

**SCINTIGRAPHIC CEREBRAL BLOOD
FLOW STUDY AND CT SCAN IN
SUBACUTE CEREBROVASCULAR
STROKE**

Thesis

Submitted For Partial Fulfillment of the M.D. Degree
(**RADIO-DIAGNOSIS**)

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى :

﴿ قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ ﴾

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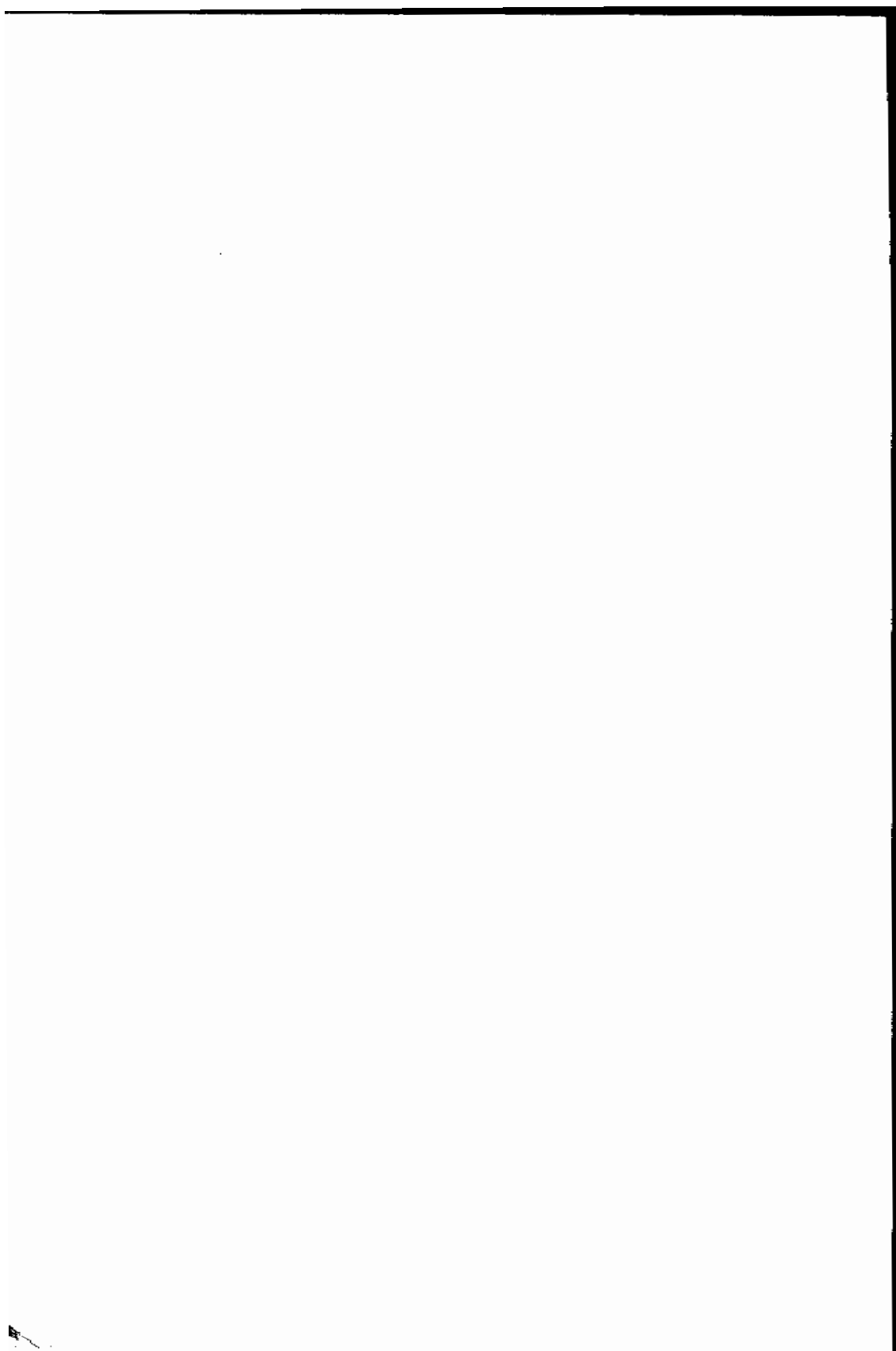
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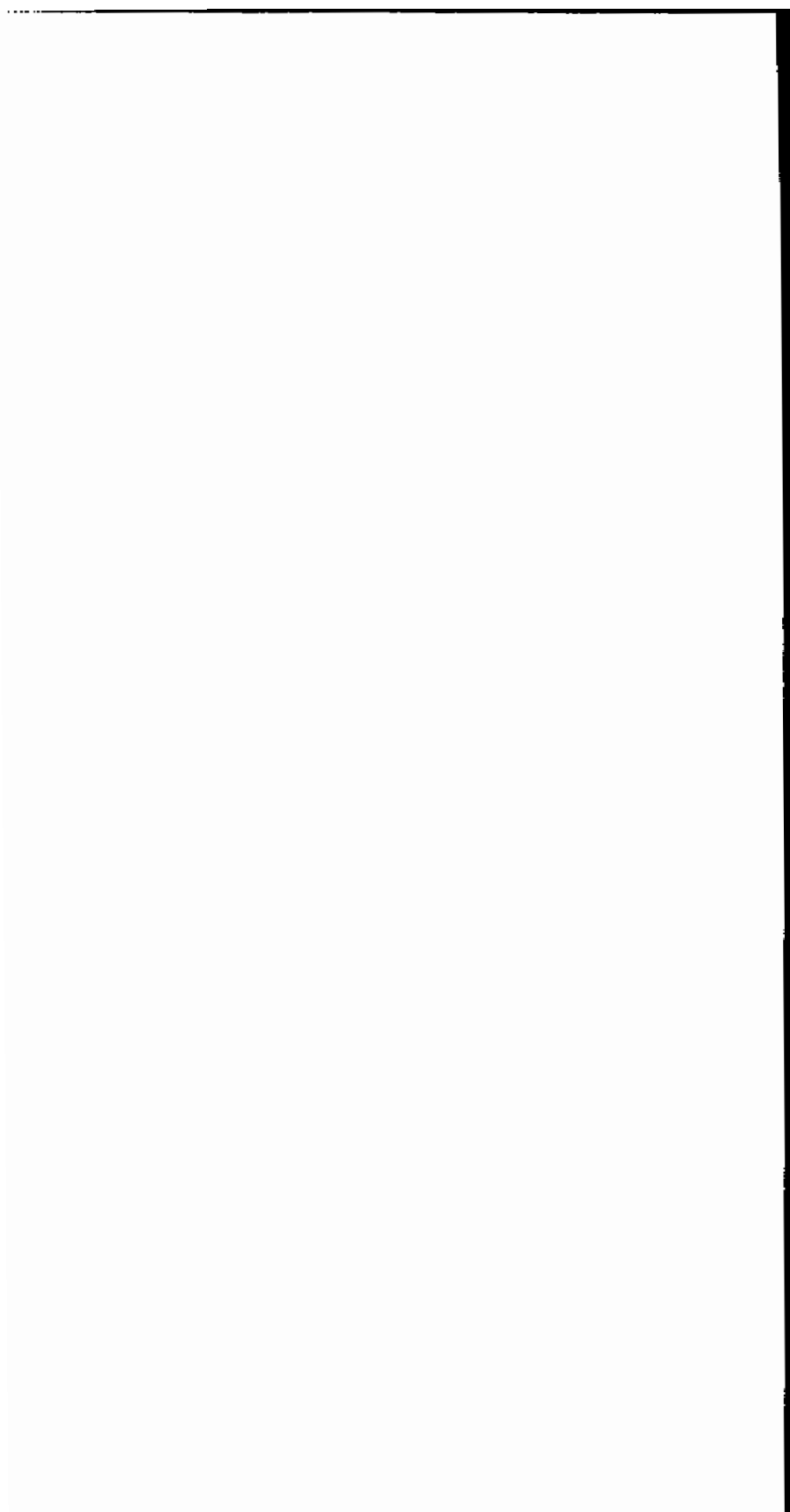
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ABSTRACT

The study includes 47 patients presented for the evaluation of regional cerebral blood flow (rCBF). Both CT Scan of the brain and SPECT evaluation of rCBF were performed for all patients.

The general advantages of SPECT examination of rCBF over CT Scan certainly outweigh its disadvantages, therefore SPECT studies of rCBF should be applied whenever possible as the technique of first choice to study rCBF in patients with subacute cerebrovascular stroke.



INTRODUCTION AND
AIM OF THE WORK

INTRODUCTION AND AIM OF WORK

Cerebrovascular stroke is the most devastating neurologic disease in adults. It results from ischaemic injury to the motor or sensory fibers in the region of internal capsule (Boyko et al., 1987).

The study of cerebral blood flow proved useful in transient ischaemic attack (TIA), prolonged reversible ischaemia with neurological deficit (PRIND), focal epilepsy, trauma and migraine . In most circumstances, where new treatment regimes are being investigated for these groups of patients, cerebral blood flow studies would be expected to act as useful monitors (Costa et al, 1991).

While techniques for the measurement of cerebral blood flow in man have been available for many years, most of these lacked spatial resolution and depth resolution. The ¹³³Xenon planar method, in particular, on which most of the information on cerebral blood flow (CBF) is based, has been shown to be insensitive and subject to artifacts. At the opposite extreme, single photon emission computed tomography (SPECT) is the most accurate technique designed to give regional quantitative information on brain perfusion and metabolism. The unique advantage of SPECT lies in its ability to provide a metabolic map of disease processes.

