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Spontaneous Spinal Subdural Hemorrhage after taking Clopidogrel : A Case report

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Introduction

Recently, the use of anti-platelet drugs such as aspirin and clopidogrel to prevent arterial thrombotic diseases has increased. Clopidogrel works by blocking platelets from sticking together and prevents them from forming harmful clots. Bleeding can be occurred as the side effect after taking clopidogrel. The cases with spinal cord injury by bleeding have not been reported so far. We report a patient with paraplegia due to spinal cord injury by spinal subdural hemorrhage (SDH) after taking clopidogrel.

Case presentation

A 69-year-old female was admitted to our rehabilitation center on January 18, 2018 after experiencing lower back pain from 3 days ago, gait difficulty and progressive right lower extremity weakness from 1 day ago. The patient was taking antihypertensive drugs for hypertension in his past history. In 2016, the patients visited the cardiologic department for chest tightness. The patient was found to have mild coronary disease in coronary angiogram and started taking clopidogrel for prophylaxis. Magnetic resonance imaging (MRI) scan was performed on admission to the patient and showed compressive myelopathy by SDH in T12-L1 level. (Figure 1) So the patient underwent T11,12 total laminectomy and intradural hematoma removal. We suspected that spinal SDH occurred spontaneously due to platelet dysfunction by taking clopidogrel. So, We performed platelet aggregation test (PAT) to identify platelet dysfunction. The PAT revealed reduced aggregation to collagen and epinephrine. The patient stopped taking clopidogrel at end of January, 2018. Clopidogrel may exhibit a reduced aggregation response for some agonists until 3 months after discontinuation of the drug. The follow up PAT performed every a month. The second and third test revealed that the aggregations to collagen and epinephrine are reduced persistently. (Table 1)

Conclusion

The PAT is recommended to perform periodically to identify platelet function of a person who are taking antiplatelet agents because of increased bleeding risk. In addition, if a person taking antiplatelet agents such as aspirin and clopidogrel or anticoagulants such as warfarin suddenly has weakness or paralysis, the clinician should suspect hemorrhage of nervous system and should perform futher evaluation and manegement on it.

Table 1. Results of platelet aggregation test performed after stopping taking clopidogrel

	ADP(%)	Epinephrine(%)	collagen(%)	ristocetin(%)
2018.03.13	80	49	51	99
2018.04.11	82	48	54	100
2018.05.09	52	26	62	68
Reference(%)	63-100	54-100	61-100	60-100



Figure 1. L-spine Magnetic resonance imaging showing hemorrhage at the level of T11 to T12-L1 of the spinal cord in sagittal T1-weighted images (arrow) and compressive myelopathy in the spinal cord due to hemorrhage in the axial T2-weighted image (triangle)