

Where is the Surgical Apex?

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Aim: The surgical apex of the orbit is a concept that is well understood by orbital surgeon but was never defined. It should represent the area where the volume decreases significantly causing crowding. Identifying involvement of pathological processes in this area is of major importance in patient management. Our objective is to define the surgical apex of the orbit using CT imaging

Materials and Methods: Retrobulbar volume was examined using CT imaging in 100 patients without orbital pathology. The length between the two landmark points, the optic nerve attachment to the globe and the point of exit from the orbit, was divided into five equal segments and the volume of the five segments V1,V2,V3,V4,V5 compared so that the most significant area of volume decrease change could be established.

Results: Volume begins to decrease significantly in the V3 segment with the change in volume becoming major in the V4 and V5 segments.

Conclusions: We defined the surgical apex of the orbit as being the posterior 3/5th of the retrobulbar space. This area needs special consideration by ophthalmologists and neuroradiologists when evaluating patients with orbital disease.