

NATIONAL CENTER FOR NEUROGENIC COMMUNICATION DISORDERS

TELEROUNDS - #15

STROKE: NEW FRONTIERS IN DIAGNOSIS AND MANAGEMENT

Wednesday, February 23, 1994

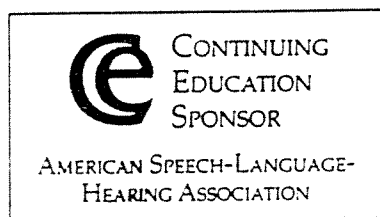
FACULTY

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ABOUT THE PRESENTER: Dr. Reinmuth is an internationally known neurologist and scholar with a long and distinguished career in the medical management of stroke. Before coming to the University of Arizona, he served on the faculty at the University of Miami and the University of Pittsburgh, where he was also chairman of the department of neurology for 16 years. Dr. Reinmuth has published extensively and was the editor-in-chief of the journal, Stroke.

MODERATOR

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DESCRIPTION

Fifty years ago, the word "stroke" was not an acceptable term to use in medical schools. It now turns out to be a useful generic term, and great advances have been made in the medical management of stroke. In this TELEROUNDS program, the causes and risk factors for stroke will be reviewed and the latest developments in the treatment of stroke will be highlighted.

OBJECTIVES

At the completion of this TELEROUNDS, the viewer should be able to:

1. Identify major types of stroke.
2. Identify important and treatable risk factors for stroke.
3. Describe major therapy for and medical management of stroke.

To call-in questions during the Telerounds program, dial (800) 933-6497

To FAX a question during the Telerounds program, dial (602) 621-8136.

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OUTLINE

- I. Stroke
 - A. Blood supply to brain is disrupted resulting in disturbance of function of the part of the brain nourished by that blood vessel.
 - B. Third leading cause of death.
 - C. 500,000 new strokes occur each year and about 150,000 die as a result.
 - D. Leading cause of disability.

- II. Categorization of Stroke According to Type
 - A. Ischemic
 - 1. Thrombosis
 - 2. Embolism
 - B. Hemorrhagic
 - 1. Subarachnoid hemorrhage
 - 2. Intracerebral hemorrhage

- III. Differentiating the Cause of Stroke
 - A. Warning signs of hemorrhage.
 - 1. Sudden onset of headache.
 - 2. Steady progression of neurologic signs.
 - 3. Vomiting.
 - 4. Severe increase in intracranial pressure.

- B. Warning signs of ischemic infarction.
 - 1. Immediate loss of neurologic functions or step-wise progression (because of blockage of additional arteries affecting different brain areas.)
 - 2. Uncommon complaints of severe headache.
 - 3. Transient ischemic attack (TIA) is experienced prior to an ischemic stroke in 10 to 20 percent of patients.
- C. Recognition of TIA as a warning sign.
 - 1. Important in terms of possible surgical repair of the carotid artery.
 - a. 90 percent likelihood that major stroke (signaled by TIA) can be prevented with surgical intervention.
 - 2. Use of anticlotting drugs.
- D. Embolic clots and the carotid artery.
 - 1. Common carotid artery divides.
 - a. External carotid - supplies neck and face.
 - b. Internal carotid - supplies two-thirds of the hemisphere of the brain.
 - 2. Internal carotid artery has bulbous swelling at the beginning of the branch from the common carotid artery.
 - a. Bulb is designed to detect blood pressure changes.
 - b. But this area has a predisposition for atheroma deposits just beyond the bulb.
 - c. Fat deposits often are torn off or displaced.
 - i. This may heal over, or
 - ii. Clots may cause complete occlusion of the artery, or
 - iii. A clot may break off and form an embolus which may lodge distally.

3. Internal carotid artery also divides inside the skull.
 - a. Anterior cerebral artery - angles off.
 - b. Middle cerebral artery - is a direct continuation of the internal carotid artery.
 - c. Therefore, a clot is more likely to travel into the middle cerebral artery.
 - d. Middle cerebral artery supplies brain areas responsible for
 - i. motor control.
 - ii. sensory perception.
 - iii. language.
 - iv. spatial awareness, etc.

IV. Risk Factors for Stroke

A. Treatable

1. High blood pressure (hypertension).
2. Cardiac arrhythmia.
3. Transient Ischemic Attack.
4. Smoking.
5. Diabetes.
6. Hyperlipidemia.
7. Obesity.

B. Untreatable

1. Age.
2. Gender.
3. Family history.
4. Race.
5. Prior heart attack.
6. Prior stroke.

V. Management of Stroke

A. Reduce risk factors.

1. Modify lifestyle.
2. Medications.

B. Anticoagulation - where there is continued risk of clotting.

1. Heparin - intravenous anticoagulant administered at very onset of stroke.
2. Warfarin - anticoagulant used over a longer period.

C. Clot dissolving drugs.

1. Thombolytic agents - effective in dissolving acute clots in coronary arteries of the heart and in some stroke.
 - a. Best if administered one to two hours after stroke onset (small risk of causing hemorrhage).
 - b. Prior to administration, CT scan must be done to rule out hemorrhage.

D. Surgery.

REFERENCES AND RECOMMENDED READINGS

- Barnett, H. J. M., Stein, B. M., Mohr, J. P., Yatsu, F. M. (Eds): Stroke: pathophysiology, diagnosis, and management (2nd edition). New York: Churchill Livingstone, 1992.
- Hachinski, V., Norris, J. W.: The acute stroke. Philadelphia: FA Davis Co., 1985.
- Toole, J. F. (Ed.): Cerebrovascular disorders (4th edition). New York: Raven Press, 1990.
- Ozer, M. N., Materson, R. S., Caplan, L. R. (Eds.): Management of persons with stroke. St. Louis: Mosby, 1994.
- Berguer, R., Caplan, L. R. (Eds.): Vertebrobasilar arterial disease. St. Louis: Quality Medical Publishing, Inc., 1992.
- Barnett, H. J. M., Hachinski, V. C. (Eds.): Cerebral ischemia: treatment and prevention. Neurologic Clinics 1992; 10: 1-299.