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A Study of Association of Mean Platelet Volume with Risk and Severity of Ischaemic Stroke in One Hundred Cases

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Abstract and Figures

BACKGROUND ‘Stroke’ is an abrupt onset of a neurologic deficit that is attributable to a focal vascular cause. Because of the rise in ageing population, the burden of stroke is likely to increase exponentially in the near future. Mean Platelet Volume (MPV), a marker and possibly a determinant of platelet function is a physiological variable of haemostatic importance. Platelet count is an index of haemostasis. Changes in MPV play a more important role in haemostasis than platelet count. So far, very few studies have looked at the association between platelet size and its relation to causation of ischaemic stroke. This study was carried out to determine as to whether elevated mean platelet volume level is an independent risk factor for ischaemic stroke and also to evaluate its relationship with severity of ischaemic stroke using modified Rankin Scale. METHODS One hundred patients above 18 years of age, irrespective of sex admitted with first episode of ischaemic stroke within 24 hours of onset of symptoms, diagnosed based on clinical and radiological features, were included in the study. Mean platelet volume was measured on admission before administration of antiplatelet drugs and severity of the stroke was assessed using modified Rankin Scale at the time of presentation. RESULTS Out of hundred patients, 61% were males and 39% were females. Patients in the age group of 40 to 60 years were 39%, while 38% were aged between 60 - 80 years. The comorbid conditions present were hypertension in 44% and diabetes mellitus in 20%. MPV was same among all the age groups with a mean value of 10.30, and the ‘p’ value was 0.952 which is statistically not significant. The clinical severity of stroke at presentation as determined by the modified Rankin Scale was severe disability in 53% of the cases. The relation of MPV to severity of stroke was also statistically not significant. There was no mortality in this study group. CONCLUSIONS MPV levels has got no statistically significant correlation with ischaemic stroke. This study also did not find a statistically significant correlation between clinical severity of stroke and mean platelet volume.

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A Study of Association of Mean Platelet Volume with Risk and Severity of Ischaemic Stroke in One Hundred Cases

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ABSTRACT

BACKGROUND

'Stroke' is an abrupt onset of a neurologic deficit that is attributable to a focal vascular cause. Because of the rise in ageing population, the burden of stroke is likely to increase exponentially in the near future. Mean Platelet Volume (MPV), a marker and possibly a determinant of platelet function is a physiological variable of haemostatic importance. Platelet count is an index of haemostasis. Changes in MPV play a more important role in haemostasis than platelet count. So far, very few studies have looked at the association between platelet size and its relation to causation of ischaemic stroke. This study was carried out to determine as to whether elevated mean platelet volume level is an independent risk factor for ischaemic stroke and also to evaluate its relationship with severity of ischaemic stroke using modified Rankin Scale.

METHODS

One hundred patients above 18 years of age, irrespective of sex admitted with first episode of ischaemic stroke within 24 hours of onset of symptoms, diagnosed based on clinical and radiological features, were included in the study. Mean platelet volume was measured on admission before administration of antiplatelet drugs and severity of the stroke was assessed using modified Rankin Scale at the time of presentation.

RESULTS

Out of hundred patients, 61% were males and 39% were females. Patients in the age group of 40 to 60 years were 39%, while 38% were aged between 60 - 80 years. The comorbid conditions present were hypertension in 44% and diabetes mellitus in 20%. MPV was same among all the age groups with a mean value of 10.30, and the 'p' value was 0.952 which is statistically not significant. The clinical severity of stroke at presentation as determined by the modified Rankin Scale was severe disability in 53% of the cases. The relation of MPV to severity of stroke was also statistically not significant. There was no mortality in this study group.

CONCLUSIONS

MPV levels has got no statistically significant correlation with ischaemic stroke. This study also did not find a statistically significant correlation between clinical severity of stroke and mean platelet volume.

KEYWORDS

Stroke, Mean Platelet Volume, modified Rankin's Scale, Severity

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