

Corneal sensitivity as a potential marker of diabetic neuropathy

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20479750&lokasi=lokal>

Abstrak

Diabetes mellitus (DM) is a complex and chronic metabolic disorder leading to many complications. One of the most common complications of DM is diabetic neuropathy. There are many studies exploring corneal sensitivity as a potential marker of diabetic neuropathy. This review aims to explore association between corneal sensitivity and diabetic neuropathy. In diabetic neuropathy, corneal sensitivity is impaired due to low level of corneal nerve trophic factors, impaired sensory nerve fibers, and lost communication of dendritic cell. In diabetic patients, this condition can be assessed by several techniques, such as Cochet Bonnet aesthesiometry, non-contact corneal aesthesiometry, and confocal microscopy. Few promising therapeutic targets for impaired corneal sensitivity include stem cell and growth factor therapy that can be used to prevent complication in patient with diabetic neurotrophic keratopathy. Impaired corneal sensitivity serve as a potential marker of diabetic neuropathy. Doctors, ophthalmologists and internists, should anticipate the possibility of observing the following changes in diabetic patients with neuropathy by using corneal sensitivity assessment test.