Medical Expertise

"Development of the European Network in Orphan Cardiovascular Diseases"
„Rozszerzenie Europejskiej Sieci Współpracy ds Sierocych Chorób Kardiologicznych"

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CASE SUMMARY

57 years old patient was admitted in April 2012 to the cardiology department due to increasing angina symptoms (CCS class II/III). His risk factors of CAD were hypertension, hypercholesterolemia, smoking and significant family history. On the day of admission the echocardiography showed normal ejection fraction without segmental contractility changes. The excersize test was terminated after 11 minutes, 11 METs, without EKG changes, but chest pain which was increasing during the excersize. Coronarography revealed anomalous vessel anatomy with hyperdominant right coronary artery, from which the whole left coronary tree was originating. No atherosclerotic plaques were present. In angio-CT the previous finding was confirmend and no origin of the left coronary artery was found. After SPECT examination no perfusion isturbances were noticed. Patient was released home with medications as follows: aspirin 75mg, Ramipri 5mg, Metoprolol 50mg and Atorvastatin 40mg. In January 2014 the patient was once again admitted to the hospital with significant excersize deterioration. Since two weeks symptoms were worsening up to the CCS III/IV class. No significant EKG chnges were noticed. Troponin and CK, CK-MB level were elevated above the normal range, typical for myocardial infarction. NSTEMI was diagnosed. Echocardiography, coronarography showed similar pictures as two years ago. SPECT showed much worse excersize tolerance and the examination was stopped at 4.4 METS due to chest pain. Moslidomin, trimetazidine and clopidogrel were added and bisoprolol was administrated instead of metoprolol.

DISCUSSION

While revieving the literature according the topic on coronary anomalies not much informations can be found and most of it is based on single case reports. Javangula at al.

presented a case of a 61 years old male with hyperdominant left anterior descending artery and coexisting aortic stenosis who underwent a successful complex surgery of the aortic valve and triple bypass grafting [1]. Double right coronary arteries have been described. Both might develop obstructive atherosclerotic disease [2] and might show up with anatomically different branches [3]. Different origins of right coronary arteires were described more often and many of them were discovered during autopsy [4,5,6]. Lessic J et al. reported an interesting case on right coronary artery origin from the pulmonary trunk [7]. Ca. 10 cases were published describing the right coronary artery originating from the distal part of a single left anterior descending artery [8, 9, 10]. Interresting analysis was made by Veltman CE et al. who focused on the influence of the coronary dominance on the short and long term outcomes in patients undergoing STEMI. They found thet left coronary dominance is associated with increased risk of 30-day mortality and early reinfarction in patients after STEMI. After 30-days post STEMI coronary arery dominance had no influence on long term outcomes [11]. The same conclusions were made in the TWENTE trial population [12]

EXPERT'S OPINION

Platelet agregation test for prevention of thrombo-embolic events should be done. It is probable, that the patient should be on double antiplatelet therapy to prevent thrombo-embolic events in future. A vasoconstrictive component of the coronary arteries might be influencing the symptoms, although no significant EKG changes were noticed during the excersize examinations. In such case administration of a Ca-channel blocker might be a good option. Patient should stay in close cardiological follow up at least at every 6 months.

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