CORNEAL ENDOTHELIAL MICROSCOPY/SPECULAR MICROSCOPY
OTH903.002

COVERAGE:

Corneal endothelial microscopy may be appropriate as a pre-operative test before intra-ocular surgery (e.g., cataract surgery) in order to identify patients at risk for postsurgical corneal decompensation. However, since it is considered a component of the usual pre-operative assessment, no additional benefit is payable over the pre-operative assessment or global surgery fee.

Corneal endothelial microscopy may be eligible for coverage in the diagnosis and management of patients with corneal dystrophies or other corneal abnormalities.

DESCRIPTION:

The cornea consists of several layers; the epithelium, stroma, and the single-celled endothelium. The endothelium is the most posterior layer, interfacing with the aqueous humor of the anterior chamber of the eye. Corneal clarity is dependent on a relatively dehydrated state. The endothelium plays a key role in maintaining dehydration by both preventing aqueous humor from entering the cornea and by pumping fluid from the corneal stroma into the anterior chamber.

The corneal endothelial cells do not replicate. When destroyed by disease or surgery, the remaining cells enlarge and spread out to cover the posterior corneal surface, thus decreasing the cell density (cell count). Corneas with extremely low endothelial cell densities can no longer maintain a dehydrated state. The corneas may decompensate, swell, and become cloudy over time, with an associated loss of visual acuity.

The slit lamp (or biomicroscope) is commonly used to assess the status of the cornea and corneal endothelium. However, the specular microscope provides a magnified view of a small area of corneal endothelial cells in order to measure and record endothelial cell counts of the cornea. This technique is also known as endothelial microscopy. Images of the endothelium seen with specular microscopy can be recorded on videotape or photographic film in order to facilitate estimates of endothelial cell density and configuration. The cell density of an individual’s cornea can then be compared to a previously documented normal range, allowing for a rough estimation of the ability of that cornea to withstand damage from surgical or other trauma.

Corneal endothelial microscopy has been frequently used as a pre-operative test before intraocular surgery to identify patients at risk for corneal decompensation after surgery. In this setting, the most common application has been cataract surgery. In addition, corneal endothelial microscopy has been used in patients with corneal endothelial dystrophies, including Fuchs’ endothelial dystrophy, posterior polymorphous dystrophy and iridocorneal endothelial syndromes. Specular microscopy has also been widely used in the evaluation of donor tissue for corneal transplantation.
RATIONALE:

The pricing recommendation to consider corneal endothelial microscopy as part of the evaluation and management of the patient is an extension of an existing Medicare policy.

PRICING:

Endothelial cell photography is considered part of the pre-surgical comprehensive eye examination for cataracts and is not allowed as a separate test. It should not be billed separately from the examination.

DISCLAIMER:

State and federal law, as well as contract language, including definitions and specific inclusions/exclusions, takes precedence over Medical Policy and must be considered first in determining coverage. The member’s contract benefits in effect on the date that services are rendered must be used. Any benefits are subject to the payment of premiums for the date on which services are rendered. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

HMO Blue Texas physicians who are contracted/affiliated with a capitated IPA/medical group must contact the IPA/medical group for information regarding HMO claims/reimbursement information and other general polices and procedures.

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