

CASE STUDY

Presenting Reason -

19 year old female referred from optometrist due to the need of high reading ADD in her glasses compared to her age. Patient complained that her vision at near is blurred despite using her glasses.

Medical History -

- Nil previous ocular history
- Unremarkable family history
- General health is good

Initial Visit Clinical Examination & Testing:

Glasses Prescription

R +0.5DS (Add +1.75)
L +0.5DS (Add +1.75)

Vision c gls R 6/7.5 (N10) L 6/7.5 (N10)

Pre-Cyclo Refraction:

R +0.75 / +0.25 X 101
L +1.25 / +0.25 X 68

Post-Cyclo Refraction:

R +1.00 / +0.25 X 120 ADD +2.50 = 6/7.5 , N5
L +1.00 / +0.25 X 90 ADD +2.50 = 6/7.5 , N5

Accommodation Reserves using RAF Rule:

R = 3D equivalent to 46 y/o
L = 3D equivalent to 46 y/o

Rest of examination was unremarkable. No signs of accommodation spasm or paresis were noted.

Visit 2 (Orthoptic Clinic) May 2023:

In clinic, orthoptic exercises were performed to improve accommodation reserves. Patient was unable to do any cycles of flipper lenses.

Home exercises such as print to nose were given to improve accommodation reserves.

Visit 3 Orthoptic Clinic) Nov 2023:

Accommodation Reserves using RAF Rule:

R = 3D equivalent to 46 y/o
L = 3D equivalent to 46 y/o

Vision Unaided R 6/7.5 (N10) L 6/7.5 (N10)
Vision c gls R 6/6 (N5) L 6/6 (N5)

Patient reports not being compliant with exercises. Re-education was done and re-emphasis on the importance of exercises. In clinic training was also performed.

Visit 3 (Orthoptic Clinic) Feb 2024 :

Accommodation Reserves using RAF Rule:

R = 9D equivalent to 25 y/o
L = 9D equivalent to 25 y/o

Vision Unaided R 6/6 (N5) L 6/6 (N5)
Vision c gls R 6/6 (N5) L 6/6 (N5)

Patient compliant with home exercises. Patient reports glasses are too strong for eyes now. Patient using +1.00 chemist readers to help with reading as still not comfortable reading without glasses. Patient can do 5 cycles of flipper lenses in clinic.

Visit 4 & 5 (Orthoptic Clinic) April - June 2024 :

Accommodation Reserves using RAF Rule:

R = 10D equivalent to 20 y/o
L = 10D equivalent to 20 y/o

Vision Unaided R 6/6 (N5) L 6/6 (N5)

Patient compliant with home exercises. Patient stopped using any glasses as can read comfortably unaided.

Diagnosis:

Accommodation insufficiency is a vision condition in which the eyes struggle to focus on nearby objects. It occurs when the eye's lens cannot adjust effectively for close-up tasks, often due to the ciliary muscles not contracting properly. This condition is common in children and young adults and can affect reading and close-up work.

Signs and Symptoms:

- Eye strain, headaches, blurry vision when reading, and fatigue with near tasks.
- They may also find it difficult to focus on close-up objects for long periods and might need to take frequent breaks.

Treatment:

Treatment typically involves prescription reading glasses, vision therapy exercises to strengthen focusing ability, and sometimes, lifestyle adjustments like taking breaks during close-up work. In some cases, bifocals or multifocal lenses might be prescribed.

Prognosis:

With proper treatment, the prognosis for accommodation insufficiency is generally good. Many patients experience significant improvement in symptoms, especially with consistent vision therapy. For children, improvement can often be seen within a few months.

Treating Doctor and Orthoptist: Dr Samuel Dance, Orthoptist Rafal Al-Qaseer



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