

Review of *Madhuyashtikadi Anjana* (Herbal Eye Liner) Used in the Management of *Timira* (Ametropia)

M.A.P.H. Silva^{1*}, J.N. Dahanayake² and L.D.R. De Silva³

¹*Institute of Indigenous Medicine*

²*Unit of Dravyaguna Vignana, Institute of Indigenous Medicine*

³*Unit of Shalya Shalakya, Institute of Indigenous Medicine*

University of Colombo, Rajagiriya 10107, Sri Lanka

**hashanisilvasp@gmail.com*

Visual impairment is a major health problem globally according to the WHO. The abnormal optical system causes visual impairment which is compared with *Timira* (Ametropia / refractive errors). *Madhuyashtikadi anjana* (MA) is a modified herbal *Anjana* (herbal eye liner) used in Sri Lankan Traditional Ophthalmology for a long period without reported toxic effects. The present study was focused to logically analyze the effectiveness of MA considering the Ayurveda pharmacodynamics and the modern pharmacological attributes. The literature was searched in authentic Ayurveda, modern, traditional texts, index journals and databases such as Pub Med, Medline and Google scholar with specific key words. The data were tabulated and analyzed by percentage. MA consists of nine ingredients viz. *Glycyrrhiza glabra*, *Piper nigrum*, *Piper longum*, *Symplocos racemosa*, *Coscinium fenestratum*, *Curcuma longa*, *Terminalia chebula*, *Terminalia bellirica* and *Phyllanthus emblica*. The prominent *Dosha karma* was *Kapha Vata shamaka* (44.4%) which clears the channels of the eye thus, enhance normal vision. The ingredients possess *Katu rasa* (pungent) (30%), *Kashaya rasa* (astringent) (25%), *Tikta rasa* (bitter) (20%), *Madhura rasa* (sweet) (15%) which collectively mitigate the abnormal eye function. The *Shita virya* (cold potency) was prominent (55.5%) which pacify the provoked *Pitta dosha* due to the cooling effect and maintains normal visual acuity. The most prominent *Guna karma* are *Chakshushya* (promote healthy vision) and *Balya* (strength) which consecutively improves the vision and strengthen the eye muscles, nerves and vessels. The herbal ingredients are possessed with the antioxidant property where the eye gain normal color, movements and vision. Considering the Ayurveda pharmacodynamic properties, Ayurveda and modern pharmacological attributes of the ingredients of MA, it is capable of managing *Timira* (Ametropia) effectively which will be beneficial for the patients. Further it is a need to conduct clinical trials to prove the effectiveness of *Madhuyashtikadi anjana* in managing Ametropia.

Keywords: Ametropia, *Timira*, *Chakshushya*, Herbal eye liner