

EDUCATIONAL MOMENTS

INSPIRING CARE

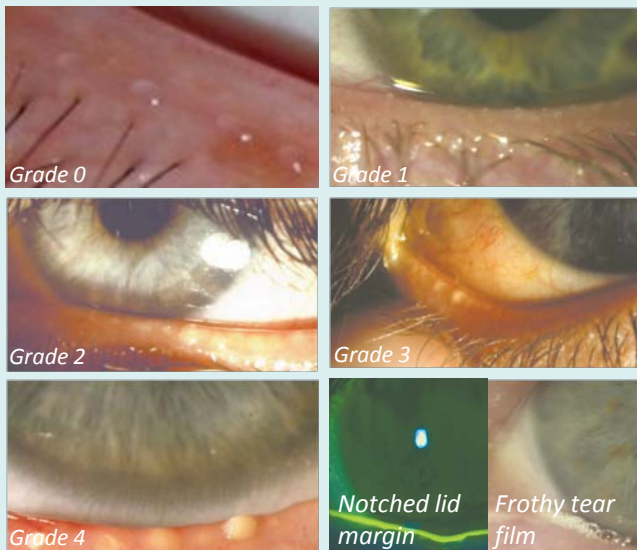


How to manage patients with Meibomian Gland Dysfunction (MGD)

What You Need to Know

Slit Lamp Viewing: (1) Diffuse beam (2) Medium magnification (16x) (3) Direct illumination

Grading:



Grade 0: All glands unobstructed (expel clear fluid on mild digital pressure)

Grade 1: One or two glands partially obstructed (expel clear fluid on mild digital pressure)

Grade 2: Three or more partially obstructed glands (glands produce opaque fluid with digital pressure)

Grade 3: One or two blocked glands with many partially obstructed glands (frothy tear film)

Grade 4: More than three blocked glands in each eye with most of remainder partially blocked

Incidence:

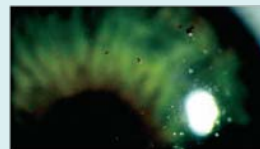
- 4–20% (Caucasian population) to over 60% (Asian population); not directly due to CL wear but affects it



- Increases with age, blepharitis (left) and rosacea

Aetiology:

- Chronic, diffuse abnormality of meibomian glands, with duct obstruction and/or qualitative / quantitative changes in glandular secretion



- Progressive inflammatory process associated with blepharitis, mechanical trauma, lowering lid temperature, microbial contamination and make-up (left)

Symptoms:

- Ocular discomfort
- Dryness
- Irritation & itching
- CL intolerance
- Smearly vision (greasy lenses)
- Photophobia

Signs:

- Absent or cloudy meibomian gland secretions on gland expression
- Frothy tears with reduced tear film quality and break up time
- Thickened lid margins with distorted meibomian glands
- Marginal dry eye signs, clinically apparent inflammation and ocular surface disease
- Discrete lipid deposits or greasy lipid layer over lens surface (above)



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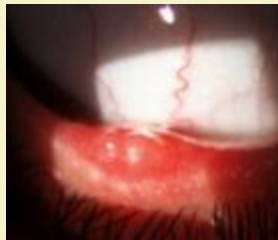
How to manage patients with Meibomian Gland Dysfunction (MGD)

What You Need to Recommend Your Patients

- Recommendations:**
- Explain the chronic nature of the condition
 - Manage \geq grade 2 or if symptoms
 - Lens wear can be continued if tolerated
 - Advice on diet (increase omega-3 fatty acid intake), effect of work/ home environments on tears and possible drying effect of some medications
 - Consider contact lenses with shorter replacement frequency
 - Artificial tears
 - Surfactant lens cleaning
 - Daily eyelid hygiene including warming/ expression followed by moderate to firm massage and expression of meibomian gland secretions
 - If severe, systemic medication (tetracyclines) may be necessary

Prognosis: Generally good resolution of symptoms and improvement in tear quality following treatment.

Differential Diagnosis:



Hordeolum (external/stye and internal/meibomian cyst) and chalazion (left)



MGD associated with reduced TBUT and inferior corneal staining (left)

How to Find Out More

- [CLICK HERE FOR FURTHER READING/REFERENCES](#)
- [CLICK HERE FOR A FLASHCARD ON MGD](#)
- [CLICK HERE FOR OUR GUIDE TO ASSESSING THE TEAR FILM](#)
- [CLICK HERE FOR A REFRESHER ON SLIT LAMP TECHNIQUES](#)

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VISION CARE INSTITUTE

How to manage patients with Meibomian Gland Dysfunction (MGD)

Patient Case Study

When you have read this guide and our recommended resources, why not take part in Johnson & Johnson Vision Care Institute self-assessment quiz to test your clinical, diagnostic and management skills. Choose only one answer to each question then check the answers at the foot of the page to see whether it's correct. Good luck!



Patient BH is a 41-year-old office worker who has worn monthly replacement hydrogel contact lenses for more than 20 years. At a routine aftercare appointment she complains of dry, uncomfortable eyes and blurry vision at the end of the working day, when she sometimes has to remove her lenses.

Questions:

1 What slit lamp technique would you use to examine this patient's lids?

- A. High magnification, narrow beam
- B. Indirect retro illumination
- C. Diffuse illumination, medium magnification
- D. Specular reflection

2 What grade would you give to her MGD?

- A. Grade 1
- B. Grade 2
- C. Grade 3
- D. Grade 4

3 Which further investigation is most relevant to these signs and symptoms?

- A. Keratometry
- B. Measurement of tear meniscus height
- C. Over-refraction
- D. Corneal scrape

4 Which of the following management options could you consider?

- A. Switch to silicone hydrogel lenses with a shorter replacement frequency
- B. Artificial tears
- C. Daily lid hygiene including warming/expression and lid massage
- D. Any of these options

1 Correct answer is C. Using a diffuse beam, 16x magnification and direct illumination is the best method of examining lids for MGD

2 Correct answer is B. Expressing the glands shows at least three are partially obstructed but not blocked and there is no froth in the tear film

3 Correct answer is B. MGD is a major cause of dry eye so assessing tear film quantity in this way (right) would be an appropriate technique



4 Correct answer is D. MGD ≥ grade 2 should be managed. Any of these options could be considered. Others include advice on diet