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Evidence Based Eye Care

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Evidence Based Eye Care

Description
A summary of the results from numerous randomized clinical trials in eye care for students and clinicians.

Keywords
Randomized clinical trials, Optometry, Ophthalmology, Evidence based, Ocular disease

Disciplines
Optometry

Comments
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Evidence Based Eye Care

### Amblyopia
- **ATS 1**
  - 3-7yo (VA20/40-20/100)
  - 1% atropine & daily patching ≥ 6 h. Improved VA @ 6 months

- **ATS 2**
  - 3-7yo (VA20/40-20/80)
  - Patching
  - 2h x 6h (moderate)
  - 6h = FT (20/100-20/400)

- **ATS 3**
  - 7-13yo benefit from patch/atropine
  - 13-18yo benefit from patch w/o prior Tx

- **ATS 4**
  - <7yo (VA20/40-20/80)
  - Daily = Weekened-only atropine

- **ATS 5**
  - 2h/d x 5 weeks work

- **ATS 6**
  - Near activities does not improve VA

- **ATS 7**
  - 3-10yo (bilateral refractive amblyopia)
  - Spectacles improve to 20/25 within 1 yr

- **ATS 9**
  - 17-12yo
  - 2h patching = weekend only atropine

- **ATS 10**
  - Bangerter filters = patching

### Myopia Control
- **LORIC Study**
  - 35 children (7-12yo)
  - 2 years
  - AL ↑ 0.29 (CRT) vs 0.54mm

- **K Reshaping**
  - 40 children (8-11yo)
  - 2 years
  - AL ↓ 0.16mm annually

- **Dual-Focus Soft CL**
  - 40 children (11-14yo)
  - 20 months
  - +2.00 center distance Progression + 30%

- **CL − Peripheral Hyperopia**
  - 45 children (7-14yo)
  - Multifocal CL (CIBA)
  - 33% less AL growth

- **ROMIO Study**
  - 78/102 kids (6-10yo)
  - 2 years
  - Orthe-K: 43% less AL growth

### Dry Eye & MGD Workshop
- **DEWS-Questionnaire**
  - OSDI
  - Mild 13-22
  - Moderate 23-32
  - Severe 33-100

- **DEWS-Tests**
  - Tearlab ≥ 312 mOs/mL
  - TBUT ≤ 10 sec
  - Schirmer Test ≤ 10 mm

- **Dry Eye Management**
  - Artificial Tears
  - Eyelid hygiene
  - Anti-inflammatorys
  - Tetracyclines

- **MGD**
  - Topical azithromycin
  - Tetracyclines
  - Anti-inflammatory therapy

### Contact Lens Wear
- **HEDS I**
  - Stromal keratitis:
    - Pred + Vir-topic
    - no additional benefit w oral acyclovir

- **HEDS II**
  - Oral acyclovir (400mg BID X 1 yr)
  - ↓ recurrence of HSX by 41% & stromal keratitis by 50%

- **Beaver DAM Eye Study**
  - 5000 (43-84yo)
  - Catarrax and AMD link to smoking & sun exposure (400-480mm, blue)

- **Blue Mountain Eye Study (BMES)**
  - 49-97yo
  - Nuclear cataract: smoking, alcoholics.

- **BMES**
  - Cataract: diabetes, vascular dz
  - PSC: steroids, smoking, sun, diabetes, myopia

### Glaucoma
- **AGIS**
  - IOP<18, less risk of progression over 7 years
  - First 1.5yr Tx is the most critical
  - IOP<15 no VF progression for 15 years
  - 16% experienced VFs are artefacts

- **CTTG**
  - TP 30% reduction
  - Tx (+) progression, (+) disc heme, (+) migraines

- **EMGT**
  - 45% Tx vs 62% control progress over 6 yrs
  - Tx ↓ risk of progression by 50%
  - ↓1mmgt ↓10% progression
  - 5 pt ↓ for 1 pt benefit

### Macular Degeneration
- **AREDS I**
  - 4757 (55-80yo):
    - 500 mg vit C, 400 IU vit E,
    - 15mg β-carotene, 80mg Zn, 2mg Cu
  - Severe AMD: 25% ↓ progression & 19% ↓ in vision loss

- **AREDS II**
  - 4203(50-85yo):
    - 1mg lutein, 2mg zeaxanthin
    - (safer than β carotene)
  - 350 mg DHA + 650 mg EPA; lower dose of zn
  - No further reduction in AMD progression

### Diabetic Eye Disease
- **Di GRading Scale**
  - Mild NPDR: (>1MA, 3% PDR @ 1yr, >1/u 1yr
  - Moderate NPDR: 12-27% PDR @ 1yr, >1/u 6-8 mo
  - Severe NPDR: ≥ 2.1": MA, hemes 4 quad, venous beading 2 quad, IRMA 1 quad, 52% PDE @ 1yr, >1/u 3-4 mo
  - PDR: NVD, NVE or vitreous hemorrhage

- **DCCT**
  - 1441 DM1 (13-39yo)
  - Intensive: AIC < 6
  - Photocoagulation ↓ 54-76%
  - Neurupathy ↓ 60%
  - Nephropathy ↓ 50%

- **DRS**
  - PRP & focal treatment for NVI & NVE
  - Photocoagulation (argon/xenon) ↓ risk of severe vision loss by > 50%

- **EDTRS**
  - CSME: retinal thickening within 500um (1/3DD) of fovea;
  - Hard exudates within 500um of fovea;
  - Focal photocoagulation effective in CSME
  - Consider PRP for severe NPDR & early PDR
  - Perform PRP for high-risk PDR

### Venous Occlusions
- **BVOS**
  - Laser Tx + neovasc & vit hemes
  - Grid laser, effective for macular edema (ME)

- **CVOS**
  - PRP for NVI
  - Grid laser for ME

- **SCORE**
  - Grid laser for BRVO ME
  - Intravitreal Kamedol
  - 1mg for CRVO ME

- **BRAVO**
  - 0.3 mg and 0.5 mg ranibizumab, effective for BRVO ME

- **CRUISE**
  - 0.3 mg and 0.5 mg ranibizumab, effective for CRVO ME

### Optic Neuritis
- **ONNT**
  - Oral prednisone, ineffective
  - Recurrences IV methylpredx4, oral predx11, faster recovery
  - Oral placebos, continual recovery over 1 yr
  - 5-year recurrence: 28%

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