Correspondence

Epidemiology of Stroke in Saudi Arabia

Sir,

I read with great interest the article entitled "Profile of stroke in a teaching university hospital in the western region".[1] It is clear that the single authored paper was the result of a great deal of effort and a lot of work. The author's efforts in analyzing this retrospective chart review data is also highly appreciated, however, this is anything but an epidemiological study. The study sample is severely biased mainly as a result of patient enrollment methodology. Only admitted patients to one hospital were included, excluding patients who presented to the emergency department (ER) with stroke but not admitted or referred to other hospitals for various reasons including bed limitations. Review of the ER records could give a better insight into the actual extent of the problem. Patients presenting to the University Hospital in Jeddah are very skewed as a result of multiple factors, most importantly the presence of more than 10 other large government and private hospitals in the same city. As well, most patients in the study had severe stroke (32% presented in coma, stayed in hospital for 2 months on average, 20% were in a vegetative state, and 31% died). The author's explanation was that most of these patients were old (mean age 63). Further analyses to objectively correlate bad outcome with age, risk factors, duration of hospital stay, and complications, were lacking. As well, the clinical and radiological description of ischemic stroke subtypes was very limited. This is clearly important as the clinical and radiological classification is of paramount importance in determining morbidity, mortality, and recurrence risks.[2,3] A summary of these important stroke subtypes is shown in the table. Although strokes constituted 3% of the hospital admissions (not clear whether elective, emergency, or both were considered), the author concluded that stroke was common among admitted patients? The stroke in one patient was considered migraine related. It would be interesting to describe in some detail the migraine attacks according to the international headache criteria.[4]

Finally I would like to thank the author for the interest and efforts in trying to investigate stroke patients; however, prospective data collection using a structured stroke registry will be more informative. The various limitations of this study make generalization difficult and preclude accurate recommendations regarding specific preventative and therapeutic health care strategies. A large, prospective, community based study is urgently needed in our region.

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Table 1 - The Oxfordshire Community Stroke Project (OCSP) classification of ishchemic stroke syndromes.

OCSP classification	Definitions	Case fatality rate in one year	Recurrent stroke in one year	Dependency* at one year
1 - TACS (total anterior circulation stroke syndrome)	Combination of higher cerebral dysfunction (eg dysphagia, dyscalculia, visuospatial disorder); homonymous field defect; and ipsilateral motor and/or sensory deficit of at least 2 areas of the face, arm and leg.	60%	6%	36%
2 - PACS (partial anterior circulation stroke syndrome)	Two of the 3 components of the TACS, with higher cerebral dysfunction alone, or with a motor/sensory deficit more restricted than those classified as LACS (eg confined to one limb, or face and hand but not the whole arm).	16%	17%	29%
3 - LACS (lacunar stroke syndrome)	Pure motor, sensory, sensory-motor stroke, or ataxic hemiparesis	11%	9%	28%
4 - POCS (posterior circulation stroke syndrome)	Presence of any of the following: ipsilateral cranial nerve palsy with contralateral motor and/or sensory deficit; bilateral motor and/or sensory deficit; disorder of conjugate eye movement; cerebellar dysfunction without ipsilateral long-tract deficit or isolated homonymous field defect	19%	20%	19%
OCSP - Oxfordshire Community Stroke Project; *Dependency = functionally dependent (Rankin grades 3 - 5)				

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Reply from the Author

Thank you, Dr. Jan for your correspondence regarding my manuscript. There are a few points I would like to clarify regarding this paper. This retrospective study was carried out to ascertain the problem of strokes in inpatients in King Abdulaziz University Hospital, not the study of stroke in Saudi Arabia including other hospitals. In our hospital, it is very difficult to include data regarding patients who present with stroke in the emergency room. I agree with your comment, that we need a large prospective, community-based study in the western part of Saudi Arabia including all hospitals. I would greatly appreciate it if you could organize such a study, as stroke is a disease which carries one of the highest morbidity rates.

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