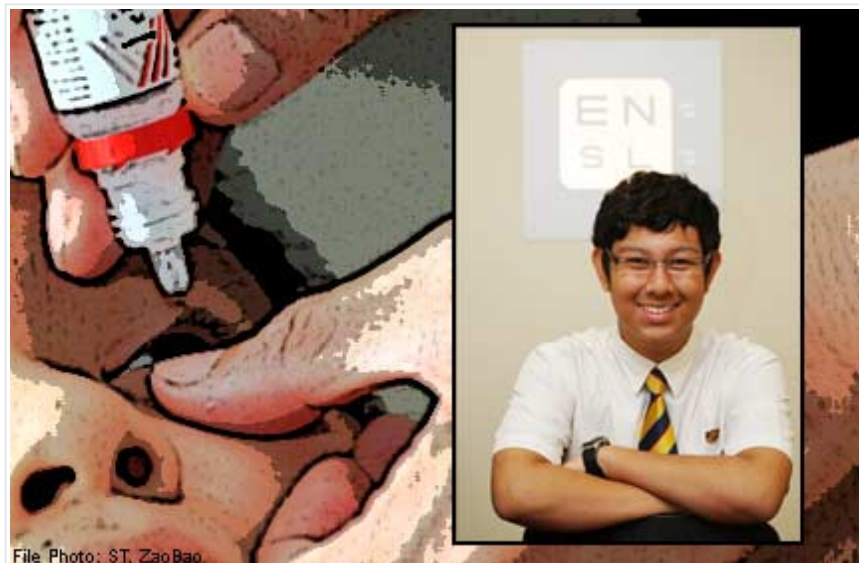


A drop a day keeps Nikhil's myopia at bay



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By Poon Chian Hui

SINGAPORE - When he was 10, Nikhil Angappan had myopia of 175 degrees in both eyes. Seven years on, the Anglo-Chinese School (Independent) student's prescription increased by just 25 degrees.

He was one of 400 children put on diluted atropine eyedrops by researchers at the Singapore National Eye Centre (SNEC) as part of a five-year trial.

And the results have been stunning, said SNEC. The research showed that the eyedrops, when given at ultra-low doses, slowed myopia by up to 60 per cent.

Said Nikhil, now 17: "It may seem like a big inconvenience to put in the eyedrops every day. But after a while, it becomes routine. All it takes is a few seconds before you go to sleep."

For 16 years, doctors at the Singapore National Eye Centre (SNEC) have been trying to find a way to stop myopia in its tracks.

They say they finally have the answer: eyedrops with a concentration of 0.01 per cent atropine.

"We are at a stage where we are sure that we have a way to treat myopia," said SNEC medical director Donald Tan, adding that the eyedrops could be available for prescription in the next six months. "This is a breakthrough in the fight against myopia here."

With 80 per cent of people afflicted by the time they turn 18, Singapore is considered the myopia capital of the world.

The eyedrops do not cure myopia, but they seem to slow down its degenerative effects by up to 60 per cent. This means that a short-sighted child, whose eyesight would normally get worse by 100 degrees a year, will only experience a 40-degree increase.

For decades, it has been known that atropine, which is extracted from certain plants, can be used to counter myopia. The drug seems to stop the eyeball from growing longer, a hallmark of myopia.

But it has not been widely used because of the side-effects caused by eyedrops with 1 per cent atropine, the normal available dose.

As the drug dilates the eye's pupil, letting in more light, children needed to wear sunglasses before going out in the day. Atropine also stops the eye muscles from working, making it harder to focus on

near objects.

That meant that children needed to wear bifocal eyeglasses when reading. Several other studies also found that when the use of atropine stopped, the myopia "rebounded".

The answer was eyedrops with 0.01 per cent atropine.

In an SNEC study which began in 2006, 400 short-sighted children were put on daily eyedrops with three different concentrations: 0.5 per cent, 0.1 per cent and 0.01 per cent. The children were tracked for five years.

Results showed that side-effects were minimised for the most diluted eyedrops. Children did not need sunglasses or bifocals, but could go about their daily lives as usual.

There was almost no rebound effect when the eyedrops were stopped for a year.

After five years, those on the 0.01 dose also fared the best, with the least decline in their eyesight.

The findings were presented at an international conference earlier this week.

Dr Lam Pin Min, an ophthalmologist at KK Women's and Children's Hospital, said he was "certainly looking forward" to the new eyedrops.

Currently, he prescribes regular (1 per cent) atropine to several young patients. But they have to use special spectacles due to the side-effects. With price tags of \$400 to \$1,000, the cost of the spectacles can be "prohibitive", said the MP for Sengkang West.

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