Microscopically, the projecting mass on the left middle cerebral artery was made up of a large hematoma consisting of both fresh and old hemorrhage. The hemorrhage lay for the most part in the outer half of a large atheromatous plaque of the intima, but in some of the sections it had broken through the media and lay among the adventitial fibers (fig. 3). A thick layer of dense fibrous tissue separated the intimal hemorrhage from the lumen of the artery. No intimal capillaries were noted in the sections studied.

COMMENT

Intimal hemorrhages in sclerotic cerebral arteries are identical in structure with those described previously in atherosclerotic plaques of human coronary arteries. They occur only in atheromatous foci, and they are intimately related to capillaries which arise from the arterial lumens. It is generally admitted, now, that intimal hemorrhages of the coronary arteries are intrinsic lesions resulting from the rupture of capillaries which are derived from the lumens of the main arteries. It may be assumed that intimal hemorrhages of the cerebral arteries are produced in a similar manner. This assumption is supported by the fact that coronary and cerebral intimal hemorrhages are not infrequently found in the same patient, a fact which suggests a common etiologic agent.

Likewise, the precipitating factor of thrombosis in sclerotic cerebral arteries appears to be the same as that in thrombosis of the coronary arteries. I have described elsewhere [1] the common finding of intimal hemorrhages at the points of precipitation of coronary thrombi, and this has been confirmed by others.[5] To date, 47 cases of coronary thrombosis have been studied by fairly exhaustive methods, including serial sections in many instances, and in 41 cases intimal hemorrhage was found at the site of precipitation of the thrombus. The common association of intimal hemorrhages and coronary thrombi in a series as large as this and the confirmatory evidence of others eliminate the possibility of this association being coincidence. Because intimal hemorrhage often occurs without thrombosis of the adjacent arterial lumen, such hemorrhages cannot be regarded as resulting from the presence of the thrombi. One is forced to the conclusion, therefore, that most coronary thrombi are precipitated either by the intimal hemorrhages proper or by other lesions that result from the rupture of intimal capillaries. The same conclusion must be reached in regard to thrombi in cerebral arteries. Although my series is small the intimal hemorrhages found at the sites of precipitation of 4 of 6 cerebral thrombi were identical in all respects with those observed in coronary arteries.

A certain amount of evidence has been collected to show that other cerebral vascular lesions besides thrombosis may be related to intimal

5. Finkelstein, L., and Horn, H.: Personal communication to the author.