

FORMAT FOR REPORTING OF GRAVES ORBITOPATHY CASES

CT finding in these patients are to be reported as follows:

1. **Proptosis:** The normal globe position is 9.9 ± 1.7 mm behind the interzygomatic line. For our purposes we will grade proptosis as none, mild, moderate or severe.

None – interzygomatic line > 6 mm anterior to posterior scleral margin.

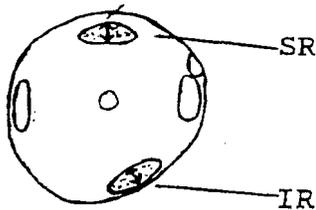
Mild – interzygomatic line < 6 mm anterior to posterior scleral margin but anterior to sclera.

Moderate – interzygomatic line on posterior sclera.

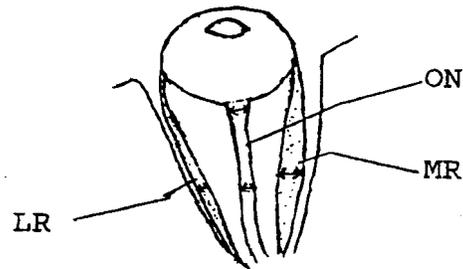
Severe – interzygomatic line behind posterior sclera.

2. **Extraocular muscles:** Muscle size should be measured as shown on the diagram and the measurements converted to a true millimeter measurement, (measure using doctors' console: actual mm).

Coronal:



Axial:



The normal muscle sizes are as follows:

Medial rectus 4.1 ± 0.5 mm (1 SD)

Inferior rectus 4.9 ± 0.8

Superior rectus 3.8 ± 0.7

Lateral rectus 2.9 ± 0.6

Superior oblique 2.4 ± 0.4

Comment should also be made regarding any low density changes visualized within the muscle.

3. **Bone Change:** Occasionally bony erosion can occur adjacent to enlarged muscles. This should be commented on if present.
4. **Superior ophthalmic vein size:** This should only be measured on the axial view. The normal measurement is 1.8 ± 0.5 mm.

5. **Optic sheath size:** This is measured on the axial view. The normal measurement is as follows (record both portions on data sheet):

Retrobulbar portion 5.5 ± 0.8 mm

Waist portion 4.2 ± 0.6 mm

6. **Apical crowding:** This is assessed on coronal views in which the transverse diameter of the orbit is 10 -15 mm. Normally the optic nerve is surrounded by fat, but with crowding there is a variable amount of muscle in contact with the optic nerve. The crowding is graded as follows:

No crowding - normal fat around the optic nerve.

Mild crowding - < 25% of ON circumference abutted by muscle.

Moderate crowding - 25 – 50% ON circumference abutted by muscle.

Severe crowding - > 50% of ON circumference abutted by muscle.

7. **Lacrimal gland displacement:** If more than 50% of the lacrimal gland is anterior to the anterolateral wall of the orbit, it is considered to be displaced and this should be commented on.

Use axial view for:

Proptosis

Optic nerve

Superior Ophthalmic vein

Medial rectus

Lateral rectus

Lacrimal gland position

Use coronal view for:

Superior rectus

Inferior rectus

Apical crowding

Superior oblique