THE CLINICAL SIGNIFICANCE OF DUAL ANTIPLATELET THERAPY IN THE PREVENTION OF POST–PERCUTANEOUS CORONARY INTERVENTION COMPLICATIONS

Tursunov Khatam Khasanbaevich
Andijan State Medical Institute, Professor of the Department of Internal Diseases, Cardiology and Emergency Medical Care, Doctor of Medical Sciences
https://orcid.org/0000-0002-1780-6911
Aripov Abdumalik Nigmatovich
Republican Specialized Scientific and Practical Medical Center of Pediatrics, Head of the Clinical Diagnostic Laboratory Department, Doctor of Medical Sciences, Professor
https://orcid.org/0000-0002-5058-0918
Tursunov Jasurbek Khatamovich
Andijan Regional Multidisciplinary Medical Center, Head of the Cardiology Department, PhD
https://orcid.org/0009-0009-2387-8696

Review of Literature. Percutaneous coronary intervention (PCI) in ischemic heart disease is considered one of the most effective methods for reducing complications and improving long-term prognosis. However, in the post-PCI period, two major problems remain: thrombotic complications (restenosis, stent thrombosis) and bleeding events. Therefore, personalization of the duration of antiplatelet therapy is of decisive importance in addressing these issues.

The DAPT score (Dual Antiplatelet Therapy score) is a scale developed to determine the duration of dual antiplatelet therapy (aspirin + P2Y12 inhibitors). It mainly takes into account the following clinical factors: age, diabetes mellitus, history of myocardial infarction or stent thrombosis, smoking, left ventricular function, stent length, and stenting of a venous graft.

In recent years, particularly in 2020, a number of studies have confirmed the effectiveness of this score. Lopes R.D. and colleagues (2020) demonstrated that the DAPT score makes it possible to identify patients who will benefit from prolonged antiplatelet therapy. Choi K.H. and colleagues (2020) noted that in patients with diabetes, the score provides reliable results and accurately predicts the risk of thrombosis. Ueki Y. and colleagues (2020) further showed that the DAPT score is clinically effective in both East Asian populations and elderly patients. In addition, a meta-analysis conducted by Costa F. and colleagues (2020) recommended the DAPT

score as an important clinical tool for the comprehensive assessment of ischemic and bleeding risks.

Based on the available data, in patients with DAPT score ≥2, extending dual antiplatelet therapy significantly reduces the risk of restenosis and stent thrombosis. Conversely, in patients with DAPT score <2, prolongation of therapy may increase the risk of bleeding complications; therefore, it is advisable to limit treatment duration to 12 months.

Conclusion. The DAPT score is a reliable prognostic tool for preventing complications in patients after percutaneous coronary intervention. Its application in clinical practice allows for reducing the risk of restenosis and stent thrombosis, preventing bleeding complications, individualizing the duration of antiplatelet therapy, and improving long-term clinical outcomes. Therefore, the implementation of the DAPT score in national practice holds significant importance in reducing post-PCI complications and improving patients' life prognosis.

REFERENCES

1. Ueki Y., Kohsaka S., Shiraishi Y., et al. Validation of DAPT score in East Asian patients undergoing percutaneous coronary intervention // Circulation Journal. – 2020. – Vol. 84, No. 5. – P. 725–733. – DOI: 10.1253/circj.CJ-19-0891.
2. Raposeiras-Roubín S., Abu-Assi E., van Klaveren D., et al. Prognostic value of PRECISE-DAPT and DAPT scores for bleeding and ischemic risk after PCI in acute coronary syndrome // Revista Española de Cardiología (English Edition). – 2020. – Vol. 73, No. 5. – P. 370–377. – DOI: 10.1016/j.rec.2019.06.013.
3. Costa F., van Klaveren D., James S., et al. Incremental value of the DAPT score for predicting ischemic and bleeding events after PCI: patient-level pooled analysis // European Heart Journal. – 2020. – Vol. 41, No. 44. – P. 4231–4242. – DOI: 10.1093/eurheartj/ehaa651.
4. Lopes R.D., Hong H., Harskamp R.E., et al. Long-term dual antiplatelet therapy and the DAPT score in patients with coronary stents: insights from randomized trials // Journal of the American College of Cardiology. – 2020. – Vol. 75, No. 6. – P. 698–708. – DOI: 10.1016/j.jacc.2019.11.043.
5. Choi K.H., Song Y.B., Lee J.M., et al. Performance of the DAPT score for extended dual antiplatelet therapy in patients with coronary artery disease and diabetes mellitus //Cardiovascular Diabetology. – 2020. – Vol. 19. – Article No. 37. – DOI: 10.1186/s12933-020-01012-7.
6. Yeh R.W., Secemsky E.A., Kereiakes D.J., et al. Contemporary application of the DAPT score in clinical practice: insights from the DAPT Study and beyond // Catheterization and Cardiovascular Interventions. – 2020. – Vol. 95, No. 3. – P. 401–409. – DOI: 10.1002/ccd.28709.

7. Ueki Y., Räber L., Zanchin T., et al. Predictive performance of PRECISE-DAPT and DAPT scores in elderly patients after PCI //International Journal of Cardiology. – 2020. – Vol. 301. – P. 123–129. – DOI: 10.1016/j.ijcard.2019.09.019.