

Fig. 3 A - Exposed Zygomatic Arch

(Fig.3) was exposed from the glenoid tubercle to the body of the zygomatic bone, after reflecting the facial nerve branch along with the superficial fascia. The osteotomy cuts were made with a thin bur at the root of the arch and near the body. The osteotomized arch was reflected from the temporal bone in an inverted 'U' shape pedicled inferiorly, preserving the vessels on either side. The access was open to the petrous temporal region (Fig.4). After completion of the neurosurgical procedure the muscle was sutured back, the osteotomized arch was replaced in the previous position and stabilised with 1-0 vicryl sutures, (Fig.5) wire or plate fixation would have produced scattering during post operative radiological procedures⁴. The wound was closed in layers.

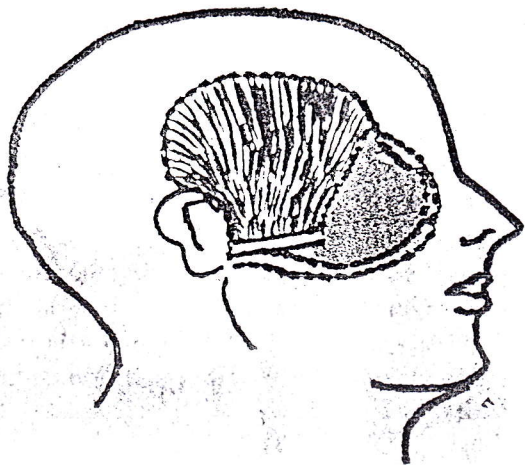


Fig. 3 B - Illustration



Fig. 4 - A. Retracted Zygomatic Arch and Temporalis Muscle

Discussion : Access osteotomies are nowadays primarily directed towards benign lesions. The selection of a particular technique depends on determining the accurate location of the lesion with the help of radiological or endoscopic techniques⁶(fig.6).

A significant advance in the lateral approach to the skull base was made by FISCH and later developed and popularised by FIJITSU and KUWABARA in 1985¹. FISCH⁹ proposed three approaches name A, B & C types for the posterior, middle and anterior regions of the lateral compartment of the skull base respectively. Trans zygomatic osteotomies are performed with 'B' type. The external acoustic meatus and the lateral orbital rim are resected with the A

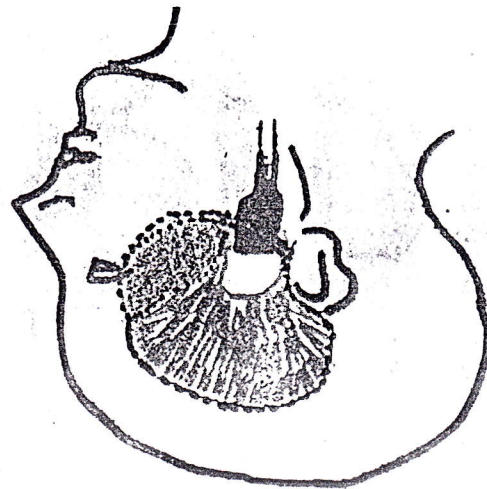


Fig. 4 B - Illustration



Fig. 5 - A. Relocation of the arch after suturing back the temporalis muscle

& C types. The temporal bone osteotomy is performed in conjunction with any of these types as per the requirement of the exposure.

The modified zygomatic arch osteotomy described in this paper was published by PITELLI as a cadaveric and clinical study in 1986². This technique avoids wide exposure and extensive osteotomies. The Alkayat Bramley incision has less morbidity and adequate exposure compared to the bicoronal incision. Avoiding total zygomatic bone disarticulation prevents later facial asymmetry and reduces damage to the zygomatico temporal and zygomatico facial branches of the facial nerve. As

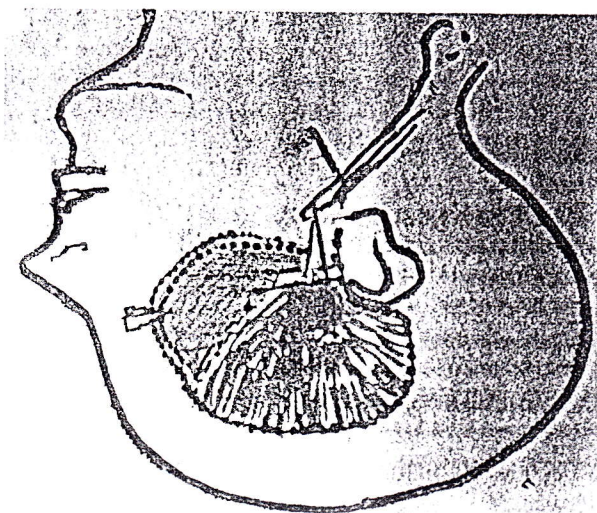


Fig. 5 - B. Illustration

only a portion of the temporalis muscle was raised from the temporal bone, post operative temporalis muscle atrophy is avoided.

The advantages of this technique include

1. Improved access to the lesion
2. Minimal brain retraction
3. Protection to brain and neuro vascular structures
4. Access to adjacent anatomical compartments
5. Minimal Morbidity
6. Minimal additional operative time.

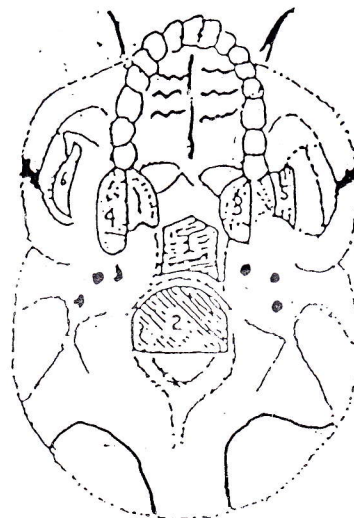


Fig. 6 - 1. Clivus 2. Cervical Spine 3. Pterygoid space/medial 4. Pterygoid space/lateral 5. Infra temporal fossa 6. Middle cranial fossa

The zygomatic arch osteotomy procedure facilitates the access to the middle and medial region of the infra temporal fossa. The other modifications provide access to the various regions of the lateral compartment, the infra temporal fossa, retromaxillary region, posterior orbital region and the pterygomaxillary region of the skull base. In general, these techniques have acceptable morbidity, minimal scarring and preserve satisfactory post operative function.

The possible complications are damage to the zygomatic branch and the trunk of the 7th nerve, atrophy of the temporalis muscle, facial asymmetry, re-

duced mouth opening and temporary reduced chewing power of the osteotomized side.

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