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The following collection of clinical guidelines has been adopted by NEON clinicians. The guidelines cover common conditions that are managed in our practice settings. This collection is not intended to be an all-inclusive list. Clinical parameters employed in our clinical performance audits shall be derived from the guidelines herein stated. These guidelines are updated on an annual basis.

Complete Eye & Vision Examination

A case history should be obtained that includes a query on physical and ocular health history, vision problems and symptoms, recreational and occupational visual requirements.

A visual acuity assessment should be performed that involves an evaluation of the visual acuity of each eye, at distance and near, as indicated.

An external examination and ophthalmoscopy should be performed that involves an evaluation of the eye and adjacent structures for indications of ocular and systemic pathology or abnormality.

An objective refraction should be performed that involves an objective evaluation of the refractive state of the eye, as determined with instruments such as the ophthalmometer, the retinoscope, etc.

A subjective refraction should be performed that involves a subjective determination of the refractive state of the eyes, at a distance and near.

Ocular motility and coordination should be assessed that involves an evaluation of eye movements and neuro-muscular balance at distance and near as indicated.

Quality of binocular vision should be assessed that involves an evaluation of fusional vergene and depth perception skills as indicated.

Accommodation should be assessed that involves an evaluation of quality and quantity as indicated.

Other evaluations should include additional procedures, as indicated, like tonometry, visual fields, biomicroscopy, color vision, stereopsis, and other procedures as indicated, such as dilated fundus exam.
Vision Screening Procedure

A procedure to provide professional vision care more efficiently to a large segment of the population, by determining the state of ocular health and the need for further examination and treatment.

1. Case background should be determined that includes a general health history, current visual symptoms, and problems (including occupational).

2. Visual acuity should be determined by performing an evaluation of the visual acuity of each eye at distance and near, as indicated.

3. Ocular health status should be determined that involves ophthalmoscopy, plus any other procedures (such as tonometry) deemed necessary.

4. Vision status should be determined that involves gross evaluation of refractive state (such as retinoscopy) and of neuromuscular coordination.

Vision Treatment

1. Spectacle Eyewear
   - Design of lens(es) -- To include as necessary the specification of lens material curves, multifocal type, tints, center thickness, tempering, and location of major reference points.
   - Technical Services -- Including selection of eyewear and its measurement, ordering and verification, dispensing and alignment of eyewear, and subsequent services (maintenance and adjustment of eyewear).

2. Progress Evaluations -- Follow-up reports and examinations, as indicated.

3. Other Treatments -- the following areas are to be completed separately (in terms of supplemental examinations and treatment); or referral as deemed necessary. A diagnostic evaluation procedure is part off all of the following:
   - Contact lenses;
   - Low vision;
   - Aniseikonia;
   - Visual training and orthoptics to include tropia, amblyopia and asthenopia;
   - Developmental vision.
Ocular Infections

Pre-treatment Considerations:

- For routine infection, use an older antibiotic that is still effective and well tolerated. It is advisable to reserve newer antibiotics for treatment of severe infections or resistant organisms.

- Avoid “shotgun” approach to treating infections. Don’t use the antibiotic steroid combinations unless they are specifically indicated. Used an antibiotic drop only.

- Obtain a culture and sensitivity only if you are dealing with a severe infection.

- Ask every woman with an eye infection if she uses mascara, eyeliners, eye shadow or any other eye makeup. If a patient has used any of these products within three or four days of the start of the infection, then have her discard all of the makeup and avoid using new make up until the infection is resolved.

Bacterial Conjunctivitis

- Therapy should be directed at the lid margin as well as at the conjunctiva proper.

- The patient should be instructed in the performance of daily lid margin hygiene.

- An antibiotic ointment like Bacitracin should be applied with a sterile cotton-tipped applicator performed at bedtime for 2 to 3 weeks.

- When the patient is asymptotic, hygienic lid scrubs can be effectively substituted for antibiotic use. Although this approach is often effective, a topical ophthalmic solution may also be indicated. Tobramycin, one drop every two hours while awake for five days, is the treatment of choice.

Staphylococcal Marginal Ulcers

- These ulcers along the periphery of the cornea are often hypersensitive to staphylococcal bacterial conjunctivitis. The ulcers are typically benign, although the patient often presents with extreme pain and photophobia.

- These ulcers should be differentiated from marginal herpetic keratitis for which steroid therapy is contraindicated.

- Treatment generally requires both steroid drops and antibiotic drops. An alternative treatment is a tobramycin/dexamethasone combination.
Contact Lenses and Infections

- If a contact lens wearer develops an eye infection, lenses wearing should be discontinued immediately.
- Soft lenses: If the patient is a soft contact lens wearer, discard the lenses and the case.
- Once the infection has cleared, start with new lenses and a fresh case.
- If the infection is a mild conjunctivitis, patients could try to salvage their lenses by cleaning them well, using an enzymatic cleaner, then putting them in fresh soaking solution every day for five days.
- Patients should be advised to use a clean case during those five days and a new permanent case when they resume lens wear.
- Rigid Gas Permeable (RGP) lenses: Unless the infection is severe, patients with RGB contact lenses can probably salvage their lenses by cleaning them well and storing them in fresh soaking solution every day for five days. The original case should be discarded.
- Patients should use a new case for those five days and a new permanent case when they resume lens wear.
- If the infection is severe, discard the lenses and start with a new pair when the infection has cleared.

Viral Conjunctivitis

- Viral conjunctivitis presents with irritated eyes and a more watery discharge than seen with bacterial conjunctivitis.
- The infection is usually self-limiting. Tobrex drops may be needed if you suspect a secondary bacterial infection.

Primary Open-Angle Glaucoma

The diagnosis of primary open-angle glaucoma is accomplished through an evaluation of patient characteristics (risk factors, symptoms, anterior segment, intraocular pressures, optic discs, and visual fields).

Patient Characteristics:

Epidemiological studies suggest that the following individuals are at relatively higher risk for POA glaucoma and should be checked for this disorder during routine optometric evaluation:

- Older;
- Black;
- Myopic;
- Under stress;
- Diabetic, or have relatives with glaucoma, thyroid disease or other chronic systemic disease.
Diabetic Retinopathy

The complications of diabetic retinopathy account for about 50,000 cases of legal blindness in the U.S. The occurrence of diabetic retinopathy is strongly related to duration of disease.

For the purposes of these guidelines, the three stages of diabetic retinopathy are as follows:

- Background diabetic retinopathy;
- Preproliferative diabetic retinopathy;
- Proliferative diabetic retinopathy.

If any of the above-noted findings are uncovered, the primary care physician should be prompted to refer the patient to an ophthalmologist for definitive management.

Diabetics should have annual dilated eye examinations to ensure proper management of eye health.
Simple Allergic Conjunctivitis

Patients presenting with conjunctival and eyelid chemosis and hyperemia, along with itching and tearing are necessary for the correct diagnosis and determination of the responsible agent.

The general approach to the management of allergic conjunctivitis includes:

- desensitization
- pharmacologic agents and
- avoidance of offending allergens.

Pharmacologic management of allergic conjunctivitis includes the use of topical vasoconstrictors, antihistamines, corticosteroids, and inhibitors of vasoactive substances (cromolyn sodium). Cold compresses are excellent short term remedies.

Use of naphazoline or phenylephrine is appropriate in the treatment of allergic conjunctivitis. Because of rebound hyperemia, long-term use of phenylephrine should be avoided.

**Mild allergic conjunctivitis:**

- Mild allergic conjunctivitis can be treated with over-the-counter preparation, Estivis.

**Contact allergies:**

- Contact allergy to cosmetics and topical drugs are cell mediated (type II) thus do not respond well to antihistaminic preparations. Therefore, treatment with topical steroids should be considered. A pulse of topical steroid (i.e. 1 drop of 1% PredForte every 2 hours for 1-2 days) can reduce the allergic reaction enough that topical vasoconstrictors and cool compresses can be used until the condition subsides.

**Acute allergic conjunctivitis:**

- A preferred treatment for acute allergic conjunctivitis is the Patanol or Optivar ophthalmic suspension, a selective antihistamine and mast cell stabilizer agent.

**Chronic seasonal allergic conjunctivitis:**

- Patients with chronic seasonal allergic conjunctivitis, who are affected over a number of weeks, should be prescribed a mast-cell stabilizer like Alomide or a combination agent comprised of a mast cell stabilizer and antihistamine such as Patanol or Optivar a week or so in advance of the allergy season or exposure to known allergies to mitigate or prevent allergic reactions.