

Medical History



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The medical history should be asked in a personal and individual setting without time pressure.

When taking a clinical history, three goals in particular should be considered:

- Understanding the patient's visual problems
- Clarifying expectations of a possible surgical procedure
- Assessing previous systemic and ophthalmological conditions.

Some patients find it pleasant if relatives or caregivers can be present during this conversation. A joint medical consultation can therefore help to reduce fears, clarify open questions, and create trust in advance. If there is a language barrier, a competent interpreter should be present as well.

A consistent structure should be followed when taking the clinical history, regardless of whether it is a standard cataract procedure or a “clear lens exchange” with possible implantation of a premium IOL. Nevertheless, the focus of the clinical history can shift significantly between refractive lens exchange and therapeutic cataract surgery. In the former, expectations play a particularly important role, whereas in the case of cataract patients, who are generally older, concomitant diseases and medication are the focus.

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M. Shajari et al. (eds.), *Cataract and Lens Surgery*,

https://doi.org/10.1007/978-3-031-05394-8_7

Author's recommendation

During the interview, the patient's medically relevant history should be asked in a standardized and focused way, but the patient's professional and social aspects should also be examined closely.

The Start of the Conversation

An open question about the current subjective perception of his or her own visual performance is a good initial question. In the course of this initial self-assessment, the patient's motives and motivation for an operation or the patient's level of disability can often be identified during the conversation. Symptoms such as deteriorated vision, blurred vision, glare and changes in refraction and corrections of glasses are usually found in cataract patients, while the refractive patient complains about the need for glasses and contact lenses. While the expectations of the cataract patient often include a restoration of the old visual acuity, the refractive patient wants to see without glasses, and achieve comparable or even better visual acuity and quality of vision.

Ask About Relevant General Medical Conditions

In addition to the family and ophthalmological history, the general medical history taken should, above all, include diseases of the patient that are relevant for the surgery. Even though modern lens surgery is generally possible without any problems even for seriously ill patients due to its minimally invasive approach, multimorbid patients may require an increased level of support from an anaesthesiological team.

Pre-existing arterial hypertension should be treated before planned lens surgery. Even with planned topical anaesthesia, it might be necessary to switch to a para- or retrobulbar anaesthesia procedure if the surgery becomes complex. In this situation, uncontrolled arterial hypertension can significantly increase the occurrence of retrobulbar bleeding and the risk of suprachoroidal bleeding.

Diabetes mellitus (diabetes type/diabetes duration/current setting incl. HbA1c) plays an important role in ophthalmic surgery and has a high prevalence in the general population. Insufficient blood glucose control should be treated before lens surgery if possible. Even in the case of proper diabetic medication, a diabetic patient still has an increased risk of complications during lens surgery and needs to be informed about this [1].

The use of oral anticoagulants should be documented. Pausing intake is not usually necessary for most patients, except for in very complex situations.

Further questions in this regard must be explored where relevant and depending on the individual findings (questions about e.g. myocardial infarction, coagulation disorders, previous vascular occlusion, embolism, thromboses, etc.), as they influence the choice of anaesthesiological surveillance.

Other important areas that should be investigated:

- Allergies (drugs in general and especially antibiotics)
- Rheumatological (rheumatoid arthritis/chronic polyarthritis, Sjögren's syndrome, immunosuppression)
- Pulmonological (asthma/COPD)
- Dermatological (neurodermatitis/psoriasis)
- Infectious diseases (including HIV, hepatitis B and C)
- Colonisation with multi-resistant germs (MRSA, EHEC)
- Neurological diseases (e.g. apoplexy, epilepsy, multiple sclerosis)
- Mental illness (including depression)
- Urological: prostatic hyperplasia (therapy with α adrenoceptor (AR) antagonist, e.g. tamsulosin with regard to floppy iris syndrome) [2].

In the case of planned special or multifocal intraocular lenses in particular, the patient's profession must be considered. Professions such as drivers (particularly night driving), and professions with passenger transport and pilots must be clarified or selected with regard to visual night-time side effects.

The patients' leisure activities (hobbies/sport) must also be considered as they might play a role in IOL selection.

Ophthalmologic History

It is advisable to proceed chronologically and start with questions in regards to childhood ophthalmological issues. This includes questions about vision in childhood, glasses in childhood, strabismus, amblyopia and the question of any occlusion therapy or surgery performed in childhood.

This should be followed by questions about known changes, pathologies or traumas of the anterior and posterior segments of the eye.

Traumas should be investigated in greater depth, since contusion traumas are associated with loose zonulae, while penetrating injuries can also cause primary defects of the lens capsule and scarring in the lens capsule and iris. This can make the use of premium IOLs impossible.

Author's recommendation

Without exception, every patient must be asked about previous surgical procedures in the anterior and posterior segment of the eye and, in particular, about any previous corneal surgeries. This is because corneal surgery in particular might have a large impact on biometry and IOL calculation.

All ophthalmologic diagnoses should be queried, especially those that can have an influence on postoperative visual acuity.

Due to the high prevalence of these conditions, they should be inquired about specifically:

- Diabetic retinal disease,
- Age-related macular degeneration (AMD),
- Vascular occlusions in the eye,
- Dry eye disease and
- Glaucoma.

If the patient has glaucoma, changes in the visual field and local medication should be documented. Two drugs in particular can play a role in the surgical outcomes.

The extent to which prostaglandin analogues can be linked to an increased incidence of postoperative cystoid macular edema is still debated but some ophthalmologists prefer to switch to another medication preoperatively.

Pilocarpine, which is occasionally used in chronic narrow-angle glaucoma, is also a particularly relevant medication to discuss prior to lens surgery. Depending on the individual anatomical conditions (anterior chamber depth, chamber angle, hyperopia), the extent to which an iridotomy should be performed preoperatively, and which replacement therapy should be used, must be discussed.

The question of the patient's dry-eye symptoms and the current use of tear substitutes, and the type and dosage of the preparations used should be always asked before any lens surgery is performed. It can be of great importance throughout the entire process of surgical planning, diagnostics, implementation and aftercare.

In a patient with known tear film disorder and blepharitis, errors in both visual fluctuations and measurement inaccuracies in corneal biometry can occur. Chronic blepharitis and keratoconjunctivitis sicca should therefore be sufficiently treated preoperatively and if needed, patients should be asked to return for a repeat preoperative examination.

Refraction/Glasses/Contact Lens

The examination of existing refractive errors or presbyopia within the framework of the medical history and their current correction is also a very important point which can have a decisive influence.

This is an intersection of diagnostics (objective refraction), examination (subjective comparison) and clinical history (do they use glasses? How old/current are the glasses? Are contact lenses used?). Only by considering all of these points can an optimal IOL selection be achieved.

In case of higher ametropias, it is essential to discuss the expected postoperative situation after the treatment of the first eye. Postoperative anisometropias often lead to visual complaints and dissatisfaction, as well as to a prolonged inability to work or a temporary lack of roadworthiness. The possible consequences of a bilateral operation, despite good visual acuity in one eye, should be discussed and documented in advance.

In the case of higher myopia and presbyopia, the habits and requirements of the patient and contact lens wear have to be determined specifically, as these patients are often used to emmetropia with regard to the postoperative target refraction and may also be considered for multifocal optics [3].

In summary, the aim should be to acquire an thorough history that is as standardised as possible but flexible to consider the individual needs and wishes of the patient.

References

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