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STRESZCZENIE ROZPRAWY DOKTORSKIEJ

Dyscyplina naukowa: Nauki medyczne

Tytuł rozprawy doktorskiej:

Czy adherencja u pacjentów po zawale mięśnia sercowego zależy od strategii leczenia przeciwpłytkowego?

Streszczenie rozprawy doktorskiej:

Introduction

Cardiovascular diseases are the leading cause of death in Poland. The treatment of acute coronary syndromes (ACS) presents a major challenge for the medical team. The treatment of patients after myocardial infarction (MI) includes optimal pharmacotherapy according to the guidelines of the European Society of Cardiology, lifestyle modifications, and education. A crucial aspect of the treatment is dual antiplatelet therapy. The effectiveness of treatment depends significantly on adherence, which is the extent to which a patient follows the therapeutic plan agreed upon with their doctor. Adherence is influenced by several factors, including side effects and adverse events. Previous studies have shown that de-escalation of antiplatelet therapy can reduce adverse events and side effects while maintaining similar therapeutic efficacy. Therefore, it is justified to conduct studies evaluating the impact of antiplatelet therapy de-escalation on treatment adherence.

Aim of the study

The main aim of this doctoral thesis is to assess whether the de-escalation of antiplatelet therapy influences adherence to therapeutic recommendations in patients after myocardial infarction. The thesis also aims to analyze in detail how sociodemographic and clinical factors affect adherence.

Materials and Methods

The study included a 12-month observation of 100 patients hospitalized at the Department of Cardiology and Internal Diseases at the University Hospital No. 1 in Bydgoszcz due to ACS. Patients who met the inclusion criteria were enrolled within the first few days after admission, after giving their informed consent. Patients with STEMI, NSTEMI, and unstable angina were included. Participants were randomly assigned to a control group, which followed standard antiplatelet therapy throughout the observation period, and a study group, where two de-escalation strategies were applied (dose reduction of ticagrelor and/or replacement of acetylsalicylic acid with placebo). Follow-up visits were conducted at 1, 3, 6, 9, and 12 months post-hospitalization. During each visit, tablet intake was assessed, physical examinations were performed, and medical history was collected with a focus on adverse events. At selected visits (2 and 5), patients completed ACDS and FCIS questionnaires.

Results

The analysis of treatment adherence for ticagrelor and acetylsalicylic acid(ASA)/placebo revealed different patterns of adherence during the 12-month observation. The mean adherence for ticagrelor was 90.85%, which was lower than for acetylsalicylic acid/placebo, which had an adherence rate of 96.11%. These results suggest that patients are more likely to adhere to acetylsalicylic acid/placebo therapy than ticagrelor. A decline in adherence to ticagrelor was observed over time, with significant reductions in adherence during visits V4 and V5. This indicates that long-term adherence to ticagrelor therapy may be challenging, especially in later stages, when the proportion of patients with low drug intake increases. Comparison of adherence between ticagrelor and acetylsalicylic acid/placebo revealed significant statistical differences, particularly in the later visits (V3, V4, V5), suggesting that patients have more difficulty maintaining ticagrelor therapy compared to acetylsalicylic acid/placebo. The correlation analysis showed that patients who were more consistent in taking one medication tended to be similarly consistent with the other. High correlation coefficients at each visit suggest that adherence to one therapy may be an indicator of the patient's overall approach to medication adherence. The study provided valuable insights into patient adherence to ticagrelor and acetylsalicylic acid/placebo therapy in the context of various clinical factors. In the studied population, adherence to ticagrelor varied depending on several demographic and clinical factors. Younger patients (18–64 years) presented higher adherence to ticagrelor than older patients. Adherence to ASA was mostly

independent of age, suggesting better acceptance of this therapy in older patients. Diabetes was a key factor negatively affecting ticagrelor adherence, possibly due to the challenges of managing multiple medications simultaneously or other health issues. Adverse events, especially serious ones (SAEs), had a significant impact on reducing adherence to both ticagrelor and ASA. Patients experiencing severe adverse events were more likely to discontinue or reduce their medication dose. Gender and other demographic variables, such as residence, education level, or body mass index (BMI), had a limited impact on adherence to therapy. In most cases, adherence differences were not statistically significant, suggesting 97 that these factors do not play a decisive role in following therapeutic recommendations. ACDS scores at the fifth visit were significantly correlated with better adherence to ticagrelor during the middle phase of the study, particularly at visits V2, V3, and V4, suggesting a positive impacton adherence during this phase of treatment. However, the results of the second visit had limited impact on adherence to both drugs. FCIS scores at the second visit showed a significant positive correlation with annual adherence to both ticagrelor and ASA/placebo, as well as adherence to ticagrelor at the first visit, suggesting that a higher level of functioning in chronic illness promotes better adherence. However, by the fifth visit, the influence of these scores was less pronounced and did not reach statistical significance. The number of medications taken was a significant factor negatively affecting adherence to both ticagrelor and ASA/placebo. A greater number of medications led to a significant decrease in adherence, as confirmed by moderately negative correlations for both drugs. A particularly significant decrease in adherence was observed at visits V2, V3, and V4.

Conclusions

1. Patient adherence to ticagrelor was lower than to acetylsalicylic acid/placebo, indicating greater difficulty in maintaining regular ticagrelor intake over a longer treatment period.

2. Adherence to ticagrelor declined over time, particularly at later visits (V4, V5), suggesting that long-term adherence to this medication is challenging for patients.

3. Younger patients adhered better to ticagrelor therapy, while age had no significant impact on adherence to acetylsalicylic acid/placebo. Other sociodemographic factors such as place of residence and BMI had no significant effect on adherence to either medication.

4. Patients with diabetes had lower adherence to ticagrelor, suggesting that this group may need additional support in managing multiple therapies.

5. Adverse events, especially serious ones, significantly reduced adherence to both ticagrelor and ASA/placebo, emphasizing the importance of minimizing adverse events duringtreatment. 98

6. Adherence correlated across different therapies. Patients who adhered to ticagrelor also demonstrated similar adherence to ASA/placebo.

7. The number of medications taken negatively impacted adherence, with more medications leading to decreased regularity in taking both ticagrelor and ASA/placebo, especially in the middle phase of treatment.

8. ACDS and FCIS scores correlated with better adherence, particularly in the middle phase of treatment, highlighting their usefulness in assessing adherence. Patients with lower scores on these scales require special monitoring and support.

9. Individualizing patient care and optimizing therapy to minimize adverse events and simplify treatment regimens can significantly improve adherence, particularly among older patients and those taking multiple medications.

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(czytelny podpis doktoranta)