

**Supplementary Table 1.** Clinical characteristics of the patients taking part in the study.

Patient	Sex	Diagnosis	Corrected visual acuity	Ocular misalignment in primary gaze, in degrees
1	M	Dragged fovea syndrome	Right 6/12 Left 6/5	Dist: Right hypertropia, 3 Near: Right exotropia, 2
2	F	Thyroid eye disease	Right 6/5 Left 6/12	Dist: Right hypertropia, 2 Near: Right hypertropia, 2
3	F	Microvascular 6 <sup>th</sup> nerve palsy	Right 6/9 Left 6/12	Dist: Right esotropia, 4 Near: Right esotropia, 4
4	F	Microvascular 3 <sup>rd</sup> nerve palsy	Right 6/18 Left 6/18	Dist: Left exotropia, 6 & left hypotropia, 2 Near: Left exotropia, 4
5	F	Skew deviation secondary to MS	Right 6/12 Left 6/9	Variable left hypotropia and excyclotorsion
6	M	Traumatic 3 <sup>rd</sup> nerve palsy	Right 6/5 Left 6/9	Dist: Left exotropia, 6 Near: Left exotropia, 6
7	F	Microvascular 6 <sup>th</sup> nerve palsy	Right 6/24 Left 6/12	Dist: Left esotropia, 6 & left hypotropia, 4 Near: Left esotropia, 6 & left hypotropia, 4
8	F	Thyroid eye disease	Right 6/4 Left 6/4	Dist: Left hypertropia, 4 Near: Left hypertropia, 3
9	M	Midbrain stroke	Right 6/6 Left 6/6	Dist: Right exotropia, 2 Near: Right exotropia, 6
10	M	Unknown	Right 6/5 Left 6/18	Dist: Left exotropia, 6 Near: Orthotropia
11	M	Left orbital tumour	Right 6/5 Left 6/12	Orthotropia, but severe limitation of left eye motility
12	F	Traumatic 4 <sup>th</sup> nerve palsy	Right 6/6 Left 6/6	Dist: Right hypertropia, 2 Near: Right hypertropia, 1