Surgery for stroke

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Blood supply to the brain is derived from two carotidtwo vertebral arteries. They arise in the neck andpass into the base of the skull. In the intracranialcavity the internal carotid divides into anterior andmiddle cerebral arteries, and the two verterbral arteriesunite to form the basilar artery which bifurcates intotwo posterior cerebral arteries. There are numerous anastomoticchannels which can provide blood supply to thebrain in conditions of gradual arterial occlusion. Thevenous drainage of the brain is carried by superficialand deep venous systems which drain into the dural venoussinuses, and then into the internal jugular vein.Stroke is defined as the sudden or rapid onset ofa focal neurological deficit that is caused by a cerebrovasculardisease and lasts longer than 24 hour.Stroke is generally divided into two categoris:1- Ischemic include embolic and thrombotic strokes.2- Hemorrhagic strokes encompass primary intraparenchymalbrain hemorrhage as well as subarachnoid hemorrhage,which is the usually the result of a ruptured cerebralaneurysm or an arteriovenus malformation.ofIn the large majority ofthe stroke syndrome ispatients, the aetiologyatherosclerosis. Otherlesions occasionally responsible for neurological symptomsinclude: aneurysms of the brachiocephalic· system, thesebeing postthrombotic, mycotic, ... etc.The clinical diagnosis of TIAs by history taken fromthe patient, Neurological examination, vascular examinationand fundus examination. The noninvasive techniques forexamination of the carotid arteries are used as screeningmethods. Contrast angiography by selective catheterizationis used for the diagnosis of stenotic or ulcerating lesionsaffecting the extra or intracranial course of arteriessupplying the brain. Atheromatous affection of the carotidbifurcation is the main cause of TIAs. It is treatedsurgically by endarterictomy. Stenosis or occlusion ofthe intracranial course of the internal carotid artery,stenosis or occlusion of the middle crebral artery andcomplete occlusion of the internal carotid artery aretreated by extra to intracranial anastomosis (superficialtemporal to middle cerebral anastomosis).The surgical treatment of spontaneous intracerebralhemorrhage is considered in large lesions associatedwith mass effects and in deteriorating patient. The bloodpressure should be controlled and bleeding disordersshould be excluded. The hematoma is evacuated througha craniotomy or craniectomy, with total evacuation ofthe hematoma and ~ecuring hemostasis.Intracranial aneurysms are the ma~n causes ofsubsrachnoid hemorrhage in the forth and fifth decades.The treatment of choice is lipping of the aneurysm.Aneurysms inaccessible to clipping can be treated byextra to intracranial anastomosis with carotid ligation.Arteriovenous malformations of the brain can producesubarachnoid hemorrhage. Treatment is by

radical excisionof the malformation, embolization or occlusion of thefeeders if the lesion is deeply Situated.