Trifluoperazine Pretreatment
In Experimental CI Gerbils

To the Editor:

It has been well established that cyclic 3',5'-adenosine monophosphate (cAMP) is elevated in the cerebral cortex following anoxia, ischemia, trauma, and decapitation, and in the cerebrospinal fluid (CSF) in experimentally induced cerebrovascular disorders, in patients with acute cerebral contusion and concussion, and in patients with stroke.

Phenothiazine tranquilizers have been shown to inhibit the rise in cerebral cAMP following decapitation and injury, without altering basal levels of cAMP. Of the phenothiazines tested against a rise in cerebral cAMP, trifluoperazine most efficiently inhibited that rise, a dose of 20 mg/kg inhibiting the rise by nearly 100%.

Thus, we believe that trifluoperazine prevented the small, nonfatal infarcts. Mortality was not significantly lowered in the trifluoperazine group, but the trifluoperazine-treated animals had a lower probability of dying than the nontreated animals (p < 0.05) at every 8-hour observation period and a lower probability of dying than the nontreated group of which 63.0% (21 of 41) had infarcts. Mortality was not significantly lowered in the trifluoperazine group, but the trifluoperazine-treated animals had a lower probability of dying than the nontreated animals (p < 0.05) at every 8-hour observation period.

Since pentobarbital has been reported to inhibit elevations in cAMP and to offer a protective effect in experimental cerebral ischemia, and theophylline has been reported to lower mortality in experimental stroke, there may be a relationship between the prevention of an ischemia-induced rise in cortical cAMP and the lowering of morbidity and mortality in experimental stroke. Although trifluoperazine has not been used in the treatment of stroke, our results show that it provides a protective effect against ischemia, 111 ' and theophylline has been reported to lower mortality in experimental stroke.

Although trifluoperazine has been shown to inhibit the rise in cerebral cAMP following decapitation and injury, 111 ' and theophylline has been reported to lower mortality in experimental stroke, 111 there may be a relationship between the prevention of a rise in cerebral cAMP and the lowering of morbidity and mortality in experimental stroke.

References

Non-Invasive Methods
Defended as Valuable

To the Editor:
The editorial appearing in Stroke (9:427-429, 1978) by Dr. Bur- ton A. Sandok, levels unwarranted criticisms of non-invasive procedures for evaluation of the cerebral circulation. I believe
Trifluoperazine pretreatment in experimental CI gerbils.
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The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://stroke.ahajournals.org/content/10/4/478.1.citation