

LASIK SURGERY

The Eye And Vision Errors

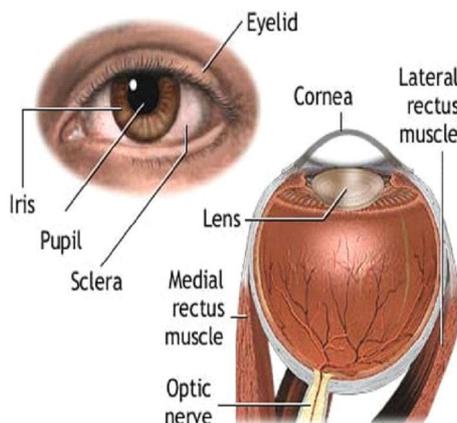
The cornea is a part of the eye that helps focus light to create an image on the retina. It works in the same way that the lens of a camera focuses light to create an image on a film, The bending and focusing of light is also known as refraction. If the shape of the cornea and the eye are not perfect the image on the retina is out-of-focus (blurred) or distorted. These imperfections in the focusing power of the eye are called refractive errors.

There Are Three Primary Types Of Vision Errors:

1)Myopia: Persons with myopia, or nearsightedness, have more difficulty seeing distant objects as clearly as near objects.

2)Hyperopia: Persons with hyperopia, or farsightedness, have more difficulty seeing near objects as clearly as distant objects.

3)Astigmatism: is a distortion of the image on the retina caused by irregularities in the cornea or lens of the eye. Combinations of myopia and astigmatism or hyperopia and astigmatism are common. **Glasses or contact lenses are designed to compensate for the eye's imperfections. Surgical procedures aimed at improving the focusing power of the eye are called refractive surgery example LASIK surgery.**



ADAM.

What Is LASIK

LASIK is a surgical procedure intended to reduce a person's dependency on glasses or contact lenses. In LASIK surgery, precise and controlled removal of corneal tissue by a special laser reshapes the cornea [The clear covering of the front of the eye] changing its focusing power, using an excimer laser. A mechanical microkeratome (a blade device) or a laser keratome (a laser device) is used to cut a flap in the cornea. A hinge is left at one end of this flap. The flap is folded back revealing the stroma (the middle section of the cornea). Pulses from a computer-controlled laser vaporize a portion of the stroma reshaping the cornea and the flap is replaced. The surgery should take less than 30 minutes.

Inside

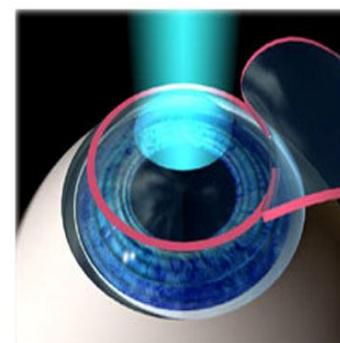
1. LASIK surgery.

2. Flotac and osteoarthritis



Special points of interest:

- * Vision error.
- * What is LASIK .
- * Advantages of LASIK .



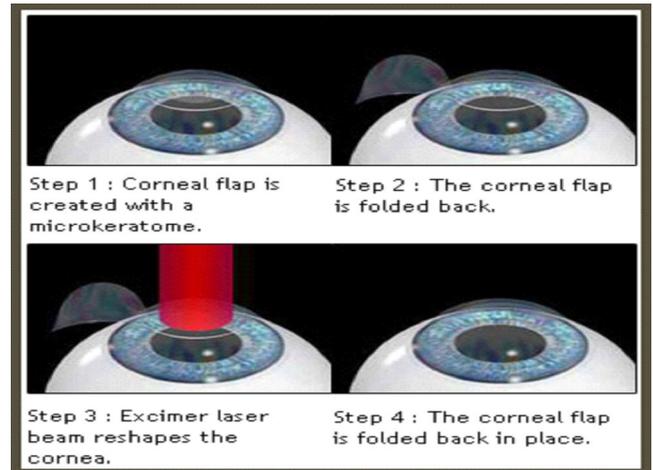
What are the advantages of LASIK surgery

- No more glasses or contact lenses and you'll be free of the associated hassles .
- LASIK has good history of success rates approximate of 80% of patient achieve the level of vision they want.
- Vision correction usually takes place immediately following the surgery
- there is typically not much pain associated with LASIK surgery at all.

What are the risks of LASIK surgery

Most patients are very pleased with the results of their refractive surgery. However, like any other medical procedure, there are risks involved. so it is important for you to understand the limitations and complications of the surgery. you should carefully weigh the risks and benefits based on your own personal value system, and try to avoid being influenced by friends that have had the procedure or doctors encouraging you to do so.

- **Some patients lose vision .**
- **Some patients develop debilitating visual symptoms** such as glare, halos, and/or double vision that can seriously affect nighttime vision. Even with good vision on the vision chart,
- **Some patients do not see as well in situations of low contrast,** such as at night or in fog, after treatment as compared to before treatment.
- **Results are generally not as good in patients with very large refractive errors of any type.** You should discuss your expectations with your doctor and realize that you may still require glasses or contacts after the surgery.



- **You may be under treated or over treated.** Only a certain percent of patients achieve 20/20 vision without glasses or contacts. You may still need glasses or contact lenses after surgery. This may be true even if you only required a very weak prescription before surgery. If you used reading glasses before surgery, you may still need reading glasses after surgery.
- **Some patients may develop severe dry eye syndrome.** your eye may not be able to produce enough tears to keep the eye moist and comfortable. Dry eye not only causes discomfort, but can reduce visual quality due to intermittent blurring and other visual symptoms. This condition may be permanent. Intensive drop therapy may be required.
- **Long-term data are not available.** LASIK is a relatively new technology. The first laser was approved for LASIK eye surgery in 1998. Therefore, the long-term safety and effectiveness of LASIK surgery is not known.
- **For some farsighted patients, results may diminish with age.** This can occur if your vision exam with lenses before dilating drops is very different from your cycloplegic refraction vision exam with lenses after dilating drops.

Compiled by Noha Gamal

References

- WWW.FDA.GOV

Flotac® and Osteoarthritis

Non-steroidal anti-inflammatory drugs (NSAIDs) have long been used for the treatment of pain, fever and inflammation. Despite the widespread use of these agents, there still are many concerns about their safety, particularly at the gastrointestinal level (1). Therefore, several strategies have been followed in order to improve the safety profile of (NSAIDs) while maintaining their clinical efficacy. One strategy is the development of selective cyclo-oxygenase2 (COX-2) inhibitors. An alternative strategy is the development of optimized formulations of non-selective (NSAIDs), using pharmacokinetic-pharmacodynamic information (2). Diclofenac-cholestyramine is a novel diclofenac formulation that has been developed with regard to the pharmacokinetic-pharmacodynamic characteristics of diclofenac, and thus yields better clinical results than other diclofenac formulations (3). In this study, the comparison between the efficacy and safety of diclofenac-cholestyramine, a formulation developed according to the pharmacokinetic-pharmacodynamic strategy, with those of celecoxib, a drug developed according to the (COX-2) hypothesis. These two treatments were assayed in patients with osteoarthritis following a randomized double-blind design (4). Patients with a confirmed diagnosis of osteoarthritis for at least 3 months, according to the criteria established by the American College of Rheumatology, were included for participation. Patients with a history of gastrointestinal bleeding or active ulcer, or those taking proton pump inhibitors, H2 antagonists or antacids were not included. Patients were randomly distributed into two groups. Those in group 1 were treated with diclofenac-cholestyramine (Flotac®, Novartis, Mexico City), 140 mg twice a day, while those in group 2 received Celecoxib (Celebrex®, Searle, Mexico City) 100 mg twice a day. It should be noted that 140 mg of diclofenac-cholestyramine are equivalent to 70 mg of diclofenac. The drug products were re-encapsulated to allow the study to be carried out according to a double-blind design. Patients were advised to take medication with food Pain was estimated by the patient and the clinical investigator using a 100 mm visual analogue scale (VAS) (5).



Side effects were obtained by interrogatory and by standard clinical and laboratory tests. Patients were evaluated 2, 4 and 6 weeks after the instauration of treatment. After 6 weeks of treatment, both, diclofenac-cholestyramine and celecoxib induced a significant reduction in VAS scores evaluation when the clinical investigator carried out the evaluation, median VAS score reductions were 41.7% and 36.8% by diclofenac-cholestyramine and celecoxib, respectively. Differences between treatments did not reach statistical significance.

Conclusion

- It has been reported that the selective COX-2 inhibitors celecoxib and rofecoxib exhibit a similar analgesic efficacy and a better gastrointestinal safety profile than non-selective NSAIDs. In particular, it has been claimed that, in patients with rheumatoid arthritis and osteoarthritis, celecoxib exhibits an improved gastrointestinal safety with regard to diclofenac sodium. Diclofenac-cholestyramine is an improved formulation, from a pharmacokinetic-pharmacodynamic point of view, compared to diclofenac sodium. Therefore, we compared the efficacy and safety of this novel diclofenac formulation with celecoxib in patients with osteoarthritis. Due to the drawbacks of celecoxib and rofecoxib, new selective COX-2 inhibitors are presently being introduced in therapeutics.

It is not yet clear if these new compounds will be better than celecoxib and rofecoxib. In the meantime, while waiting for the improved selective COX-2 inhibitor, the use of optimized formulations of non-selective NSAIDs, such as diclofenac-cholestyramine, yielding an improved efficacy/safety profile, appears as a suitable alternative for the pharmacological treatment of pain and inflammation.(6,7) .

Compiled by samar mahmoud

• References:

- (1)- Hochberg MC: Curr Rheumatol Rep 3: 473 (2001).
- (2)- Wallace JL: Dig Liver Dis 34:89 (2002).
- (3)- Castañeda-Hernández G, Zazueta-Montiel B, Granados-Soto V, Torres-López JE, Pérez-Urizar JT & Rosas-Ramos R: Ann Rheum Dis 60 (Suppl I): 308 (2001).
- (4)- Silverstein FE, Faich G, Goldstein JL, Simon LS, Pincus T, Whel-ton A, Makuch R, Eisen G, Agrawal NM, Stenson WF, Burr AM, Zhao WW, Kent JD, Lefkowitz JB, Verburg KM & Geis G: J Amer Med Assoc 284: 1247 (2000).
- (5)- Silverstein FE, Faich G, Goldstein JL, Simon LS, Pincus T, Whel-ton A, Makuch R, Eisen G, Agrawal NM, Stenson WF, Burr AM, Zhao WW, Kent JD, Lefkowitz JB, Verburg KM & Geis G: J Amer Med Assoc 284: 1247 (2000) .
- (6)- Castañeda-Hernández G, Zazueta-Montiel B, Granados-Soto V, Torres-López JE, Pérez-Urizar JT & Rosas-Ramos R: Ann Rheum Dis060 (Suppl I): 308 (2001).
- (7)- Silverstein FE, Faich G, Goldstein JL, Simon LS, Pincus T, Whel-ton A, Makuch R, Eisen G, Agrawal NM, Stenson WF, Burr AM, Zhao WW, Kent JD, Lefkowitz JB, Verburg KM & Geis G: J Amer Med Assoc 284: 1247 (2000).

Advisory Board:

Dr. Ezz El-Denshary

Professor of Pharmacology & Toxicology
Faculty of Pharmacy, Cairo University

Dr. Naglaa Assaf

Lecturer of Pharmacology & Toxicology
College of Pharmacy, MUST University.

Editorial Board:

Dr. Samar M. Saleh

Drug Information Pharmacist, Drug Information Center (DIC), College of Pharmacy- MUST

Dr. Doaa Hamdan

Drug Information Pharmacist, Drug Information Center (DIC), College of Pharmacy- MUST

Dr. Noha Gamal

Demonstrator at Pharmacognosy Department, Drug Information Pharmacist, Drug Information Center (DIC), College of Pharmacy- MUST

College Dean:

Prof. Dr. Mohamed F. El-Miligi

Address : M.U.S.T., 6 October city -
Almutamayez District

Fax / Phone: 02/38377643

EXT: 4 404

E-mail: banhawii@yahoo.com

مركز معلومات الدواء



Drug Information Center