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Scheduled coronary angiography in men: the impact on well – being and the long - term prognosis

Summary

Coronary angiography is the gold standard in diagnostics of ischemic heart disease. The is a most often performed study in the field of invasive cardiology enabling the classification of sick persons to the various type of revascularization treatments. In 2012 Andrzej Krupienicz published the hypothesis being based on is notifications of patients and on known effects of contrast media on coronary vessels, that the coronary angiography could have a therapeutic effect (1)

Purpose of the work

The study aimed was to validate the hypothesis by Andrzej Krupienicz on the possible therapeutic effect of coronary angiography in men

Material and methods

The study group consisted of 519 men who had their first coronary angiography performed at the City Specialist Hospital and District Specialist Hospital in 2012 - 2013 with whom an interview was conducted one month after the study on the impact of coronary angiography on the current state of health and assessment of their health.

Statistical analysis was performed by Statistica 13.3 program. Basic descriptive statistics were obtained and calculations for selected variables were performed using the Chi2 test and the Mann-Whitney U test, t Student test, and then one-way logistic regression models were performed to check which data constitute a significant prognostic factor for the main dependent variable. The value of the predictors was estimated based on the odds ratio along with their 95% confidence interval. Classically $\alpha = 0.05$ was adopted as the threshold of significance.

Results

All the men included in the study were divided into the three groups

The first one included 227 patients who stated that coronary angiography had a positive impact on their health. The second group consisted of 271 patients who believed that coronary angiography did not have any impact on their health. And the third group of 21 men stated the coronary angiography had affected their health but they felt worse after the procedure. This group was too small, so was not included in the final analysis

1. No statistically significant differences in terms of demographic data such as age, place of residence, education, professional activity between the two groups of men were noted

2. The groups of patients did not differ in clinical factors namely BMI value, basic laboratory test (creatinine, peripheral blood morphology), taken medications, comorbidities (diabetes, hypertension, myocardial infarction, cardiomyopathy, heart failure, stroke), and ECG recording

3. No statistically important differences were related in basic parameters measured during coronary angiography such as the irradiation time $p = 0,265$, the radiation dose $p = 0,919$, the amount of contrast administered $p = 0,243$, the type of contrast $p = 0,278$ and the observed change in the coronary vessels $p = 0,605$ between the groups.

4. There was also no statistical significance after one year in terms of deaths $p = 0,388$, procedure performer $p = 0,482$, between men who felt better after coronary angiography, and those who did not benefit from the study

5. The performed analysis of one – way logistic regression model for the variable „feeling better” showed, statistically significant results in the range of administered drugs $p = 0,020$. The analysis concerned the drugs administered during coronary angiography versus no drugs. Patients who believed the coronary angiography did not have any impact on their health received more Heparinum natricum in combination with Papaverinum hydrochloricum during the study.

Conclusions

43.7% of men feel better after coronary angiography. They associated the change in their health with the performed coronary angiography.

It should be recognized that coronary angiography has an impact on patients' health, but it has not been possible to determine what factor influenced the patients' well-being.

Due to the statistically significant result in the data on the administered drugs during coronary angiography, it is necessary to conduct in-depth studies taking into account this variable and to conduct an analysis in a group of women