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## XEN IMPLANT AND FAKOEMULSYPHICATION

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**Abstract:** The goal of our research is to describe the positive results of combined phaco surgery in patients with long-term glaucoma and the placement of xen implant, leading to the discontinuation of medical therapy.

**Materials and methods:** Eight patients undergoing long-term glaucoma and cataract medical therapy have been included from march 2017 until september 2017.

**Results:** Post-operative decrease of iop and better vision was found in all eyes part of the research.

**Conclusion:** The use of the implant leads to a safe and effective decrease of iop in patients with primary open-angle glaucoma, not controlled with medical therapy. The gel-implant is an alternative treatment method for patients with glaucoma, as well as a stand-alone option for patients with either cataract, or glaucoma.

**Keywords:** IOP, XEN

## XEN ИМПЛАНТ И ФАКОЕМУЛСИФИКАЦИЯ

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**Резюме:** Пациенти с катаракта и глаукома, са подложени на комбинирана хирургия с хеп имплант, поради отсъствие на контрол на iop с медикаментозна терапия.

**ЦЕЛ:** Целта на нашето проучване е да се представят резултати при комбинирана факохирургия при пациенти с дългогодишна глаукома, и поставяне на хеп имплант, с цел премахване на медикаментозна терапия.

**МАТЕРИАЛ И МЕТОДИ:** За периода март 2017-септември 2017, са направени 8 пациента, с дългогодишна медикаментозна терапия за глаукома и катаракта.

**Резултати:** при всички очи се получи намаляване на iop, и подобряване на зрението в ранния постоперативен период.

**ЗАКЛЮЧЕНИЕ:** Имплантът води до безопасно и ефективно понижение на iop при пациенти с първична откритоъгълна глаукома, неконтролирани с медикаментозна терапия. Гел-имплантът е алтернативно средство за лечение при пациенти с глаукома както като самостоятелна опция, така и при пациенти с катаракта и глаукома заедно.

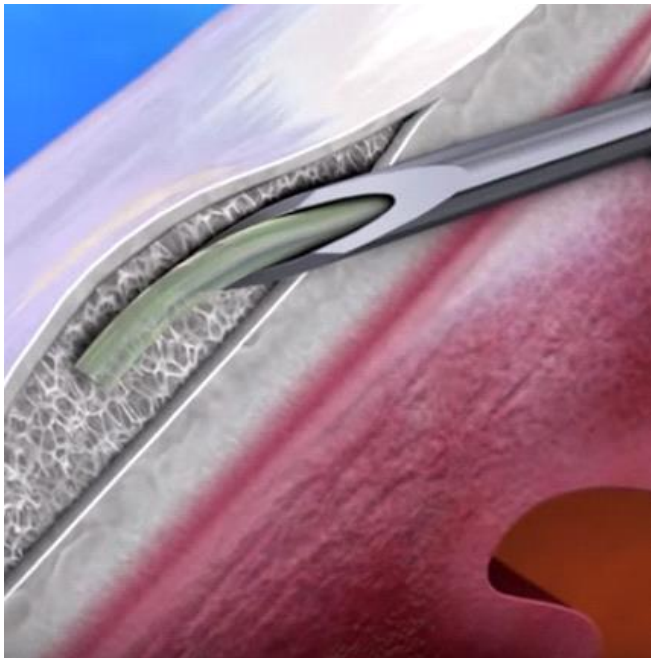
**Ключови думи:** IOP, ВОН, XEN

### ВЪВЕДЕНИЕ

XEN / Allergan/, е миниинвазивен, субконюнктивен желатиноподобен имплант, който се използва за лечение на високо ВОН при пациенти с откритоъгълна Глаукома, неповлияващи се от медикаментозна терапия, както и при пациенти в комбинация с катарактна хирургия. фиг. 1 и фиг.2.



фиг.1

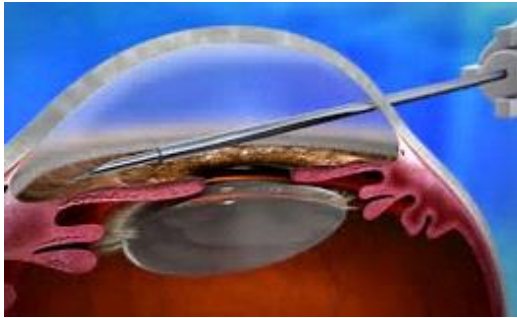


фиг.2

XEN води до редуция на вътреочното налягане, използвайки същите принципи като конвенционалната трабекулектомия, без необходимостта от инцизия на конюнктивата или наличието на склерален флеп. Имплантът е с вътрешен диаметър 45 микрона, който генерира ВОН между 5-8 mm Hg, и намалява риска от постоперативна хипотония. Самият имплант се поставя с наконечник с предпазител, субконюнктивно, който се адаптира към подлежащата тъкан и следва физиологичните движения на очите. фиг.3. и фиг.4



фиг.3



фиг.4

XEN образува нов отводящ път за повишеното количество преднокамерна течност, от преднокамерният ъгъл до субконюнктивното пространство, с нов блеб.

### **МАТЕРИАЛ**

За периода от март 2017-септември 2017 г. са оперирани 8 пациенти, 10 очи. При 4 от пациентите е извършена комбинирана факохирургия, поради катаракта, и поставяне на XEN имплант, поради високо ВОН. При всички пациенти е установена Глаукома с открит ъгъл, на дългогодишна медикаментозна антиглаукомна терапия.

За определяне на подходящ пациент, за поставяне на XEN, съществуват включващи и изключващи критерии:

1. Включващи критерии
  - ВОН между 18-33 mm Hg
  - видим трабекуларен апарат
2. Изключващи критерии
  - Закритоъгълна/ вторична глаукома
  - предишна антиглаукомна оперативна интервенция
  - очни възпалителни заболявания

### **МЕТОДИКА**

Гел-имплантът се поставя самостоятелно и/или в комбинация с факоемулсификация.

- може да бъдат оперирани и двете очи, последователно с 30 дни разлика.
- Уточняване мястото за поставяне на XEN, преди инцизиите - къде точно ще са основната инцизия и side port; маркира се таргетната зона; проверява се инжекторът.
- Инжектора винаги трябва да бъде в хоризонтално положение, успоредно на очната повърхност; докато иглата с импланта е в инжектора, не се упражнява натиск върху него.
- в Предна камера се поставя вискосубстанция
- Поставяне на иглата през склерата- на около 3-3.5 mm; като мястото върху конюнктивата преди това е белязано с маркер и поставяне на Митомидин субконюнктивно;
- завъртане на буталото на инжектора на 45° и поставяне на импланта.
- проверява се дали импланта е видим под конюнктивата-добре оформен блеб, горе назално на 3.5 mm от лимба.

### **МОНИТОРИРАНЕ НА ПАЦИЕНТИ И ПОСТОПЕРАТИВНО МАНИПУЛИРАНЕ**

-Редовно мониториране на ВОН, между 12-14 mm Hg - 6 месеца

-стероидни капки -4 пъти дневно - 1 месец

-антибиотични капки -4 пъти дневно-1 седмица

Постоперативно мониториране на пациенти след 1 седмица- при нормално ВОН и високо ВОН.

-при нормално ВОН- XEN имплантът изглежда плосък на конюнктивната повърхност, добре оформен блеб, ВОН варира между 12-15 mm Hg.

- при повишено ВОН- блеб не се наблюдава, фиброза на тъканите, ВОН е повишено >20 mmHg.

### **ЗАКЛЮЧЕНИЕ**

-При всички очи, на които се постави XEN- се постигна таргетно налягане 12-14 mmHg, без медикаментозна



терапия, за 6 месеца остана в същите стойности на ВОН.

-с XEN няма нужда от шев на конюнктивна, както и риска от постоперативни компликации е в много нисък процент.

-сравнително бърза и безкръвна манипулация, изискваща минимални усилия

КНИГОПИС: АЛЕРГАН, СОБСТВЕНИ РЕЗУЛТАТИ 2017

#### REFERENCES

- [1] Adhikari, S., Paudel, N., Adhikari, P., Shrestha, G. S., & Shrestha, J. B. (2013). Screening Preschool Children for Visual Disorders: A Pilot Study. *Optometry & Visual performance*, 1(6)202-207 202-203.
- [2] Groenewoud, J.H., Tjiam, A.M., Lantau, V.K., Hoogeveen, W.C., Tjeerd H. N. de Faber, J., Juttman, R.E., de Koning, H.J., Simonsz, H.J. (2010). Rotterdam Amblyopia Screening Effectiveness Study: Detection and Causes of Amblyopia in a Large Birth Cohort. *Investigative Ophthalmology & Visual Science*, 51, 3476-3484.
- [3] Kvarnström, G. Jakobsson, P. Lennerstrand, G. (2001). Visual screening of Swedish children: An ophthalmological evaluation. *Acta Ophthalmologica*, 79(3), 240-244.
- [4] Murthy, G.V., Gupta, S.K., Ellwein, L.B., Muñoz, S.R., Pokharel, G.P., Sanga, L. Bachani, D. (2002) Refractive Error in Children in an Urban Population in New Delhi. *Investigative Ophthalmology & Visual Science*, 43, 623-631
- [5] Janev, K.G. (2002). *General Ophthalmology*. Skopje: Menora
- [6] Gerhard K. Lang, M. (2000). *Ophthalmology*. New York: Thieme Stuttgart.
- [7] Cynthia A. Bredford, M. (2010). *Basic Ophthalmology*. Skopje: Tabernakul.
- [8] Barnes, M., Williams, C., Lumb, R., Harrad, R.A. et al. (2001). The prevalence of refractive errors in a UK birth cohort of children aged 7 years. *Investigative Ophthalmology & Visual Science*, 42:S389
- [9] Preslan, M.W. Novak, A. (1996). Baltimore Vision Screening Project. *Ophthalmology*, 103, 105-9
- [10] Naidoo, K.S., Raghunandan, A., Mashige, K.P., Govender, P., et al. (2003). Refractive error and visual impairment in African children in South Africa. *Invest Ophthalmol Vis Sci*;44:3764-70.
- [11] He, M., Zeng, J., Liu, Y., Xu, J., et al. (2004) Refractive error and visual impairment in urban children in southern China. *Investigative Ophthalmology & Visual Science*, 45:793-9.
- [12] P Jamali et al. (2009). Refractive Errors and Amblyopia in Children Entering School: Shahrood, Iran *Optom Vis Sci* 86 (4), 364-369.
- [13] Logan, N.S., Shah, P., Rudnicka, A.R., Gilmartin, B., G. Owen, C.G. (2012). Uncorrected Refractive Error in School Children in England, UK. *Investigative Ophthalmology & Visual Science*, 53, 2311