

Controversial treatment using coloured overlays in visual processing disorders

Dear Editor:

Pediatric ophthalmologists often encounter children referred by GP/pediatric colleagues with learning difficulties, Autism Spectrum Disorders (ASD), Attention Deficit Hyperactive Disorder (ADHD), and dyslexia. Majority of educated parents of these children, prior to their clinic consultation would have already researched thoroughly on sensory processing disorders including visual, auditory or tactile sensory perceptual difficulties. A routine search on any search engine would bring upon scores of websites of centres offering unique and highly successful treatment for any visual processing problem in a child. As a result, the parents arrive to the clinic with high hopes and false assurances hoping the best for their child, from an eye clinic for a problem which is still not fully understood.

One such treatments commonly offered is around the use of coloured overlays from centres claiming to be run by expert behavioural optometrists trained in 'Intuitive Colourimetry'.^[1] The treatment is based on the early works of Helen Irlen, an educational psychologist. She anecdotally showed an improved visual performance and reading abilities when offered coloured lenses or overlays. She then proposed that certain wave lengths of light could be causing symptoms of visual stress in children and hence eliminating such offending wave lengths of light could improve the stressful symptoms related to luminous contrast.^[2] She believed this would improve the reading ability and hence the comprehension. She eventually termed the condition as Irlen Syndrome (or Meares-Irlen syndrome). More recently it is also called Visual Stress Syndrome or Scotopic Sensitivity Syndrome (SSS).

The practitioner tests the reading speed with different coloured lenses and the one which offers the highest reading speed in terms of 'number of words' read would be the colour of choice for that particular child.^[3,4] Coloured lenses and overlays come with a cost, and sadly the child is known to change their preferred colour pretty soon in many of these cases, incurring a constant expense for the family.

This syndrome is very loosely diagnosed by opticians prescribing the overlays, and the condition lacks any scientific

diagnostic criteria. Several well-designed studies failed to reproduce any convincing data around the efficacy of the treatment with overlays. Nevertheless, the commercial practices offering such treatments are on the rise and understandably they are catering to the needs of anxious and desperate parents who would be willing to go to any extent if there is a solution for their child's visual problems.

The role of pediatric ophthalmologists in such cases is crucial in that we need to understand the genuine concerns of the worried parents and direct them towards the appropriate path that is evidence-based and not let them fall prey to the catchy websites offering poorly-evidenced treatments. We need to educate parents in the pathogenesis of the visual processing problems to our best. We need to emphasise them that conditions such as dyslexia are more of a language processing problem than a vision-related one, as once thought. Many of these children have excellent visual acuities and normal ophthalmic and orthoptic assessments. Our role should be limited to diagnosing and managing any underlying anomalies of the binocular system including underlying refractive errors, amblyopia, squints, and convergence insufficiency. A detailed orthoptic evaluation and treating the binocular anomaly is the best management pathway for such children.

Despite lacking sound evidence, there is a big market for coloured overlays in the developed part of the world. Such practices are directly sold to the teachers and parents by vested interests and that is what is keeping this market still profitable. The time is not far for the behavioural optometrists to pitch in and start marketing coloured overlays in new economic powerhouses such as China and India. The parents should realise that these treatment strategies lack robust scientific basis and take it with a pinch of salt, if they still wish to pursue. The American Academy of Ophthalmology and the American Academy of Pediatrics firmly repudiated the use of lenses, stating that there was no scientific basis and therapeutic benefits to support their use. They also advised that any such investments would divert resources from evidence-based treatment.^[5]

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