ondary to a reduction in the population of functioning photoreceptors, or abnormalities in electrical response characteristics, or abnormalities in electrical conductance, etc.; the reduction in $R_{\text{max}}$ cannot be due to prereceptor light absorption. However, from the analysis of $R/R_{\text{max}}$ functions (Fig. 2) it appears that a small amount of prereceptor light absorption does occur. This probably is due to the neuronal accumulation of lipopigment, as suggested by Berson and Watson, and we estimate its optical density to be about 0.3.

Robert W. Massof
Mary A. Johnson

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To the Editor:

Recently, R. L. Radius and his colleagues (INVEST OPHTHALMOL VIS SCI 19:153, 1980) reported on their efforts to determine what change vascular compromise has on pressure-induced interruption of axonal transport. They attempted to reduce blood flow at the optic nerve head by unilateral ligation of the common carotid artery. Their failure to show any significant effect and the "inconclusive experimental results" were not surprising to us. Well known to vascular physiologists is the difficulty in mimicking in animals the human cerebral ischemia induced by unilateral carotid occlusion. The reason appears to be that autoregulation and collateral circulation provide near-normal flow when one carotid is ligated. Henkind ligated both common carotids along with both vertebral arteries in dogs and failed to produce any ocular ischemia. Whisnant et al. showed that there is little clinical effect after ligation of three or less of the major arteries to the dog brain and that most dogs survive after all the major arteries to the brain are ligated in the neck. It is common knowledge among neurosurgeons and vascular physiologists (Seymour Kety and Bennett Stein, personal communication) that in humans without vascular disease tying off one common carotid does not acutely alter cerebral circulation because of excellent collateral circulation. S. Hayreh (personal communication) has observed no untoward ocular or central nervous system side effects from unilateral carotid ligation in monkeys.

We have recently performed a series of experiments in nonhuman primates in which we determined blood flow to various ocular structures, using radioactive microspheres. When Macaca assamensis was used, it was often necessary to catheterize the left ventricle via the carotid artery, thus occluding the carotid on that side. No significant differences in blood flow were found between eyes on the opposite side of the catheter and those eyes on the same side as the catheter.

Additionally, we have also determined ocular blood flow in a number of baboons in which both carotids were blocked (unpublished results). No significant differences were found for ocular flow between these baboons and those in which both carotids were open. We have found that stump pressures taken directly above ligated carotids in various nonhuman animals are variable, ranging from a low 50 mm Hg to pressures near normal mean arterial pressures. These experimental stump pressures created by unilateral ligation, however, cannot be used to predict ocular perfusion.

The question of the vascular effect on pressure-induced disruption of axonal transport is an important one. We hope Doctor Radius and his colleagues will continue their experiments using a different method of inducing reduced nerve head blood flow.

Lloyd M. Wilcox, Jr.
Ellen M. Keough
Department of Ophthalmology
and
Raymond J. Connolly
Department of Surgery and Physiology
Tufts University School of Medicine
Boston, Mass.

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