CLINICAL GUIDELINE

Gonioscopy

The following document provides information about gonioscopic examination in optometric practice. This Guideline is not a substitute for legal responsibilities and optometrists must ensure that they comply with State and Federal Law and Common Law responsibilities.

Gonioscopy is a clinical procedure used to assess the angle of anterior chamber and to inspect the anatomical structures of the anterior chamber angle (the angle).

Gonioscopy is essential to visualise the anterior chamber of patients with risk factors for any form of glaucoma and is especially important in identifying those patients at risk of acute angle closure glaucoma. Iridotrabecular contact and angle obstruction are risk factors for the development of primary angle closure glaucoma and secondary glaucoma and can be detected and appreciated by performing gonioscopy.

Measurement of intra-ocular pressure (IOP) should precede gonioscopy as the action of manipulating the gonio lens on the eye may cause IOP to change.

Estimates of the peripheral anterior chamber depth should be made during routine slit lamp examination. The presence of a critically narrow angle may indicate to an optometrist that pupil dilation should not be risked and ophthalmological referral is indicated.

Gonioscopic examination of both eyes is advisable to assist in appreciating angle structures and depths, and any differences between the angles.

Gonioscopy indications

- evaluation of the angle in glaucoma suspects
- assessment of the angle prior to pupillary dilatation
- Grade 2 or less angles when measured using the Van Herrick technique
- previous history of angle closure and where there is suspicion of angle closure including patients who have undergone laser peripheral iridotomy
- follow-up evaluation of glaucoma to rule out development of an angle closure component, particularly in the follow-up of patients on miotic therapy
- asymmetric anterior chamber depths
- clinical signs or symptoms of angle closure such as glaukomflecken, intermittent blur, headaches/frontal pain, haloes
- evidence of neovascularisation of the angle or risk of neovascularisation of the angle such as CRVO, PDR or significant retinal ischaemia
- suspicion of neoplastic activity in the anterior chamber where there is evidence of previous anterior segment inflammation
• history or evidence of ocular trauma in the absence of a recent history of hyphaema
• anterior chamber anomalies and abnormalities such as pseudoexfoliation, pigment dispersion syndrome or Krukenberg spindle

Gonioscopy (relative) contraindications

• corneal or conjunctival inflammation or infection
• corneal abrasions or erosion where the risk of damaging the already compromised corneal epithelium is unwarranted
• significant epithelial basement membrane dystrophy in which the corneal epithelial attachment is weakened
• presence or suspicion of lacerated or perforated globes
• recent history of hyphaema or recent ocular contusion which may cause recurrence of bleeding. Gonioscopy should be deferred for several weeks after the hyphaema has cleared. (It is then important to perform gonioscopy to examine for angle recession or other damage to the angle)
• systemic connective tissue disorders such as Epidermolysis Bullosa
• recent intraocular surgery

Utilisation of gonioscopy

There are two main types of goniolens: direct and indirect. More information and demonstration of techniques can be found at www.gonioscopy.org

Disinfection of gonioscopy equipment

Optometrists Association Australia has clinical guidelines which cover infection control and disinfection of ophthalmic equipment. The guidelines can be found at www.optometrists.asn.au/LinkClick.aspx?fileticket=ik%2bK%2fUlX7RQ%3d&tabid=123

Also, product manufacturers and distributors provide information on cleaning and disinfection of gonioscopy equipment. An example of this is the Haag-Streit website www.haag-streit.com/fileadmin/haagstreit_international/Documents/Manual/GA_KontaktGl%C3%A4ser.pdf

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6 Bigar, F, Wiffen, SJ, Bourne, WM, Ophthalmologica 2001; 215:1-7
Additional Reading

