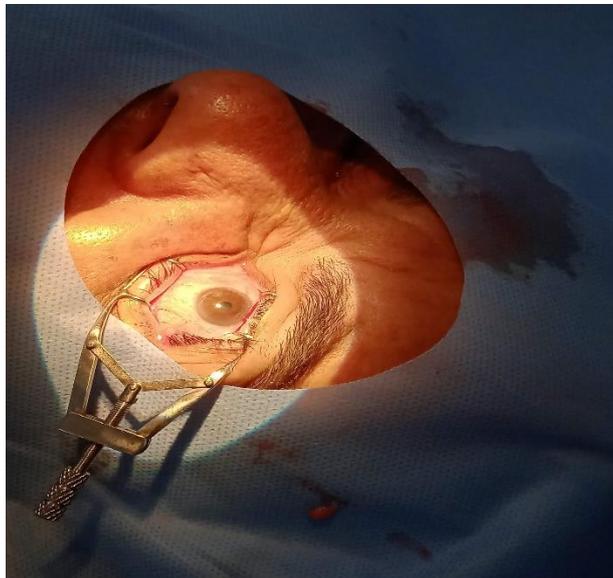
Anesthesiologists also explained cranial nerve blocks performed during surgery, covering cranial nerves II (Optic), III (Oculomotor), IV (Trochlear), V (Trigeminal), VI (Abducens), and VII (Facial). Throughout the perioperative period, patient communication was maintained, ensuring that the patient was informed about procedures and outcomes.

Figura 1- Discente(s) Unievagélica centro cirúrgico da Clínica de Olhos Anápolis



Fonte: Autores

Figura 2- Cirurgia de catarata, centro cirúrgico da Clínica de Olhos Anápolis



Fonte: Autores

CONCLUSION

In conclusion, this experience report provided a unique opportunity for students from the Academic League of Tissue and Organ Transplantation (LATTO) at Universidade Evangélica de Goiás to be actively involved in observing cataract surgeries. The

dedication of specialized healthcare professionals and adherence to ethical standards throughout the process were remarkable. This experience enabled a deeper understanding of patient care and surgical practice in the field of ophthalmology.

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