

Half of patients undergoing cerebrovascular stent placement respond poorly to clopidogrel

5 February 2008

A study by researchers at Rush University Medical Center, published in the February issue of the American Journal of Neuroradiology, finds that half of patients undergoing cerebrovascular stent placement did not respond well to clopidogrel. Clopidogrel (Plavix) and aspirin are medications routinely prescribed for 1-3 months following cerebrovascular stent placement to combat the risk of blood clots (stent-thrombosis) and reclosure of the artery (re-stenosis).

“Given the importance of platelet inhibition in the prevention of in-stent thrombosis and re-stenosis, there is a great incentive to ensure that adequate antiplatelet effects are achieved in high-risk patients,” said Dr. Shyam Prabhakaran, stroke neurologist at Rush University Medical Center.

The study reviewed 76 patients who underwent cerebrovascular stent placement for various clinical indications, including wide-neck aneurysm and intracranial stenosis. Researchers used the VerifyNow rapid platelet function assay-aspirin (RPFA-ASA) to calculate aspirin reaction units and the P2Y12 assay (VerifyNow) to calculate P2Y12 reaction units and percentage platelet inhibition immediately before the endovascular procedure.

In the 71 patients on aspirin in whom ARU was measured, only three patients had a low response to aspirin. Of the 55 patients in whom percentage platelet inhibition was measured, 28 patients (50.9%) had clopidogrel resistance. The researchers observed a significant association between older age (over the age of 55) and clopidogrel resistance and there was a strong effect of diabetes on platelet activity suggesting that these patients may require alternate approaches.

“Our study shows that using a point-of-care

platelet function test in patients undergoing cerebrovascular stent placement is feasible and may be a valuable tool in the prevention of stent-related complications,” said Prabhakaran. “Akin to the international normalized ratio used for warfarin, platelet function tests provide objective measurement of antiplatelet efficacy and help tailor therapy on an individual basis.”

However, given these preliminary results, the researchers encourage further studies on ideal doses, timing, and duration of antiplatelet therapy for cerebrovascular stent placement.

Source: Rush University Medical Center

APA citation: Half of patients undergoing cerebrovascular stent placement respond poorly to clopidogrel (2008, February 5) retrieved 25 May 2022 from <https://medicalxpress.com/news/2008-02-patients-cerebrovascular-stent-placement-poorly.html>

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