



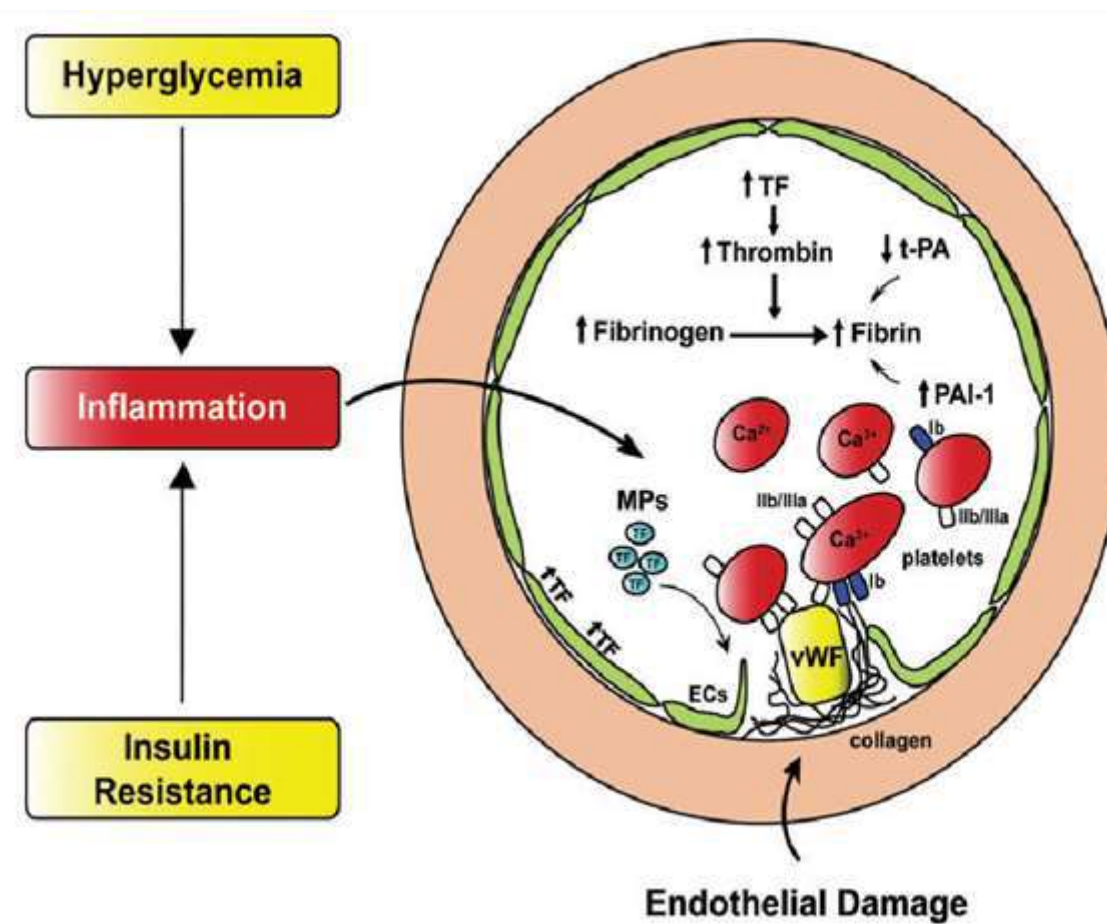
UNSTABLE ANGINA WITHIN PATIENTS WITH TYPE 2 DIABETES MELLITUS



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Introduction:

Unstable Angina (UA) is a form of acute coronary syndrome and is a major cause of mortality. It is in increase due to the growing prevalence of many risk factors for coronary failure, such as diabetes mellitus (DM), which aggravates the underlying mechanisms of atherosclerosis.

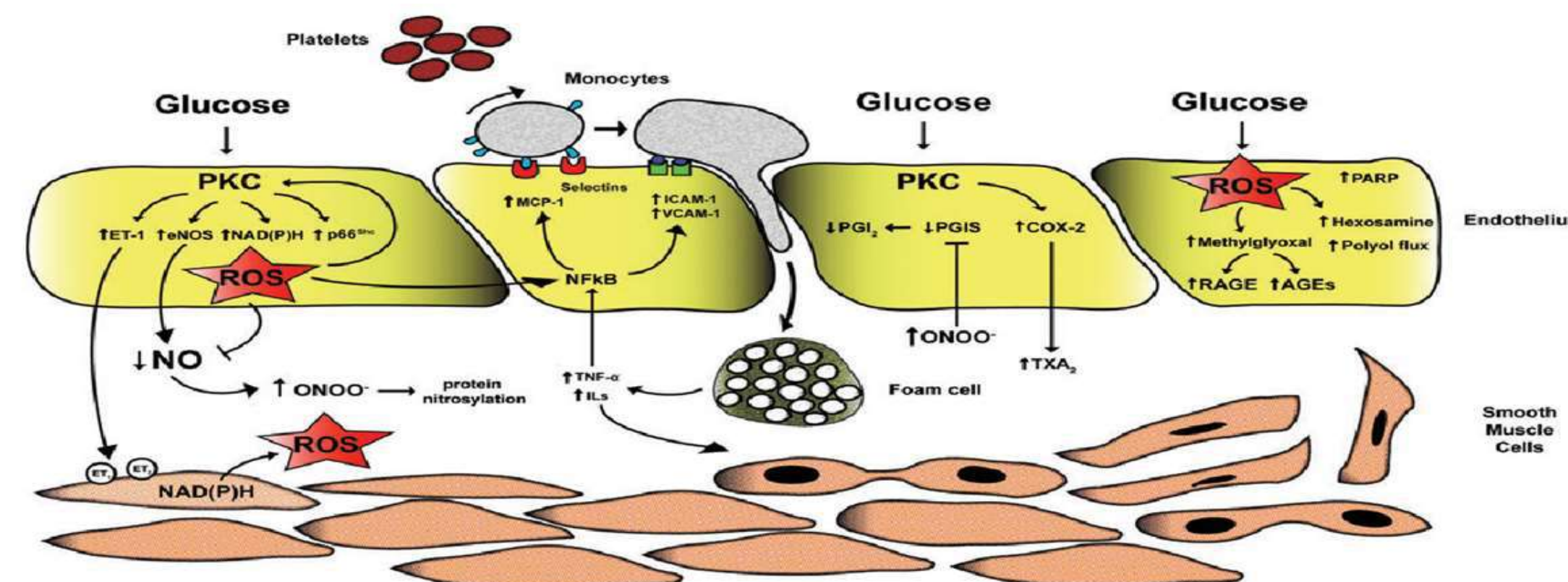


DM has negative effects on most metabolic pathways and contributes to the multiple complications of this disease. This is caused by:

- (1) insulin resistance
- (2) hyperglycemia
- (3) metabolic syndrome
- (4) endothelial dysfunction
- (5) hyper coagulation;

Chronic hyperglycemia and insulin resistance are playing an important role in initiating vascular complications of diabetes and involve certain mechanisms including:

- (1) increased formation of advanced glycation products and activation of advanced glycation product receptors,
- (2) oxidative stress
- (3) inflammation



Keywords:

unstable angina, diabetes mellitus

Purpose:

Study of the features of clinical evolution, diagnosis and treatment of patients with unstable angina and type 2 diabetes mellitus.

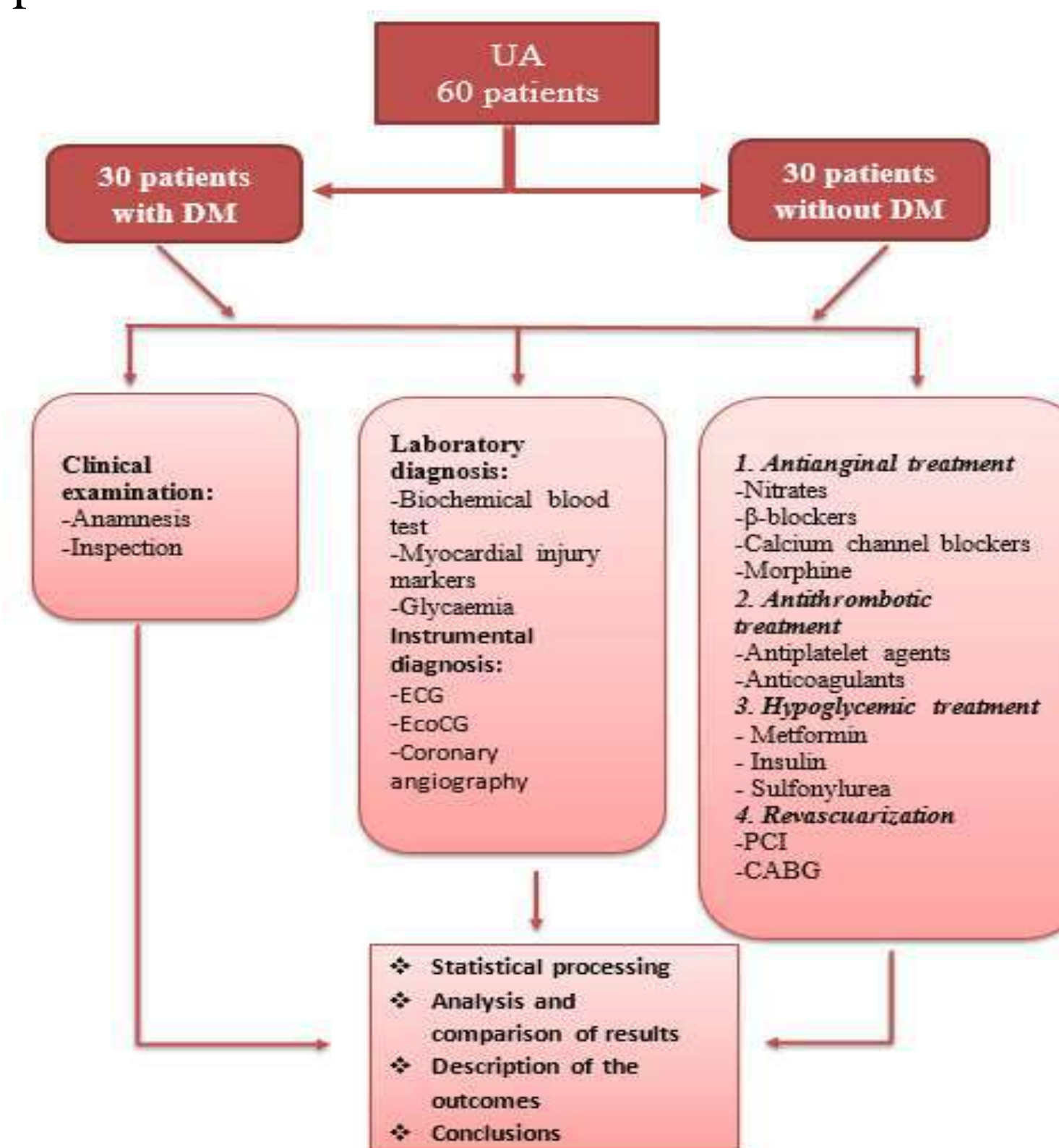
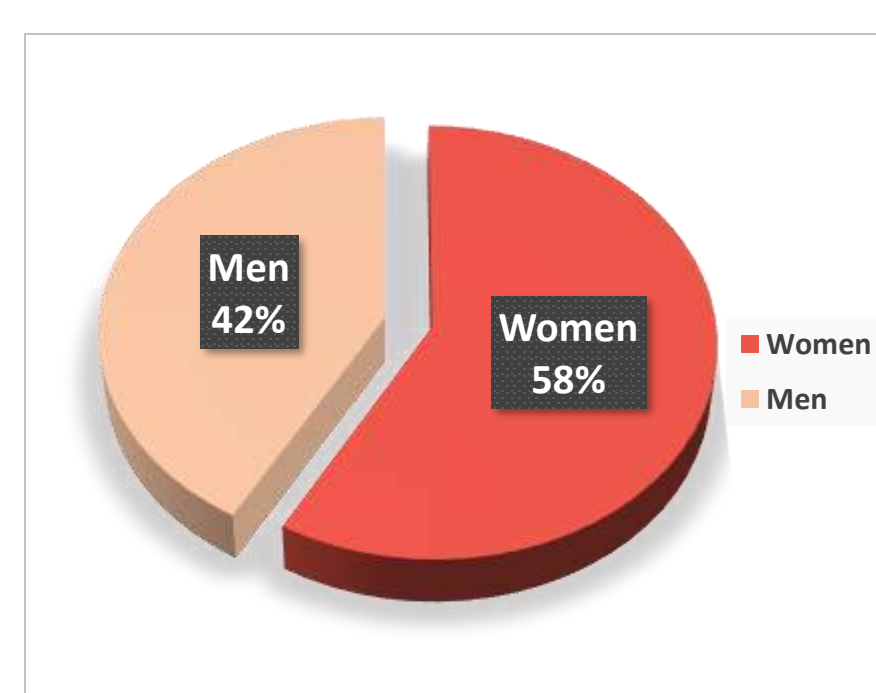


Material and Methods:

This study was performed on a group of 60 patients diagnosed with Unstable Angina, 30 of them with and 30 without DM, hospitalized between May - October 2018, within the Holy Trinity Municipal Hospital.

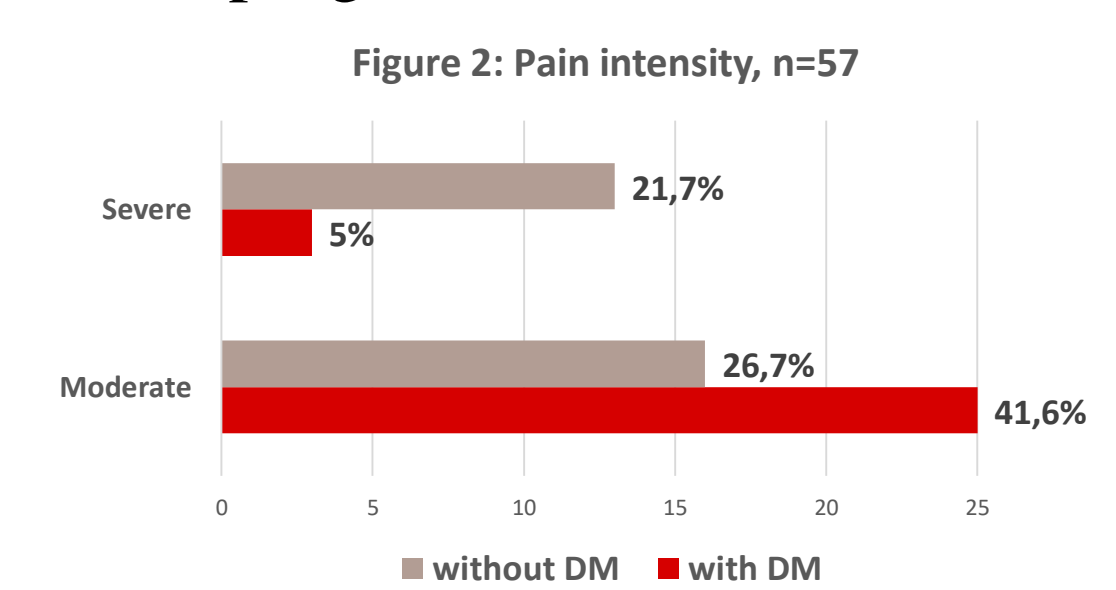
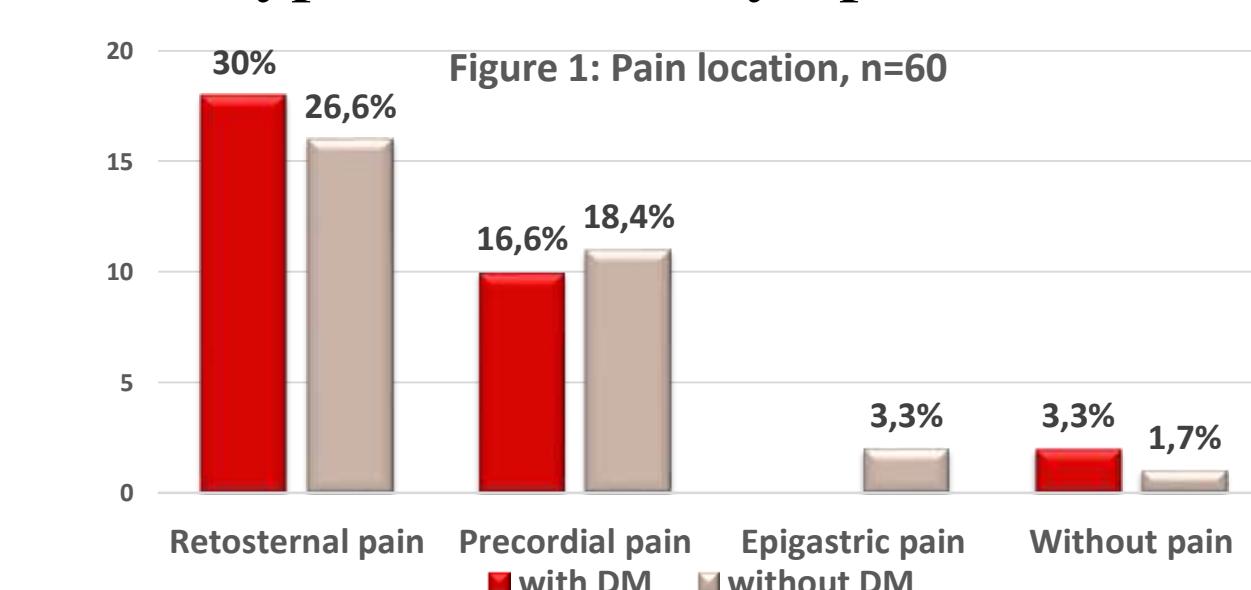
Symptoms, complications, laboratory and instrumental diagnosis, drug and interventional treatment were compared.

In the study group, there are more women – 35, i.e. 58%, in comparison with men - 25 (42%). The mean age of the patients - 68.9 years (± 20 years).



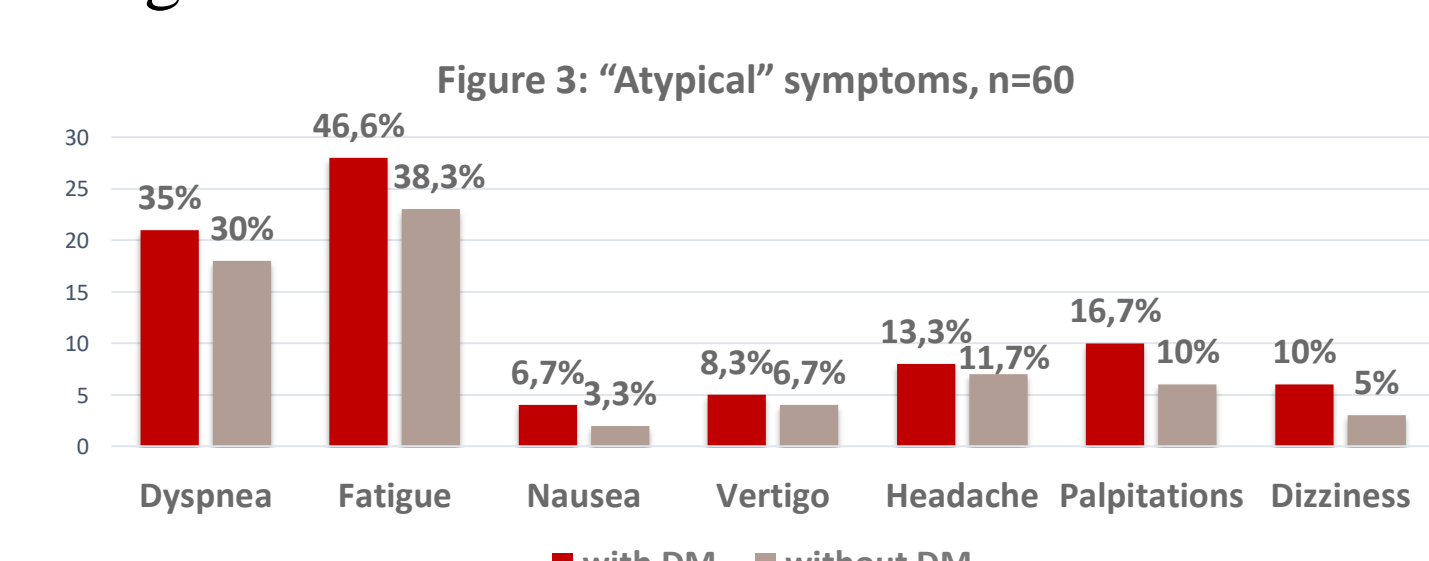
Results:

The clinical status of patients with diabetes and UA includes certain features. Cardiac ischemia in diabetics compared to those without diabetes is more common with atypical or silent symptoms with an unfavorable prognosis.



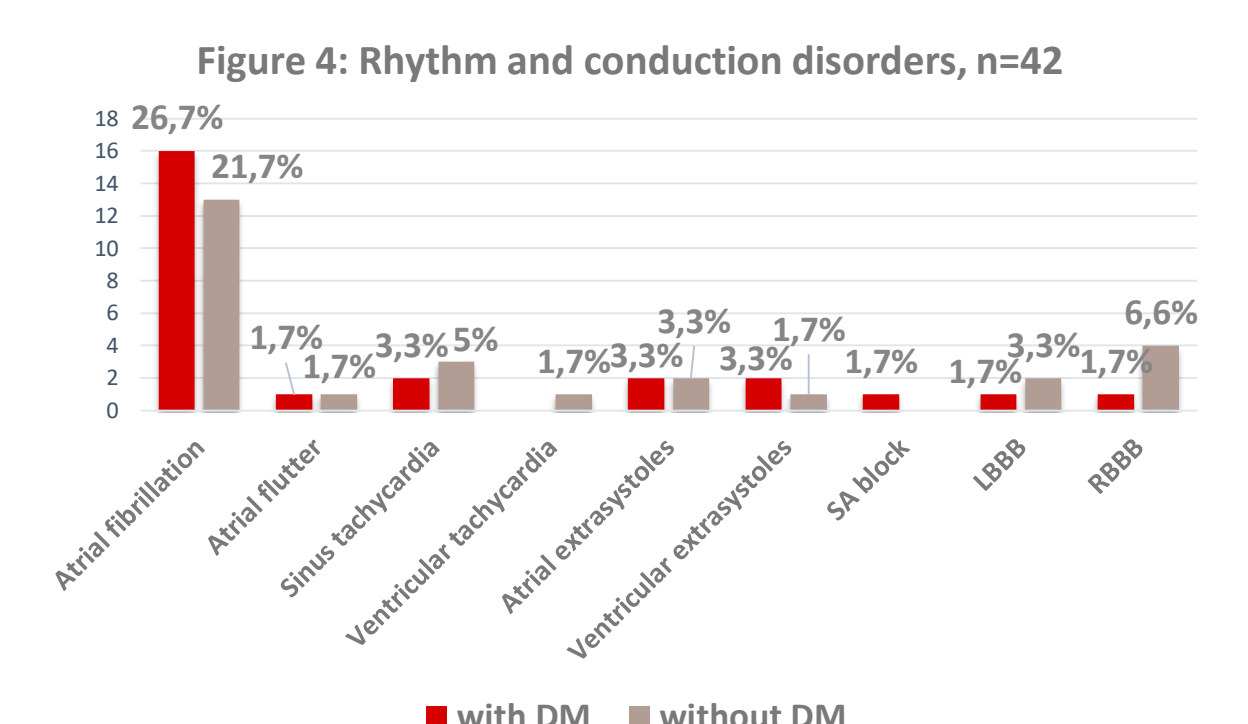
For people with diabetes, the recognition of cardiac symptoms may be more difficult due to autonomic cardiac neuropathy, which leads to a subsequent decrease in the symptoms experienced, silent ischemia and chronic symptoms associated with diabetes.

Although chest pain is the classic symptom of UA, atypical symptoms such as dyspnea, weakness and fatigue are vague symptoms which are characteristic of a large number of diseases.

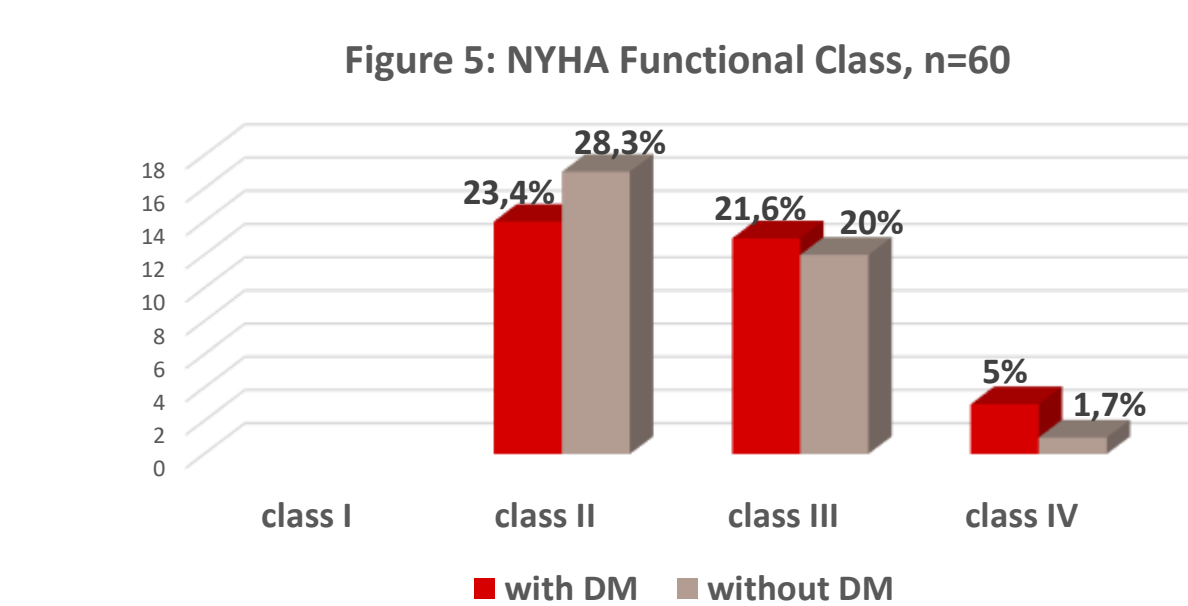


The "atypical" symptoms, in the absence of chest pain, could contribute to a delay requiring urgent care, which leads patients to believe that their symptoms are harmless.

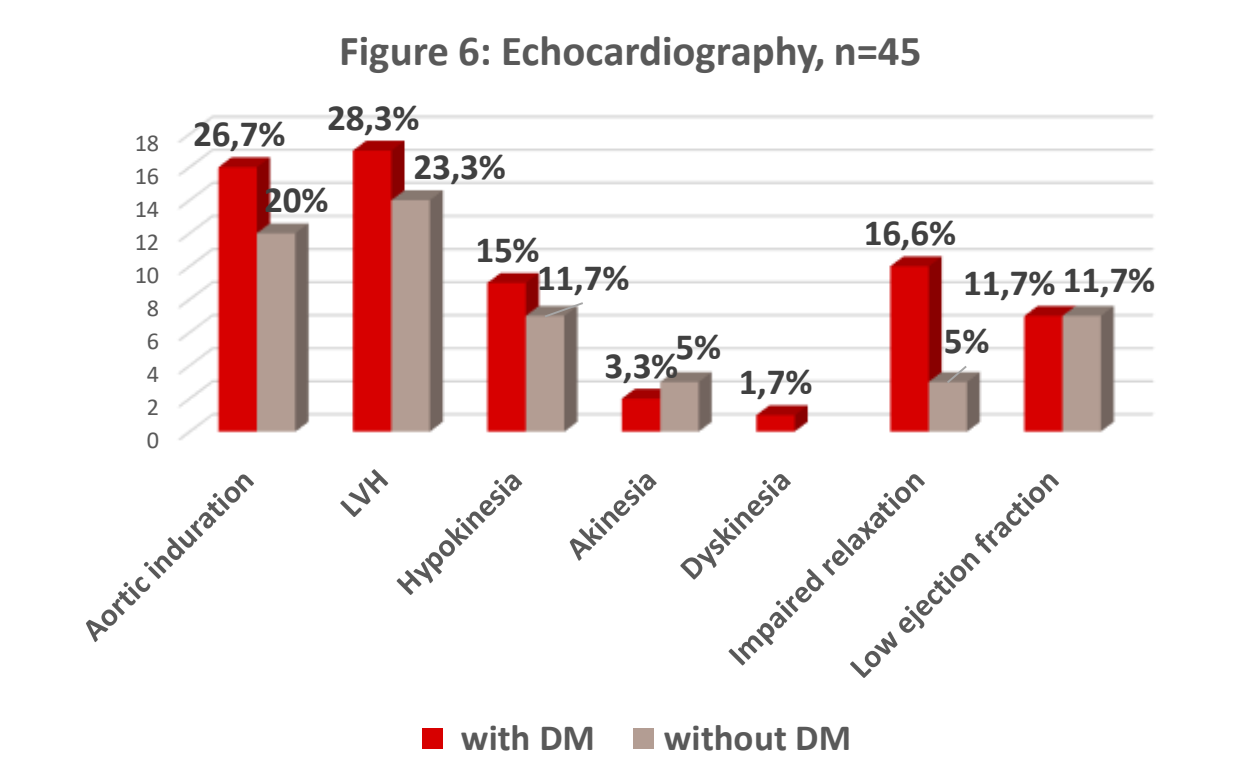
The most common complications in patients with UA and DM are atrial fibrillation and heart failure (HF). Favoring their appearance is determined by the low glucose tolerance and insulin resistance that can lead to electrical and structural remodeling with favoring the appearance of rhythm disorders.



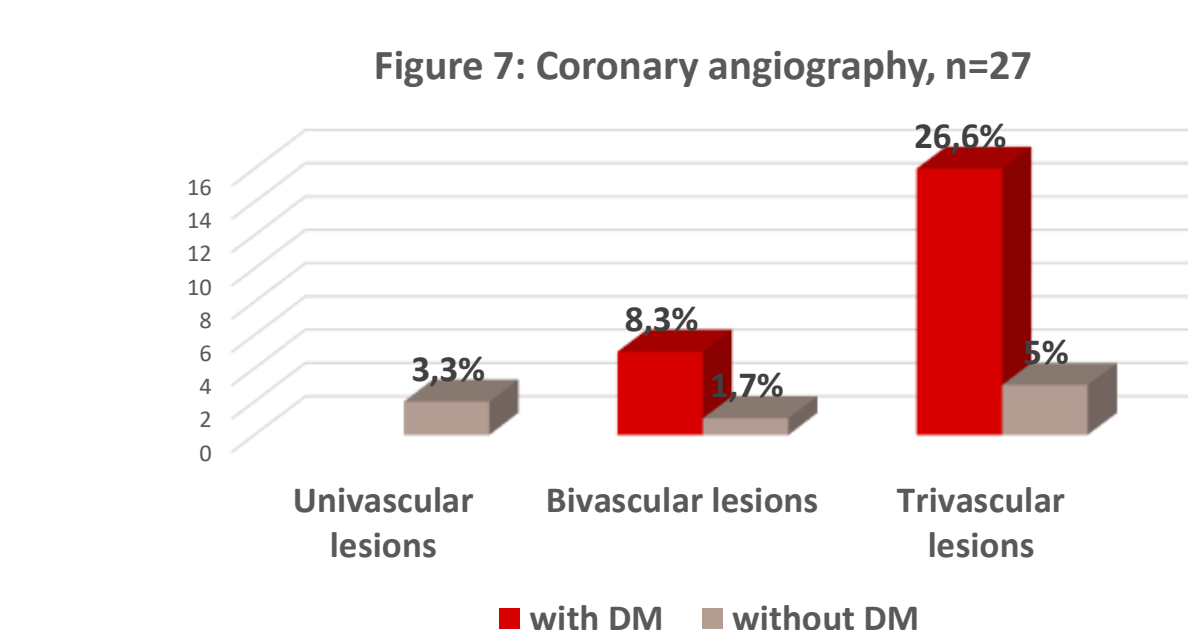
Patients with diabetes are more likely to develop HF and have a much worse NYHA functional class and more HF-related symptoms and signs compared to those without diabetes.



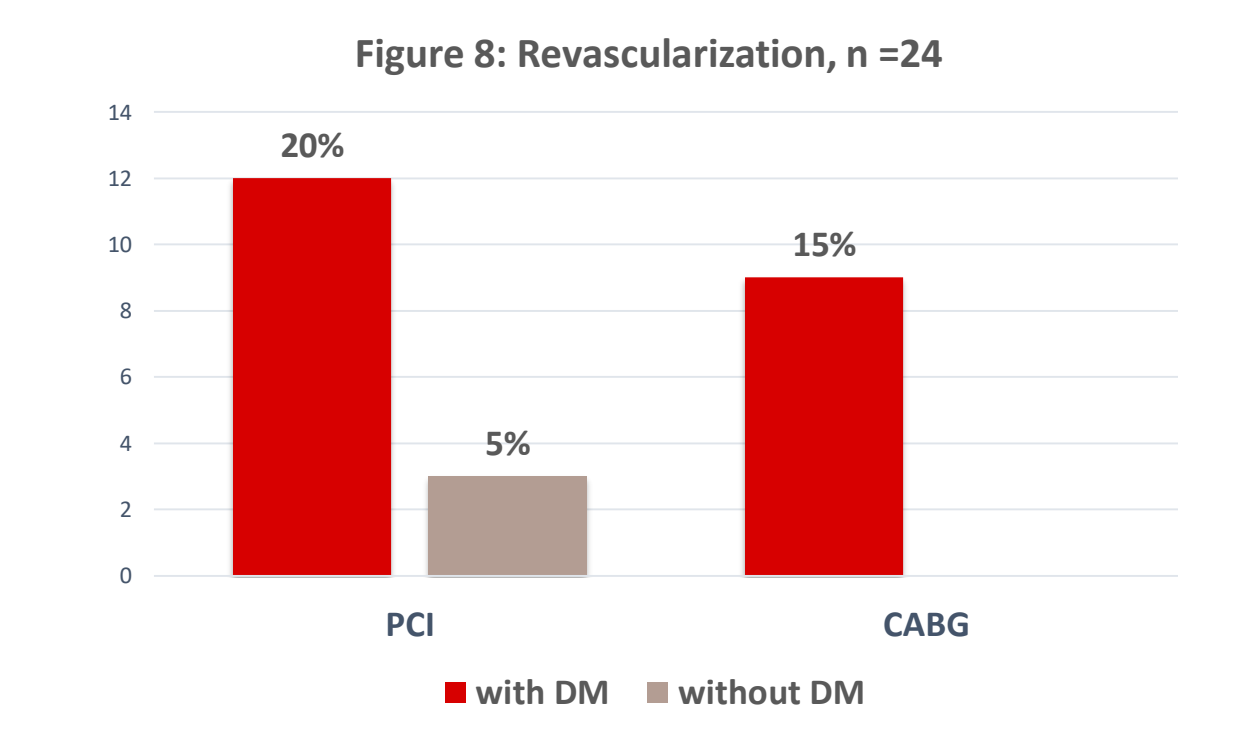
Also, patients with DM more frequently have aortic induration, LVH, hypokinesia, dyskinesia and impaired relaxation. These results can be explained by the toxic effects of hyperglycemia and hyperlipidemia characteristic of diabetes with direct impairment of cardiac function.



A specific feature of patients with diabetes is a more severe coronary multivascular damage and the involvement of more coronary segments than those without diabetes.



Other studies have shown that myocardial revascularization by PCI or CABG improves angina more efficiently compared to a strategy based only on drug treatment. CABG is considered to be more effective in multivascular lesions and is a preferable treatment in patients with diabetes.



Conclusion:

- 1) Clinical-evolutionary features in patients with unstable angina associated with diabetes involve lower pain intensity, atypical clinical manifestations and frequent development of complications such as atrial fibrillation and heart failure.
- 2) Most patients who have benefited of invasive treatment are part of the group of patients with diabetes, due to the more frequent presence of multivascular lesions, involving small vessels.