



Procedure Information Sheet

Introduction

Myopia or near- or short-sightedness is mainly due to elongation of the eyeball in childhood and adolescent, resulting in blurry vision for distant object. Patients with high myopia have higher risks to develop glaucoma, macular degeneration and other eye diseases. Therefore, controlling the progression of myopia in children is important at an early age.

Atropine eyedrops is an effective method for myopia control by slowing down eyeball elongation. Studies on the effectiveness of atropine eye drops in reducing myopia progression started as early as in the 70's. High concentration atropine (1%) has more side effects, such as increased sensitivity to light and near blur. Children may need sunglasses or transition lenses for outdoor activities or progressive lenses for reading. Due to the above reasons, clinical use of atropine is not popular.

Recent clinical studies in Hong Kong and Singapore showed good efficacy with low concentration atropine (0.01% to 0.05%) in retarding myopia progression but with little side effects. After 2 years of treatment, myopia progressed less than -0.50 D on average, but over -1.00 D in the control group without treatment. After withdrawal of atropine after 2 years of treatment, in children treated with atropine 1%, there was a rapid increase in myopia whereas those using atropine 0.01% showed minimal change.

Indication

Slow down myopia progression in children.

The Operation / Procedure

Apply one drop to each eye at night before sleep. Attend follow-up as instructed. Wear spectacles as usual.

Before the Operation / Procedure

1. Atropine is classified as Part 1 poison medication in Hong Kong. Low concentration atropine is currently not registered by Department of Health, HKSAR. Parents or guardians are required to give their written consent to agree the use of non-Hong Kong registered medication.
2. Eye assessment, measurement of the refractive power and length of the eyeballs are required before commencing the use of atropine eyedrops.
3. The medication should be stored at room temperature. Do not refrigerate and avoid direct sunlight.

After the Operation / Procedure

Children should have their eyes examined every 4-6 months, including measurement of the refractive power and axial length of the eyeballs. Myopia progression and side effects of the eyedrops should be monitored.

Risk and Complication

Low concentration atropine has minimal effects on pupil size, accommodation and near vision. Please inform your doctor of any side effects encountered. Photochromic lenses may be suggested to relieve photophobia. Progressive lenses can be used for reading in case of reduction in accommodation occurs.

Rarely children may experience dry mouth, fever, palpitation, constipation, flushing skin, skin or eye allergy. If side effects occur, please stop using the eyedrops and seek early medical consultation.

Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

Patient's Label

Patient Name: _____
Hospital No: _____
Episode No: _____



Myopia Control with Atropine

1. Yam JC, Li FF, Zhang X, et al. **Two-Year Clinical Trial of the Low-Concentration Atropine for Myopia Progression (LAMP).** *Ophthalmology* 2020; 127:910-919.
2. Chia A, Lu QS, Tan D. **Five-Year Clinical Trial on Atropine for the Treatment of Myopia 2. Myopia Control with Atropine 0.01% Eyedrops.** *Ophthalmology.* 2016; 123: 391–399
3. Pineles SL, Kraber RT, VanderVeen DK, et al. **Atropine for the Prevention of Myopia Progression in Children. A Report by the American Academy of Ophthalmology.** *Ophthalmology* 2017; 124: 1857-1866

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