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LARGE INFERIOR RECTUS RECESSION WITHOUT LOWER LID RETRACTION: TWO INCREDIBLE TECHNIQUES

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Abstract. Relevance. Lower lid retraction is a frequent undesirable result following inferior rectus recession operations. Especially in relatively larger amounts of recession, a special and close relationship between lower lid retractors and muscular fascia makes the complication more severe. **Purpose of the study.** To introduce two methods that allow wide inferior rectus recession without causing lower eyelid retraction and to evaluate the long-term results. **Material and methods.** There were 25 cases and 18 control group cases in first operation technique named 'ninety percent of posterior fibers recession of inferior rectus' which can be perform for any vertical deviation without muscle fibrosis; and 8 cases were in second operation technique which named 'muscle elongation with both organic tissue and non-absorbable suture'. **Results and conclusion.** In both technique patients' deviation corrected and all ocular movement was free. Both operation techniques, which introduces by us, does not affected lower lid retractor and operations has both effective results and no lid problem.

Keywords: lower eyelid retraction, fibrosis, muscle elongation, non-absorbable suture.

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БОЛЬШАЯ РЕЦЕССИЯ НИЖНЕЙ ПРЯМОЙ МЫШЦЫ БЕЗ РЕТРАКЦИИ НИЖНЕГО ВЕКА: ДВА НЕВЕРОЯТНЫХ МЕТОДА

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Аннотация. Актуальность. Ретракция нижнего века является частым нежелательным результатом после операций по устранению рецессии нижней прямой мышцы. Особенно при относительно больших объемах рецессии особая и тесная связь между ретракторами нижнего века и мышечной фасцией делает осложнение более серьезным. **Цель исследования:** представить два метода, которые позволяют обеспечить широкую рецессию нижней прямой мышцы, не вызывая ретракции нижнего века, и оценить долгосрочные результаты. **Материалы и методы.** Было 25 случаев и 18 случаев контрольной группы с первой техникой операции под названием «девяносто процентов рецессии задних волокон нижней прямой мышцы», которая может быть выполнена при любом вертикальном отклонении без мышечного фиброза; и 8 случаев были со второй техникой операции под названием «удлинение мышцы как органической тканью, так и не рассасывающимся швом». **Результаты и заключение.** При использовании обеих методов отклонения пациентов были исправлены и все движения глаз остались свободными. **Выводы:** Обе методики операции, которые мы представляем, не влияют на ретрактор нижнего века, и операции дают как эффективные результаты, так и не имеют проблем с веком.

Ключевые слова: ретракция нижнего века, фиброз, удлинение мышцы, не рассасывающий шов.

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PASTKI QOVOQNI TORTIB OLMAGAN HOLDA KATTA PASTKI REKTUS RETSESSIYASI: IKKITA AJOYIB USUL

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Annotatsiya. Dolzarbligi. Pastki qovoqni tortib olish pastki rektus retsessiyasi operatsiyalaridan keyin tez-tez kiruvchi natijadir. Ayniqsa, nisbatan katta miqdordagi retsessiyada, pastki qopqoq retraktorlari va mushak fastsiyasi o'rtasidagi maxsus va yaqin munosabatlar asoratni yanada og'irlashtiradi. **Tadqiqot maqsadi.** Pastki qovoqning orqaga tortilishiga olib kelmasdan, pastki rektusning keng retsessiyasiga

imkon beradigan ikkita usulni joriy etish va uzoq muddatli natijalarni baholashdir. **Materiallar va usullar.** Mushak fibrozisiz har qanday vertikal og'ish uchun bajarilishi mumkin bo'lgan pastki rektusning orqa tolalari retsessiyasining to'qson foizi deb nomlangan birinchi operatsiya texnikasida 25 ta holat va 18 ta nazorat guruhi holatlari mavjud edi; va 8 ta holat ikkinchi operatsiya texnikasida organik to'qima va so'rilmaydigan tikuv bilan mushaklarning cho'zilishi deb nomlangan. **Natijalar va xulosa.** Har ikkala texnikada, bemorlarning og'ishi tuzatildi va barcha harakatlar ko'zlar bo'sh edi. Biz taqdim etayotgan operatsiyaning ikkala usuli ham pastki ko'z qovog'ining retraktoriga ta'sir qilmaydi va operatsiyalar ham samarali natijalar beradi, ham ko'z qovog'ida hech qanday muammo bo'lmaydi.

Kalit so'zlar: pastki qovoqning tortilishi, fibroz, mushaklarning cho'zilishi, so'rilmaydigan tikuv.

Iqtibos uchun:

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Introduction. Lower lid retraction is a frequent undesirable result following inferior rectus recession operations. Especially in relatively larger amounts of recession, a special and close relationship between lower lid retractors and muscular fascia makes the complication more severe. Our aim in this study is to introduce two methods that allow wide inferior rectus recession without causing lower eyelid retraction and to evaluate the long-term results.

Material and methods. Patients files were evaluated retrospectively. There were 25 cases and 18 control group cases in first operation technique named 'ninety percent of posterior fibers recession of inferior rectus' which can be perform for any vertical deviation without muscle fibrosis; and 8 cases were in second operation technique which named 'muscle elongation with both organic tissue and non-absorbable suture'. All patients underwent full orthoptic and ophthalmic assessment included vertical deviation angles measurement both at near and distance fixation, both pre and postoperatively. Measurement of margin-to-reflex distance (MRD2) performed 1 month later the operation. Follow-ups over than 18 months in all patients. Each 0.5 mm scleral show evaluated as (+), less than 0.5 mm scleral show either evaluated as (±) or (-). SPSS for windows programme were used for evaluations. 'Ninety percent of posterior fibers recession of inferior rectus' Operation technique: Patients' conjunctiva is opened by limbal conjunctival incision than conjunctiva is enlarged with blunt dissection from sclera. After reaching inferior rectus muscle 1.5–2 mm two holes on both sides of the muscle are opened. The muscle is held with a hook. A 6/0 absorbable suture are placed on the deeper tendon part adjacent to the sclera and is locked at both edges of the tendon. The deeper tendon layer is dis-inserted from muscle insertion. In order for the surface and deeper fibers to enlarge towards the posterior, the muscle is held with a clamp and is stretched back. This deeper part of muscle is fixed to the sclera on both sides to desired distance. 'Muscle elongation with both organic tissue and non-absorbable suture'. Operation technique: According to the deviation amount 7-14 mm length bovine pericardium (Tutopatch®) is inserted between distal end of the tendon and begin of the muscle fibers with 6/0 nonabsorbable suture. There is no processing performed to the inferior rectus insertion. Then placing the pericardium distal edge to the tendon just beginning of inferior rectus fibers, then muscle fibers release from the end of the tendon and suturing the proximal edge the pericardium to distal end of the inferior rectus tendon. Thus, the muscle is lengthened to the desired amount.

Results. In first technique, although the vertical deviations of the patients were almost completely corrected, no significant lower lid retraction was observed despite recessions of up to 7 mm. Like as, in the second operation technique group, no lower lid retraction was observed despite muscle regression of up to 17 mm while the patients' deviation corrected and all ocular movement was free.

Conclusion. Both operation techniques, which introduces by us, does not affected lower lid retractor and operations has both effective results and no lid problem.

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