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 $9.9 \pm 1.7$ 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 $4.1 \pm 0.5$ mm (1 SD)
   Inferior rectus $4.9 \pm 0.8$
   Superior rectus $3.8 \pm 0.7$
   Lateral rectus $2.9 \pm 0.6$
   Superior oblique $2.4 \pm 0.4$

   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 $1.8 \pm 0.5$ 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.

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