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ISCHEMIC HEART DISEASE. ACUTE CORONARY SYNDROME. ST- ELEVATION MYOCARDIAL INFARCTION OF INFERIOR WALL OF LEFT VENTRICLE.

G. Stoev*, D. Mitzov, M. Stoynev, N. Stoyanov, S. Jejovski, G. Petrova, S. Djurova, A. Nikolov, Y. Cherkezov, P. Stoyanova, B. Pesheva, M. Mihneva, K. Atanasova, I. Vutzov, M. Ingeliev, Z. Kamenova

SBALK Yambol, Bulgarian Cardiac Institute, Yambol, Bulgaria

ABSTRACT
Acute coronary syndrome is result of vulnerable atherosclerotic plaque, which causes thromb-formation and in different degree compromises the coronary blood flow. Depending on the degree and the duration of interruption of the coronary blood flow, the status of other vessels, formed collateral vessel net, the severity of ischemia and necrosis there are different manifestations of ACS-unstable angina, Non ST- segment elevation myocardial infarction, ST- segment elevation myocardial infarction, sudden cardiac death. The modern strategy for treatment of AMI is the early reperfusion therapy. We report 60 years old patient with ACS - acute ST-segment elevation myocardial infarction of inferior wall of left ventricle, from the coronary angiography: thrombotic occlusion of the RCA in distal segment- we performed percutaneous coronary intervention in emergency with optimal angiographic result- with TIMI III coronary flow to the periphery of the vessel.

Key words: ACS, thrombotic occlusion, PCI

Acute coronary syndrome is result of vulnerable atherosclerotic plaque, which causes thromb-formation and in different degree compromises the coronary blood flow [1]. Depending on the degree and the duration of interruption of the coronary blood flow, the status of other vessels, formed collateral vessel net, the severity of ischemia and necrosis there are different manifestations of ACS-unstable angina, Non ST- segment elevation myocardial infarction, ST- segment elevation myocardial infarction, sudden cardiac death.

According to the MONICA study the mortality from acute myocardial infarction is 13-27% until 28th day and mortality is highest in the first 2 hours [2]. Modern strategy for the treatment of AMI is early reperfusion therapy – medical therapy (fibrinolysis), mechanical (percutaneous coronary angioplasty) and surgical (coronary artery bypass surgery). The time factor for the realization of reperfusion strategy is of dominant importance, because the sooner the reperfusion is achieved, the less are the consequences for the patient.

***Correspondence to**: *Gavril Stoev, SBALK Yambol, Bulgarian Cardiac Institute. Address: Yambol, Bulgaria, № 69 Dimitar Blagoev boulevard, 8600, e-mail: gavril.stoev@gmail.com*

CLINICAL CASE

Male, 60 years old, with risk factors for ischemic heart disease - gender, age, obesity, smoking, hypertension, dislipidemia. He was admitted in the hospital with typical angina pectoris, occurring at rest at 18:00 pm, persistent at the moment of hospitalization. He searched medical help in emergency unit of Sliven Hospital, where was diagnosed ACS and the patient was transferred to SBALK Yambol for interventional treatment.

Status: Apparent age of the man in charge of the actual. In good general condition. Oriented to time, place and identity. Skin with preserved turgor. Mucous membranes – pale-pink. Neck, cervical veins - ok. Periphery lymph nodes and thyroid, not enlarged. Respiratory system - both breast halves with equal participation in

breathing. Clear percussion tone. Vesicular breathing without wheezing. Cardiovascular system- rhythmic heartbeat, HR-73b./min, BP 114/82 mmHg. Clear heart tones without murmurs. No murmur in renal and carotid area. Abdomen - soft, painless at palpation, taking part in breathing. Livers on the level of costal arc. Spleen- not enlarged. Succussio renalis- negative in both sides. Limbs- without edema, preserved pulse in peripheral arteries.

Laboratory results: Leukocytes (Leu) - 9.1; 9.7; Erythrocytes (Er) - 4.57; Hemoglobin (Hb) - 136; 138; Platelets (Tr) - 301, 316; aPTT - 57.7; Glucose - Serum - 9.1; Cholesterol - 5.82; Triglycerides - 2.43; HDL - 0.68; LDL - 4.04; CK- 256, 997, 827, CK-MB - 18.7, 150.1, 85.6, troponin - 0.31, 44.1; Creatinine - 136.1, 126; Urea - 6.9, 6.8;

ECG at admission: sinus rhythm, indifferent type axis, ST- elevation in II, III, aVF, ST-depression with negative T- waves in leads I, aVL, V1 to V6, HR- 74b./min. Echocardiography: slightly depressed systolic function, EF-48% (Simpson). Hypokinesia of the lateral wall, akinesia of inferior wall of left ventricle and inferolateral, left venricle hypertrophy. Mitral valve: MR 0 + , E <A; Aortic valve: Ao flow- ok.

Pericardial reaction - 3-4mm in diastole, infront of the RV.

Coronary angiography- LCA: tortuous vessels, LM - without stenosis; LAD-irregularities in proximal segment, 40% stenosis in middle segment; LCx- irregularities, with origine of OM1 near the ostium of LCx, OM2-40% ostial stenosis, 60% stenosis in middle segment; RCA-tortuous vessel with irregularities in proximal segment, 30% stenosis in middle segment, occlusion in distal segment, with TIMI-0 flow to the periphery of the vessel **[figure 1]**. Right dominant type of coronary circulation. An angioplasty of RCA was performed with trombaspiration and coronary stent implantation- Solarflex 3.0/24mm. Optimal final angiographic result: TIMI-3 flow to the periphery of the vessel and MBG-3 perfusion of the periphery **[figure 2]**.

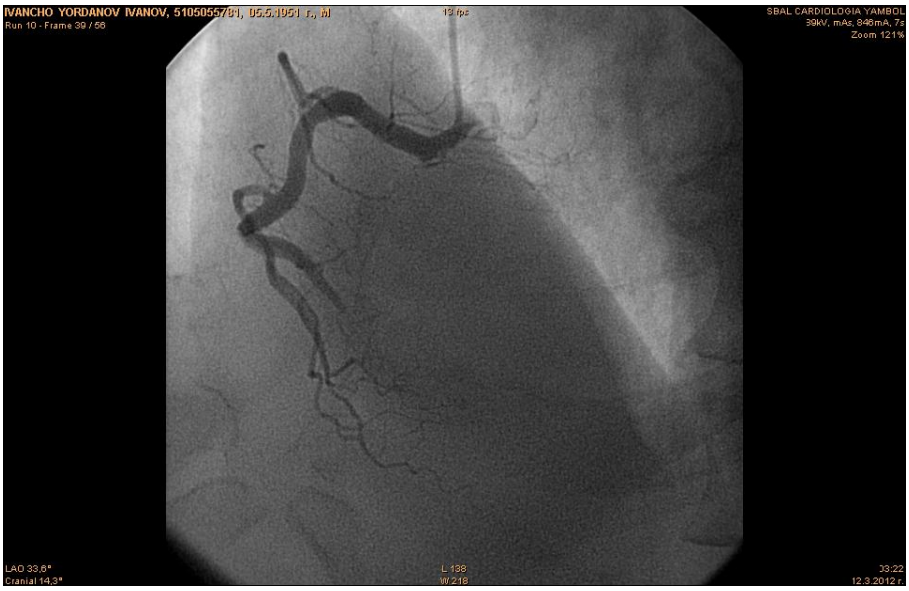

Fig. 1.

DISCUSSION

We report 60 years old patient with ACS - acute ST-segment elevation myocardial infarction of inferior wall of left ventricle. The angina symptoms began at 18.00, total ischemic time- 9h.4min., time to presentation- the time from symptom onset until arrival at the presenting hospital- 8h 30min., door- to-balloon time- 34 min. Negative enzymes for fresh myocardial necrosis at the time of admission. Undertaken percutaneous coronary angiopolasty with optimal angiographic result- with TIMI III coronary flow to the periphery of the vessel [3].

According to European guidelines- 2011 for treatment of AMI with ST elevation:

1. Angioplasty until 1 hour – optimal- in the "golden hour"
2. PCI until 2 hours, very good option
3. PCI until 6 hours- a good option
4. Angioplasty until 12 hours - a compromise.

Percutaneous angioplasty is the most effective treatment of AMI. There are no absolute contraindications and is much more effective than thrombolysis. Thrombolysis can revascularize the occluded coronary artery only 50% -75% of the treated patients, while PCI is effective in 90% -95% of the cases. Primary PCI, compared with thrombolysis in large randomized studies, has reduced the mortality among patients with STEMI by approximately 20-25% [2].

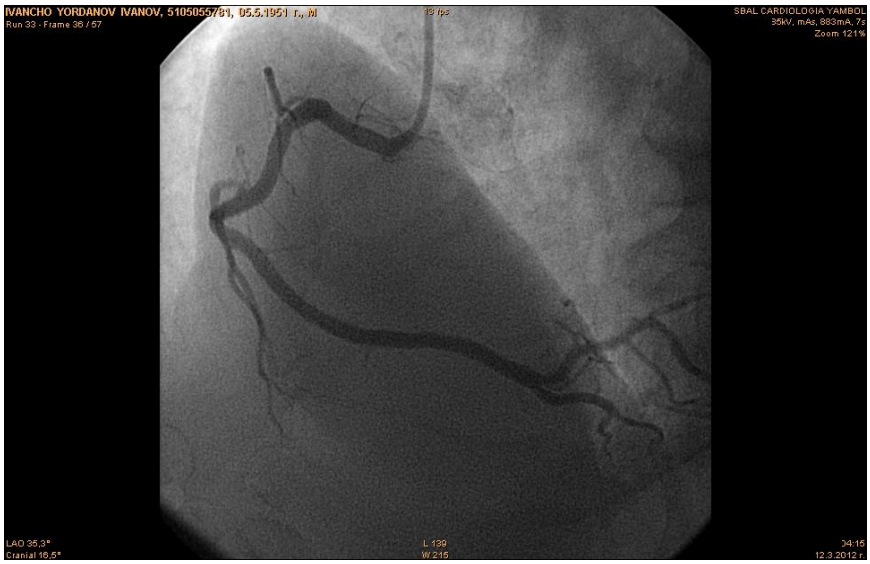

Fig. 2.

CONCLUSIONS

Primary angioplasty is the most modern, most effective and with most benefits for the patient method of treating acute myocardial infarction.

According to European guidelines / 2011/, for the treatment of AMI the first hour is “the golden hour” for primary angioplasty.

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