hemorrhage. This specimen also demonstrates the localized snarl of vessels through which the operator must go if he approaches alongside of it to ligate the entering vessels at its base. The massive hemorrhage incident to dissecting through the numerous cortical veins filled by arterial pressure is reason enough to discourage the boldest brain surgeon. Since it is probably safe enough to clip the entering middle cerebral artery in these lesions, as shown by Case 2, this should be the procedure of choice where it appears to be the major arterial supply to the fistula. The exposure of this vessel can be greatly facilitated by withdrawing cerebrospinal fluid by spinal puncture. Otherwise, it may be technically impossible except when room is obtained through a preliminary evacuation of a large degenerated, subcortical clot.

CONCLUSIONS

Case 1 of this report demonstrates the typical antemortem and postmortem pathologic picture of arteriovenous aneurysm of the brain vessels and the futility of carotid ligation as a method of preventing rupture and death by hemorrhage.

Case 2 illustrates the feasibility of direct ligation of the artery “feeding” the aneurysm for the production of a cure. This last case emphasizes the necessity of continuing the detailed study of pathologic lesions that are seemingly impossible to cure so that those that appear incurable at the present may be included in the easily curable of the not too distant future.

PROGRESSIVE EXTRAPERIORBITAL HEMATOMA

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Orbital hematoma occurs so commonly in craniofacial injuries that it deserves no further comment. Progressive extraperiorbital hematoma, however, is a condition with special diagnostic and therapeutic features which hitherto seems to have attracted but little attention in the literature.† Extraperiorbital hematoma designates hemorrhage between the bony orbit and its periostneum, the periorbita (Fig. 1).

The following case is reported as an illustrative example.


History. The patient was admitted ½ hr. after he had fallen 10 ft., from a pile of lumber, on the left side of his head. At first he was completely unconscious, but within 1 hr. he partially recovered consciousness, complaining of severe left-sided headache.

Examination. He was restless, semistuporous and confused, but not aphasic. There was bleeding from the left nostril and a laceration of the left ear. A massive left orbital hematoma

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† Rare cases of severe exophthalmos in newborn, following birth injury, have been reported by Ehrenfest,2 Borland,1 and Phillipsen.3 The condition was attributed to either retro-orbital subperiosteal hematoma or thrombosis of orbital veins. On scrutiny of the original articles, however, these observations did not prove to be convincingly documented.
with moderate exophthalmos was present. All extra-ocular movements on the left were impaired; pupils and eyegrounds were normal. Except for a positive Babinski sign on the right no other abnormal neurologic findings were noted. His pulse was 56, respirations 20. B.P. 140/70.

![Diagrammatic drawing of a head sectioned horizontally. A left-sided extraperiorbital hematoma arising from a fracture of the lateral wall of the orbit is indicated by the darkly shaded area. Note displacement of orbital contents with exophthalmos.](image)

Roentgenograms of skull and orbit (Fig. 2) showed slightly depressed comminuted linear fractures of the left frontoparietal region with one crack extending through the greater wing of the sphenoid bone and lateral wall of the left orbit. There was also a fracture of the left frontozygomatic process.

![Orbital roentgenogram showing fractures in frontotemporosphenoidal area and also of the frontozygomatic process.](image)

**Course.** In view of the location of the skull fractures, the patient was carefully watched for signs of possible extradural hematoma, but fortunately this dreaded complication failed