

Skeptical about “Vasodilator” therapy for Senile Dementia?



You have every reason to be.

Years ago, when neurologists believed that “sluggish” cerebral blood flow was the cause of senility, a number of drugs were marketed to dilate cerebral vessels and thus improve mental functioning. But more recent clinical evidence tells a very different story:

For the vast majority of senile patients, **degeneration of neurons** is the cause of their symptoms, **not** sluggish blood flow to the brain.^{1,2}

“Cerebral vasodilator” drugs **do not reliably improve mental functioning or behavior** in the elderly.^{3,4,6}

Even if poor circulation were the cause of senility, the "vasodilator" drugs don't have much effect on vessels narrowed by atherosclerosis. The brain's own self-regulation of its circulation is a far more powerful vasodilator.⁴

Vasodilators could even worsen circulation to the brain or other compromised organs by increasing flow to more normal vascular beds, thus further compromising already ischemic areas.³⁻⁵

A recent careful review⁶ of all clinical studies of "cerebral vasodilators" evaluated the efficacy of some of the most commonly used drugs:

Cyclandelate (Cyclospasmol)

"A review of four (well-controlled) studies concludes that **cyclandelate is no more effective than placebo** . . . There are few data to support its effectiveness."

Papaverine (Pavabid, Cerespan, etc.)

"**The efficacy of this drug, either for treating cerebral vascular insufficiency or angina pectoris, is questionable.**"

Isoxsuprine (Vasodilan)

"**No (well-controlled) study reports this drug to be practically useful.**"

References

1. Simard D, Olesen J, Paulson OB, et al: Regional cerebral blood flow and its regulation in dementia. *Brain* 94:273-288, 1971.
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4. *AMA Drug Evaluations*. Fourth edition. Chicago, American Medical Association, 1980, pp 214-215.
5. Coffman JD: Drug therapy: Vasodilator drugs in peripheral vascular disease. *New England Journal of Medicine* 300:713-717, 1979.
6. Yesavage JA, Tinklenberg JR, Hollister LE, et al: Vasodilators in senile dementias, a review of the literature. *Archives of General Psychiatry* 36:220-223, 1979.
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What are the alternatives?

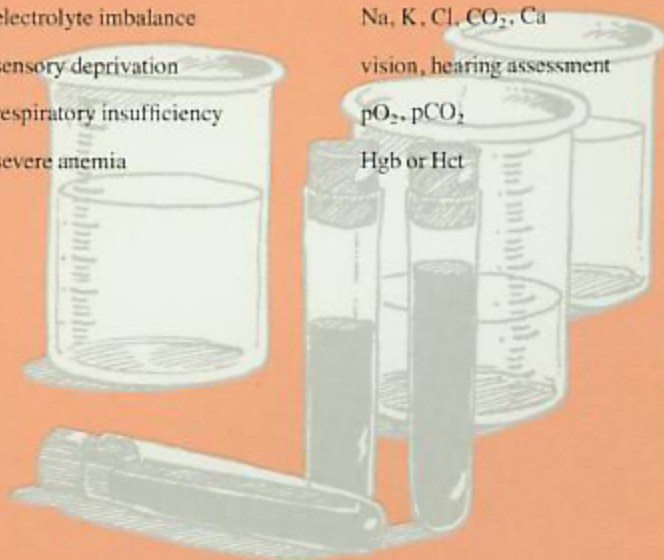
Back To The Basics . . .

A good history and physical examination with appropriate laboratory studies may uncover a treatable cause of mental decline in the elderly.

If no treatable cause is found, many geriatricians prescribe behavior therapy for family members, nursing home staff, or the elderly themselves, to improve their cognitive and emotional state. A pamphlet from the Harvard Drug Information Program, "Improving Mental Functioning in the Elderly," describes these techniques in detail.

Some Treatable Causes of 'Senility'⁷

Diagnosis	Examination
renal failure	BUN, creatinine
pernicious anemia	serum B ₁₂ level
thyroid disease	T ₄ , T ₃ -uptake
hepatic encephalopathy	liver function tests
depression	history, mental status exam
intracranial lesion (e.g., subdural hematoma, tumor)	neurological exam, C-T scan
overmedication	review drug history
electrolyte imbalance	Na, K, Cl, CO ₂ , Ca
sensory deprivation	vision, hearing assessment
respiratory insufficiency	pO ₂ , pCO ₂
severe anemia	Hgb or Hct



This information has been prepared by the Drug Information Program of Harvard Medical School, under the direction of Jerry Avorn, M.D. A brief pamphlet for laypersons, "Improving Mental Functioning in the Elderly," has been written for physicians to distribute to patients in explaining the material presented above. For copies (specify number desired), and for additional information, please write to the Drug Information Program, Harvard Medical School, 643 Huntington Avenue, Boston, MA 02115. The Drug Information Program is supported in part by grant No. HS03880 from the National Center for Health Services Research of the Public Health Service.