Higher Stroke Mortality on Weekends: Are All Strokes the Same?

To the Editor:

In their interesting study, Saposnik et al1 reported that patients admitted to hospital for ischemic stroke on weekends had a higher stroke mortality than those admitted on weekdays (8.5% versus 7.4%, respectively). Very recently, Kostis et al2 reported a similar observation for patients admitted for myocardial infarction. In fact, mortality at 30 days was significantly higher for patients admitted on weekends than for patients admitted on weekdays (12.9% versus 12.0%). Interestingly, in addition to several risk factors, stroke and myocardial infarction share also a peculiar temporal pattern of occurrence. Neurological and cardiovascular emergency calls are more frequent during morning hours,3 stroke and myocardial infarction onset is more frequent on morning,4,5 and the same is for fatal cases.6 Large meta-analysis studied have confirmed such morning excess.7,8 Moreover, a weekly pattern exists as well, with Monday shown to be a critical day for both stroke and myocardial infarction.9–11 On one hand, the higher mortality on weekends could be explained, at least in part, by the dramatic reduction of availability of the more common urgent procedures during weekends,12 or, more in general, by a less availability of medical staffing and ancillary support. However, it is also possible that different level of severity of diseases arrive to hospital on weekends. This seems to be the case of acute coronary syndromes.13 In fact, weekends are characterized by a lower rate of admissions than expected, but there is a significantly higher proportion of acute coronary syndromes presenting with ST-elevation myocardial infarctions (STEMI). Thus, due to this increased proportion with STEMI, there is a 10% higher proportion of coronary syndromes with myocardial infarction in the weekends. In the study by Saposnik et al,1 there is no mention of subgroups of events by type of stroke and level of severity. It could be possible that different levels of severity on arrival to the hospital may have implication on the higher mortality rate on weekends.

Disclosures

None.


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