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Ticagrelor-induced acute kidney injury can increase serum concentration of statin, and lead to concurrence of rhabdomyolysis

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Case Study : Ticagrelor is an oral, reversible, direct-acting inhibitor of the adenosine diphosphate receptor P2Y12. Recently ticagreloris substituted for clopidogrel owing to its more rapid onset and more pronounced platelet inhibition. However, ticagrelor might cause more deterioration of renal function compared to clopidogrel, especially in the elderly patients over 75 years of age, with pre-existent renal dysfunction, and with angiotensin converting enzyme inhibitors or angiotensin II receptor blockers.

An 80-year-old woman was presented with oliguria and generalized myalgia. She had been taking ticagrelor and rosuvastatin due to unstable angina. Laboratory work-up showed increased blood urea nitrogen, serum creatinine, serum cystatin C and urine NGAL, and also revealed increased serum creatine kinase, lactate dehydrogenase, and urine myoglobin, suggesting concurrence of rhabdomyolysis. Ticagrelor-induced acute kidney injury led to a rise in serum concentration of rosuvastatin, which eventually resulted in rhabdomyolysis. To our knowledge, this is the second case of ticagrelor-induced acute kidney injury causing rosuvastatin-induced rhabdomyolysis.

Therefore we provide a caution that renal function deterioration and interaction with statin should be considered when prescribing ticagrelor, especially in the elderly patients.

Keywords : ticagrelor, acute kidney injury, rosuvastatin, rhabdomyolysis