

# Myopia Management with Multifocal Corneal Gas Permeable Lenses

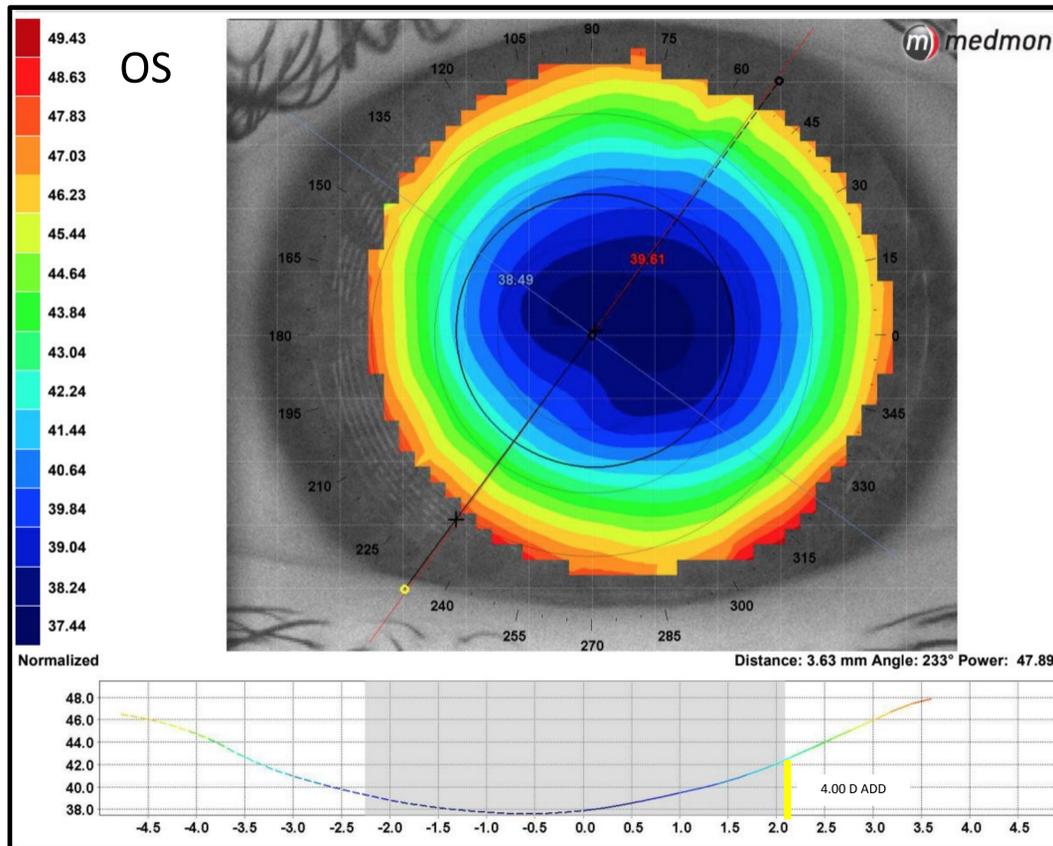
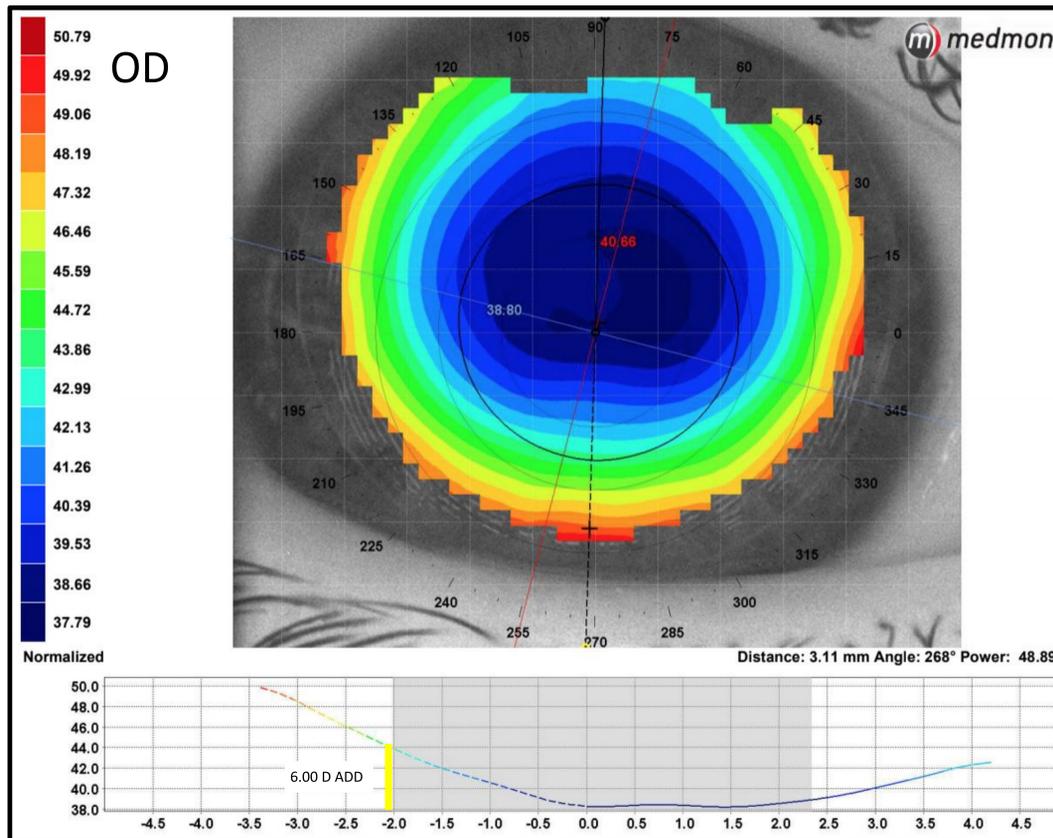
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## Introduction

Optical myopia management treatments aim to provide peripheral defocus on the retina in order to slow the progression of myopia. Slowing the progression of myopia has become a prominent goal of the optometric community as a response to a worldwide myopia epidemic. Rapidly increasing incidence and magnitude of myopia in the general population could create a public health crisis, as rates of complications such as glaucoma, retinal detachment, and myopic macular degeneration all increase in prevalence in patients with myopia. Traditional methods of myopia management include orthokeratology, soft multifocal contact lenses, and atropine eye drops. This case describes a variation of the preceding treatments, based off the treatment strategy of orthokeratology and soft multifocal contact lenses.

## Case Description

A patient presented to a clinic for a myopia management consultation. The patient was fifteen and had degenerative myopia, with a presenting prescription of -13.00 -1.75 x 015 OD and -12.75 -2.75 x 165 OS. While his prescription was already high magnitude, his parents were motivated to use all methods available to prevent further progression and increasing ocular health risk factors. The patient was using 0.025% atropine eye drops, which alone had not demonstrated adequate control. Due to the patient's high myopia, he was not a good candidate for orthokeratology. Soft multifocal contact lenses were selected as the best treatment option. The patient had never worn contact lenses, and he returned to the office five separate occasions to work with staff and doctors on the training of insertion and removal of the soft contact lenses.



## Case Description, Contd

The patient struggled to hold his eyelids open wide enough to place the contact lens on the globe. At the fifth encounter, a small diameter corneal GP was given to the patient with an explanation of the insertion technique for that lens. The patient was able to insert the lens himself on his second try. The small diameter lens was easier for the patient to handle. Topography was taken and a multifocal aspheric corneal GP was ordered with a +3.00 add OU. The patient experienced acceptable distance vision with the lenses, and topography demonstrated that the add of the multifocal lens provided treatment similar to a soft multifocal contact lens.

## Conclusion

While traditional methods of myopia management should remain the first choice for most patients, creative solutions can achieve the same goals for patients who are unsuccessful with standard options. Center distance multifocal contact lenses with peripheral add power provide the same peripheral defocus demonstrated to slow the progression of myopia. When looking to implement treatments, it is important to consider the patient needs and the goals of the treatment in order to find the best fit for patient and treatment success.

## Limitations

At this time, no studies have been published evaluating the effectiveness of corneal multifocal gas permeable lenses in slowing the progression of myopia. It is possible that due to the smaller size and greater movement of the gas permeable lens compared to a soft multifocal contact lens, the treatment is less effective. This case is presented as an alternative to traditional, literature supported myopia management treatments when other options are eliminated. It is not presented as a superior treatment.

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## Contact Information

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