

## ORIGINAL ARTICLE

**Stroke care challenges in rural India: Awareness of causes, preventive measures and treatment options of stroke among the rural communities**

Kanaga Lakshmi<sup>1</sup>, Kumaran Viswanath<sup>2</sup>, Chan En Ze<sup>3</sup>, Sam David Marconi<sup>4</sup>, Sandeep Nathaniel David<sup>5</sup>, Rita Caroline Isaac<sup>6</sup>

<sup>1, 2</sup>Assistant Professor, <sup>3,5</sup>Intern, <sup>4</sup>Resident, <sup>6</sup>Professor, RUHSA Department, Christian Medical College, Vellore - 632209, India

<a href="#">Abstract</a>	<a href="#">Introduction</a>	<a href="#">Methodology</a>	<a href="#">Results</a>	<a href="#">Conclusion</a>	<a href="#">References</a>	<a href="#">Citation</a>	<a href="#">Tables / Figures</a>
--------------------------	------------------------------	-----------------------------	-------------------------	----------------------------	----------------------------	--------------------------	----------------------------------

**Corresponding Author**

Address for Correspondence: Rita Isaac MD, Professor & Head, RUHSA Department, Christian Medical College, Vellore 632209, India  
E Mail ID: rita.isaac@cmcvellore.ac.in

**Citation**

Lakshmi K, Viswanath K, Ze CE, Sam Marconi D, David SN, Isaac R. Stroke care challenges in rural India: Awareness of causes, preventive measures and treatment options of stroke among the rural communities. *Ind J Comm Health* 2014;26(4):349–355.

**Source of Funding :** Nil **Conflict of Interest:** None declared

**Article Cycle**

**Submission:** 08/09/2014; **Revision:** 24/10/2014; **Acceptance:** 20/11/2014; **Publication:** 15/12/2014

**Abstract**

**Introduction:** Management of stroke in the remote rural areas in India faces major challenges because of lack of awareness. Stroke care services can be optimally implemented only if the communities have an understanding of the disease. **Method:** A population based, cross sectional survey of an adult general population sample between the ages of 31–60 years in a rural block in Tamil Nadu, India was carried out to study their knowledge, attitude, beliefs about cause, signs and symptoms, preventive measures and treatment options of stroke. **Results:** Of the 174 subjects studied only 69% were aware of the term stroke and 63% were able to list the symptoms. Only a little more than half the participants (58%) were aware that diabetes, smoking and hypertension are risk factors for stroke. None of the participants were aware of the endovascular thrombolysis injection for better recovery from stroke. About quarter (23%) of the participants did not think that the stroke is an emergency condition and they need to take the patient urgently to the hospital. Only 56% of the participants had checked their blood pressure and 49% for diabetes. A history of having either hypertension or diabetes and stroke in the family was the only factor that was significantly associated with better awareness ( $p < 0.001$ ) independent of other potential facilitating factors including age, occupation, education and gender. **Conclusion:** There is a need to educate the rural communities about the risk factors, how to recognize the onset, the preventive measures and optimum care of stroke to reduce the burden.

**Key Words**

Community Awareness; Community Education; Stroke Awareness; Stroke Prevention; Stroke Care

**Introduction**

Current estimates of the prevalence of stroke vary in different regions in India which ranges from 44 to 424 per 100,000 population [1,2] and there is an increasing trend reported in the prevalence of stroke [3]. It is projected that the combined annual cost to India of stroke, coronary heart disease, and diabetes will go up to about \$54bn (£34bn; €41bn) by 2015, about six times the \$8.7bn lost through these

diseases in 2005 [4]. While effective preventive measures and timely treatment with intravenous tissue plasminogen activator for acute ischaemic stroke have shown to significantly reduce the morbidity and mortality due to stroke, public awareness of it remains poor in India [5,6]. A hospital based study done in Northwest India reported that about one-fifth of the subjects could not identify a single risk factor of stroke and only 7.4% of respondents were aware that “blood clot–dissolving