

Katarakta in refraktivna kirurgija, Saturday, May 17 2025, 9:15-11:00

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Chairs: Špela Štunf Pukl and Rok Grčar

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General and personalised approaches for the management of ocular surface disease before, during and after cataract surgery

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Patients' expectations after cataract surgery are higher than ever before. Not only high-quality procedure with optimal visual outcome, but also comfort during and after the procedure are expected, and healthy ocular surface has a major role in this.

High prevalence of dry eye in cataract patients (60-80%) with frequently asymptomatic course (>50%), warrants for specific ocular surface tests before surgery for detection. In beginning stages, prescribing artificial tears is of benefit; and as proved in a study specific positive effect can be obtained with trehalose artificial tears. Treatment is prescribed when symptoms and/or signs of dry eye are more prominent. For quick response a short course of topical corticosteroids (e.g. Softacort) and gel are advised. As far as other ocular surface diseases, meibomian gland pathology is present in 52% of cataract patients. Surgery disturbs the lipid layer, thus preoperative lid hygiene and in blepharitis also topical azithromycin (Azyter) are suitable. Stabilisation of the tear film also allows for optimal keratomeries, while antibiotics reduce the burden of microorganisms. The Ocular Surface Frailty Index (OSFI) can also be used to individually predict the onset of dry eye symptoms after cataract surgery.

The surgery itself disturbs the balance of the ocular surface due to the release of inflammatory factors, photo toxicity of the microscope and preservatives in eye drops; therefore, it should be optimised in time, performed with corneal protection gels and minimal use of preserved drops.

Postoperatively, the preservatives in drops, especially benzalkonium chloride also represent one of the main causes of iatrogenic dry eye, so we prescribe preservative-free therapy. In a comparative study of dexamethasone with or without preservative, a significant increase in corneal epithelial defects and foreign body sensation was proved after 2 weeks in the preservative but not in the non-preservative group. However, antibiotic and NSAID are also toxic for epithelial and goblet cells, thus all therapy should be prescribed for the shortest possible time relative to the needed prophylaxis and with regular check-ups. Dry eye symptoms peak on the 7. postoperative day and continue as long as 3-6 months. Patients are advised to continue with lid hygiene using tea tree oil preparations, which have been shown in trial to significantly reduce the burden of Demodex. Preservative-free artificial tears with prolonged hydration and osmoprotection are advised. In fact, a randomised study showed a faster and greater improvement in symptoms and signs of dry eye in patients using artificial tears with a combination of hyaluronic acid and 3% trehalose compared to other artificial tears. Trehalose has an effect on the healing of the ocular surface, protects the cells and reduces the level of inflammation.

Pre-operative ocular surface diagnostics and optimisation prevent complications and ensure comfort, while close follow-up and therapy modification results in optimal visual outcome and patient satisfaction.

Splošni in personalizirani pristopi za obvladovanje bolezni očesne površine pred, med in po operaciji katarakte

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Pričakovanja pacientov po operaciji katarakte so danes višja kot kdarkoli prej. Poleg kakovostnega posega in optimalnega izid vida je pomembno tudi ugodje med in po posegu, pri čemer ima glavno vlogo zdravje očesne površine.

Zaradi visoke prevalence bolezni suhega očesa v populaciji s katarakto (60-80%) in tihega poteka pri vsaj 50% pacientov je pred operacijo pomembno aktivno odkrivanje z dodatnimi testi za očenso površino. Pri blažjih oblikah svetujemo umetne solze; raziskava je potrdila specifično pozitivno vrednost umetnih solz s trehalozo v predoperativnem obdobju. Zdravljenje predpišemo pri bolj izraženih simptomih in/ali znaki. Za hiter učinek uvedemo pulzno topično kortikosteroide (npr. Softacort) in gel.

Od drugih bolezni očesne površine pri kar 52% bolnikov s katarakto najdemo patologijo meibomovih žlez. Ker operacija dodatno poslabša lipidni sloj, je primerno pred posegom izvajati toaleta vek ter pri blefaritisu predpisati topični azitromicin (Azyter). Izboljšanje solznega filma zagotovi optimalne topografske meritve, antibiotično zdravljenje pa zmanjša obremenitev očesne površine z mikroorganizmi. Lahko uporabimo OSFI (angl. Ocular Surface Frailty Index), s katerim

individualno predvidimo pojav simptomov suhega očesa po operaciji katarakte.

Poseg poruši ravnovesje očesne površine zaradi sproščanja vnetnih faktorjev, fototoksičnosti mikroskopa in kapljic s konzervansi; zato naj bo časovno optimiziran, ob zašiti roženice in omejeno rabo kapljic s konzervansi.

Tudi pooperativno je konzervans – benzalkonijev klorid v kapljicah eden glavnih vzrokov iatrogenega suhega očesa, zato predpišemo kapljice brez konzervansa. V primerjalni raziskavi rabe dexametazona z ali brez konzervansa so že po 2 tednih ugotovili pomemben porast epitlenih defektov roženice in občutka tujka v skupini z, ne pa tudi v skupini brez konzervansa.

Vendar sta tudi sam antibiotik in NSAID toksična za epitelne in čašaste celice, zato se vsa terapija rabi pod nadzorom in čim krajši čas glede na nujno preventivno. Simptomi suhega očesa dosežejo vrh 7. dan in se nadaljujejo še 3-6 mesecev.

Pacientom svetujemo nego vek s pripravki z oljem čajevca, za katerega je raziskava pokazala, da pomembno zniža breme z Demodex. Svetujemo tudi umetne solze brez konzervansa s podalšanim vlaženjem in osmoprotekcijo. Randomizirana študija je namreč pokazala hitrejše in večje izboljšanje simptomov ter znakov suhega očesa pri pacientih, ki so uporabljali umetne solze s kombinacijo hialuronske kisline in 3% trehaloze v primerjavi s drugimi umetnimi solzami. Trehaloza vpliva na celjenje očesne površine, zaščiti celice in zmanjša nivo vnetja.

S predoperativno diagnostiko usmerjeno v očesno površino in primerno optimizacijo le-te se lahko izognemo zapletom in zagotovimo ugodje. Z natančnim pooperativnim spremljanjem in prilagajanjem terapije pa dosežemo tudi optimalen izid vida in visoko zadovoljstvo pacientov.