Awareness Regarding Stroke In Rural Community Of Vadodara

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Abstract : **Background and Objectives**: Stroke is a principal cause of death and functional impairment. While older people are particularly vulnerable to stroke, research suggests that they have the poorest awareness of stroke warning signs. This study explored knowledge of stroke warning signs among older adults. **Methods:** Randomly selected older people (aged ≥ 65) in rural area of Vadodara. Participants completed home interviews. Questions assessed knowledge of stroke warning signs for stroke. **Results:** Of the whole sample, Less than half identified established warning signs (e.g., weakness, headache), with slurred speech (54%) as the exclusion. In general, there were considerable gaps in alertness with poorest levels evident in those with primary level education only and in those alive in rural area of Vadodara. **Conclusion:** Knowledge deficits in this study suggest that most of the common early symptoms or signs of stroke were recognized as such by less than half of the older adults surveyed. Thus, they may lose vital time in presenting for medical attention. Lack of public awareness about stroke warning signs must be addressed as one important contribution to reducing mortality and morbidity from stroke. [Parekh A et al NJIRM 2013; 4(6) : 128-131]

Key Words: Stroke, Warning Signs, Awareness, Older people.

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Introduction: Stroke is a major cause of death and disability world wide[1]. Rapid access to a specialist service can reduce the risk of death and disability following stroke as early assessment enables accurate diagnosis, provision of acute treatment, early detection and response to complications, and provision of care by a multi-disciplinary team with expertise in stroke[2,3]. Early recognition and rapid response to the symptoms of stroke by patients and witnesses are important dimensions of improving access to thrombolysis and improving outcome following stroke.

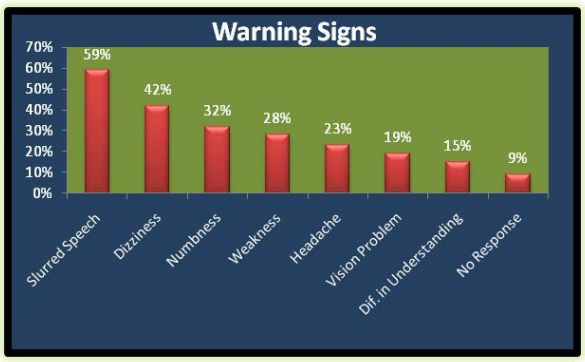
There have been numerous studies of the factors associated with prehospital delay and some factors such as contacting the primary physician, or not using Emergency Medical Services, were in almost all cases found to be associated with delayed arrival time[4,5]. However, findings concerning the impact of demographics and clinical factors, as well as of knowledge about stroke, were somewhat inconsistent, perhaps due to differences in location, time of investigation and medical environment. In one study, perceptual, social and behavioral factors, rather than knowledge, were suggested to be important for decreasing arrival delay[6], and the role of the bystander in delivery of acute stroke was highlighted. Rural area of Vadodara has a unique culture in which family relationships tend to be close and are held in high regard, and where relatives often live together. In addition, knowledge about acute stroke treatment is not widespread, especially among the elderly and people with little education.

Material & Methods: A cross-sectional study of participants from rural area of Vadodara. This study involved survey of randomly selected older people (aged ≥65). A structured questionnaire was designed. In the questionnaire, questions addressing warning signs. The questionnaire was prepared into Gujarati & English. Questionnaires were administered during face to face interviews. The questionnaire was administered to 234 randomly selected households for two weeks in September 2009. The head of household or a responsible adult was interviewed. Only one person per household was interviewed. All participants gave verbal consent. Data collected were double entered into Microsoft Excel database.

Result: Knowledge of stroke warning signs in the overall population is presented in table. The warning signs most commonly identified were slurred speech, dizziness, numbness, weakness and headache. However, with the exception of slurred speech (identified by 59%), less than half of the

population identified these established warning signs. People of Rural area of Vadodara identified the established warning signs of dizziness, numbness, problems with vision and difficulty understanding. 9% identified no warning signs for stroke(Figure 01).

Figure 01: Perception of stroke warning signs



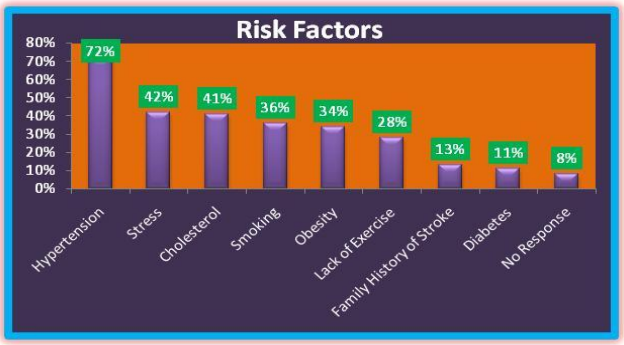
Risk factors are shown in Figure 2. The most commonly identified stroke risk factors by the The percentage unable to identify any stroke risk factors was small. The association between presence of risk factors and correct identification of stroke warning signs and risk factors was examined. Having heart disease or a prior stroke or TIA was not associated with higher knowledge of stroke warning signs.

Current smokers and those reporting not engaging in regular exercise had significantly lower levels of knowledge about stroke warning signs.Finally, the relationship between having a risk factor and identifying that factor as a risk factor for stroke was exam examined. A relationship was found for smoking, with current and past smokers significantly more likely to identify smoking as a stroke risk factor than never smokers.

Discussion: This paper reports knowledge of warning signs for stroke in samples of older adults in rural area of Vadodara. Consistent with the findings of other studies, this survey found that knowledge of stroke warning signs was poor. When presented with a list of warning signs, only one slurred speech was identified by more than half of respondents. This finding confirms previous studies, in which dizziness and numbness were

overall sample were hypertension, stress, hypercholesterolaemia, smoking and obesity. However, with the exception of hypertension identified by 74%, less than half of the population correctly identified established stroke risk factors.

Figure 02: Perception of stroke Risk Factors



identified [7,8], and contrasts somewhat with other study findings, where disturbance of vision was found to be the most commonly identified warning sign [9].

Hypertension was identified most frequently as a risk factor for stroke, followed by stress, hypercholesterolaemia, smoking and obesity, findings similar to those reported by Pancioli and colleagues [7]. However, while hypertension was identified as a stroke risk factor by three-quarters of the respondents in this survey, all other risk factors were identified by less than half with 6% of the sample unable to identify any risk factor. Thus, while this Irish population had greater awareness of stroke risk factors than a younger US sample [8], albeit in a recognition-type task of identifying factors from a list, there were still considerable gaps in awareness. In addition, factors such as stress and obesity were commonly identified, although they are not established as risk factors for stroke. In contrast, established risk factors such as diabetes and alcohol use were identified by approximately respondents. Health promotion in this area could provide clarification of the similarities in risk factors for stroke and MI, with

more specific information on factors that increase risk specifically for stroke.

The poorer level of awareness of stroke warning signs relative to risk factors is consistent with previous reports [10,9,11,12] and is cause for concern, given that most of the common early symptoms or signs of stroke were recognised as such by less than half of the older adults surveyed. As such, many older adults in this study may not recognise that they, or a significant other, are having a stroke when symptoms emerge, thus losing vital time in presenting for medical attention. Mass media campaigns to improve public awareness of stroke warning signs have been found to be effective in improving knowledge of warning signs [8,10,13,14,15], particularly in younger age groups, although producing little change in knowledge of risk factors [10]. On the other hand, these campaigns have been found to be less effective for those aged ≥ 65 in many studies [10,13]. People in younger age groups have been shown to be more knowledgeable than older people prior to intervention with public health promotion campaigns and to remain more knowledgeable after the campaign [13].

Older people are at greater risk for stroke because of their age. They are a particularly important population sub-group to target in relation to awareness of stroke warning signs. Evidence indicates that stroke awareness campaigns are least effective in increasing knowledge in this older age group. A lack of public awareness in relation to these factors will translate into failure to reduce mortality and morbidity from stroke over time [11-14]. However, there is evidence that television based advertising may contribute to a reduction in age-related differences in knowledge of stroke warning signs [16]. In addition, research evidence indicates that increasing public awareness of stroke warning signs does not translate necessarily to improving timely access to medical care [14, 17]. The inability to identify and respond to stroke warning signs in a rural context, where distance from hospital is an added obstacle to accessing rapid medical care, highlights an area of specific need for health promotion intervention.

Conclusion: Early recognition of stroke symptoms and signs is key to maximising the potential for medical intervention and more favourable stroke outcomes – the 'time is brain' imperative. This study highlights significant gaps in awareness in relation to stroke warning signs & risk factors in older people in rual area of Vadodara. The need for substantial population health education with regard to stroke prevention and management is critical to a future reduction in both the incidence of stroke and in reduction of stroke mortality and morbidity. This will require a more concerted effort across specialists in stroke care, public health and geriatric medicine to ensure that programmes developed to meet this need are based on sound gerontological and public health principles.

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