

## THE CARDIOVASCULAR PATIENT - CHALLENGE OR PROBLEM FOR THE DOCTOR OF DENTAL MEDICINE?

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### ABSTRACT

The pain is a main and strictly subjective criterion for the patients' assessment of the quality of treatment. The anesthesia is the basic part from the contemporary standards for good dental practice.

**The aim** of the investigation is to establish how far the risk patient with cardiovascular disorders, receives an adequate anesthesia in the dental treatment

**Object** of the study are 276 interviewed patients from the Clinic of Cardiology – St. Georgy University Hospital – Plovdiv, The Department of Cardiology – MBAL – Pazardjik, and private cardiological practices in Plovdiv, Smoljan and Pazardjik.

For that purpose a questionnaire was prepared. It comprises questions about retrospective revision of previous dental interventions. The questions are orientated to specify the use of an anesthesia in the dental treatment, how far effective is it, if there is a refusal on the dentist part.

**Conclusion:** It was established, that the doctors of dental medicine avoid the use of anesthesia in the cardiovascular patients.

**Key words:** cardiovascular diseases, risk patients, complications, anesthesia

### INTRODUCTION

Current dental practice should meet all requirements of patients' comfort. Painless dental procedures are an important criterion for assessing the quality of dental care. Local anesthesia is sometimes accompanied by complications. For this reason it is avoided in patients with a problematic clinical history.

**The aim** of the investigation is to establish how far the risk patient with cardiovascular disorders, receives an adequate anesthesia in the dental treatment.

**Object** of the study are 276 interviewed patients from the Clinic of Cardiology - St. Georgy University Hospital -

Plovdiv, The Department of Cardiology - MBAL - Pazardjik, and private cardiological practices in Plovdiv, Smoljan and Pazardjik.

Data is collected using a direct, anonymous questionnaire from December 2008 through January-February 2009. All cardiologic inpatients as well as patients visiting the Outpatient Cardiologic Facility were interviewed. For that purpose a questionnaire is prepared consisting of questions about patient's sex, age and disease, is he/she given anesthesia during painful dental procedures, have any complications ever occurred after he/she was given anesthesia, have he/she felt any pain despite the given anesthesia, is he/she being consulted by other specialists, has he/she been refused anesthesia owing to cardiovascular disease, has he/she been refused dental treatment owing to cardiovascular disease. The results are statistically processed by ANOVA.

### RESULTS

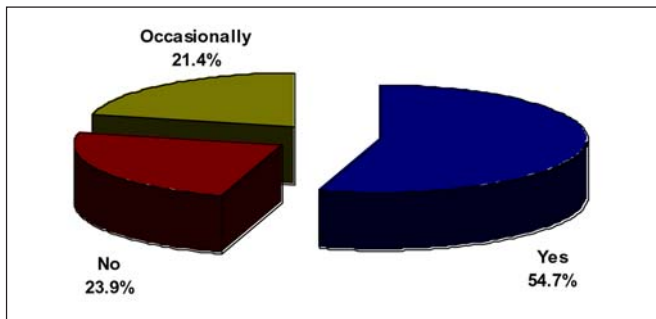
Patients' distribution according to age, sex and current medical condition is presented in table 1..

**Table 1.** Characteristics of patients

Characteristics	n	%
Number of patients	276	100
Sex		
Male	123	44.6
Female	153	55.4
Age (mean±SE)	55.38 ± 0.73	
Cardiac disease		
Ishaemic heart disease, angina pectoris, myocardial infarction	135	48.9
Abnormal rythms and disturbances of conduction	46	16.7
Arterial hypertension, hypertensive heart disease	70	25.4
Others	25	9.0

The results of the question „Are you given anesthesia during painful dental procedures?” are: (Fig. 1)

**Fig. 1.** Are you given anesthesia during painful dental procedures?



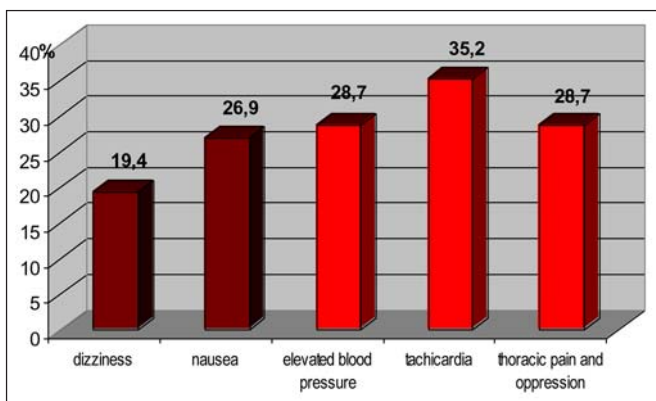
The results of the question „Does your dentist refer you to a specialist for consultation in case you need anesthesia?” are:

- Yes – 30,1%
- No - 50,7%
- Occasionally- 19,2%

The results of the question „Have you developed complications following anesthesia during dental procedures?” are: (Fig. 2)

- Yes – 39,1%
- No – 60,9%

**Fig. 2.** Complications following anesthesia during painful dental procedures?



The results of the question „Have you ever experienced pain regardless of the used anesthesia?” are:

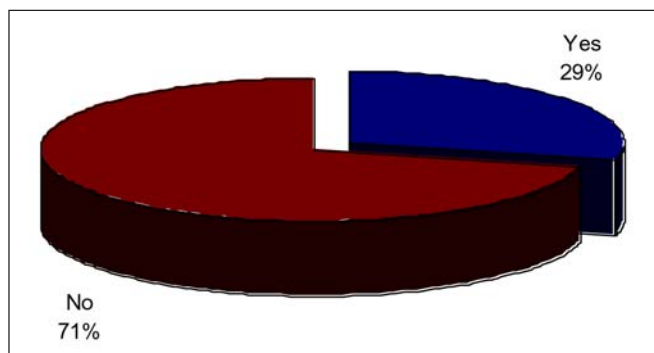
- Yes – 33,0%
- No – 67,0%

The results of the question „Before anesthesia, have you received additional cardiac medication?” are:

- yes – 31,5%
- no – 68,5%

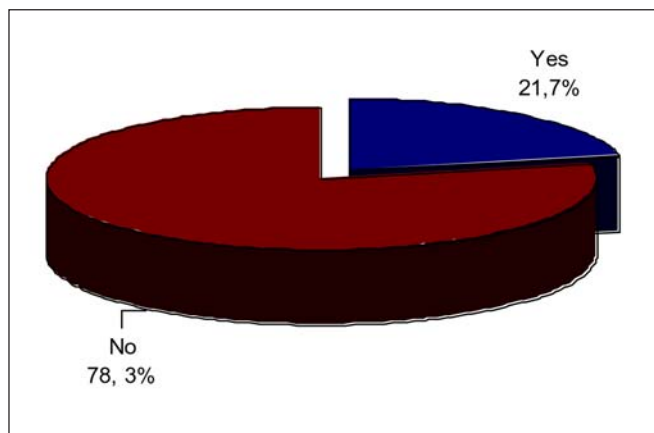
The results of the question „Have you ever been refused anesthesia due to the presence of cardiac condition?” are: (Fig. 3)

**Fig. 3.**



The results of the question „Have you ever been refused dental procedures due to the presence of cardiac condition ?” are: (Fig. 4)

**Fig. 4.**



## DISCUSSION

From the accumulated evidence, it is seen that only 54% of the interviewed patients received painless dental care. 69.9% of them are not referred to a specialist for consultation. Anesthesia complications have been registered in 39.1% of the patients and 33% have experienced pain, regardless of the used anesthesia. 68.5% of the patients have been administered additional cardiac medication. It is noted that 28.6% of the patients had been refused anesthesia due to the presence of cardiac condition. For the same reason, 21.7% have been refused dental care.

## CONCLUSIONS

A significant proportion of cardiac patients do not receive adequate and high quality dental care. The relationship between general dental specialists and specialist-consultants is not adequate, thus worsening the quality of used local anesthesia. Further research on modern anesthetics on cardiac patients is necessary in order to expand their indications.

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