

EYEOP1 : The first medical device for one step treatment of glaucoma!



EYETECHCARE

EyeTechCare designs, develops and will soon distribute EyeOP1, an innovative medical device for a new type of non-invasive treatment of glaucoma using therapeutic ultrasound.

Key dates:

- July 2008: Creation of EYETECHCARE
- March 2010: Start of clinical trials at the Edouard Herriot Hospital.
- July 2010: Request for company certification: ISO 9001 and ISO 13485
- End of 2010 Evaluation of EyeOP1 for CE approval
- Start 2011: European launch

Ultrasonic

Circular

Cyclo

Coagulation



The Market

- 65 million people with glaucoma
- 7 million new cases per year, a number constantly growing with increased life expectancy, the ageing population and early detection of glaucoma
- 2nd cause of blindness worldwide
- Target market: glaucoma patients and ophthalmologists.

(ULTRASONIC CIRCULAR CYCLO COAGULATION)

To establish the treatment within the medical community, EyeTechCare has named its treatment method UC³

Glaucoma

Glaucoma is one of the major unsolved conditions in ophthalmology.

Glaucoma is often associated with high Intra Ocular Pressure (IOP) caused by an imbalance between the aqueous humor "inflow" and "outflow."

All treatments aim at reducing IOP by reducing the fluid inflow or increasing the outflow.

There is no fully satisfactory treatment for various reasons : inaccessibility (complexity, cost, and constraints), inefficiency, tolerance problems,...



The progression from the diagnosis of glaucoma to blindness can be as quick as:

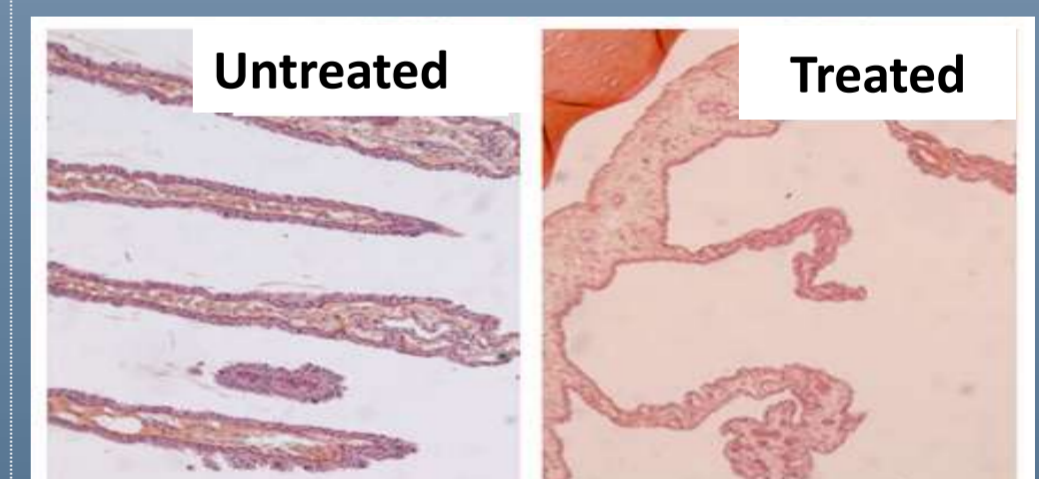
- 3 years for very high IOP (> 30 mmHg),
- 14 years for lower IOP (21-25 mmHg)



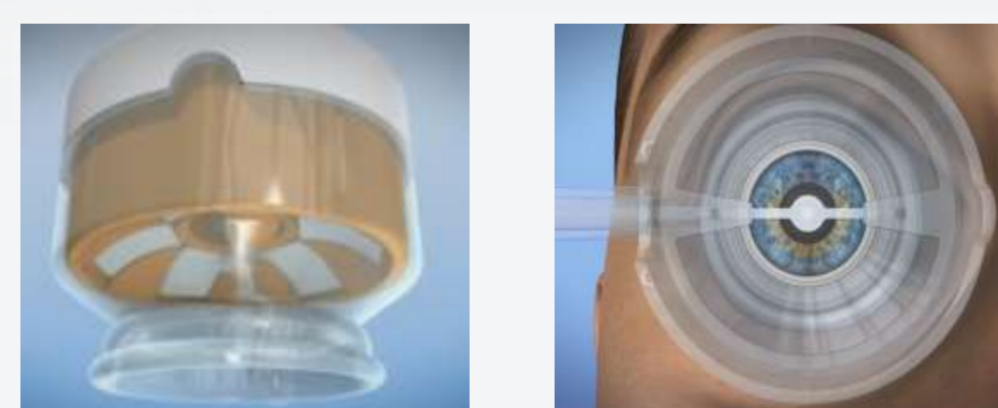
EYEOP1 has 2 parts, a surgical control module with touch screen interface and control pedal and a single use probe that applies HIFU to the eye.

HIFU has been used in medicine for decades to apply focused energy to specific locations for targeted destruction

HIFU gently coagulates the targeted tissue, in our case the ciliary bodies, which produces the aqueous humor. This coagulation prevents production of the aqueous humor and therefore reduces IOP. Beyond this intense energy level focal point, acoustic energy rapidly reduces and become harmless to the non-targeted and surrounding tissue.



The histological analysis on the right shows the expected coagulation necrosis with loss of the bilayered epithelium and vascular depletion of the ciliary processes



➢ Precise, secure and reproducible positioning of the therapy probe on eye through its centring and suction system.

➢ Precise and controlled coagulation of the ciliary bodies with an arc form across 6 miniaturized piezoelectric transducers (and non-point form)

➢ Entire circumference treated in less than 1 minute: fast treatment without repetition.

➢ Gauged treatment: the practitioner may activate between 1 to 6 sectors successively and automatically.

➢ Compared to current treatments and in view of preclinical results, the treatment is tolerated well and without side effects. It is fast, simple, easy to learn and does not depend on the operator.

