Cardiac Surgery - The effect of the socioeconomic status on the preoperative clinical state and on the postoperative prognosis

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Summary:

Cardiac surgery has become possible in an increasing number of patients due to the progress in surgical methods and the ability to give a better postoperative care. Mortality rates were once the tool for estimating the quality of care. Nevertheless, a need to distinguish between different groups of patients has risen. To answer that need, a tool which can classify every patient to a specific group according to his medical history was developed, the EuroSCORE. This tool can estimate the mortality rate of a patient after a heart surgery.

Recent studies have shown that there are other factors which may attribute to the estimation of the prognosis of many patients.

In the past few years there has been growing awareness to the socioeconomic background of the patient and to the level of influence that this background has on the results of the treatment. Researches that were conducted around the world shown that the socioeconomic status (SES) can influence the general level of patient’s health and his life span.

These data appears to be also true in the field of cardiology. A statistically marked influence has been measured in different studies to the SES from which the patient arrived in relation to the mortality due to ischemic heart disease.

Thus, the question of the degree of influence of the SES on the prognosis in the field of cardiac surgery has risen. There has been only a few studies examining this question in this area of expert, but the accumulating data shows similar results.

Our study examined two questions:
1. Is there a relationship between the SES and the EuroSCORE?
2. Is there a relationship between the SES and the postoperative mortality?

In order to answer these questions the database of the cardiac surgery department of “sha’arey zedek” hospital was analyzed.

Each patient from the 4205 patients that went through a cardiac surgery between 03/01/1993 and 29/01/2003 was clustered to a specific SES using the “Israeli LAMAS”.

In order to answer the first question, a cross-match was made between the assigned SES and the EuroSCORE of the patient.

In order to answer the second question, a cross-match was made between the 30 days mortality and the SES of the patients.

Surprisingly, according to our results the patients who arrived to the surgery in a worse medical condition were the patients from the higher SES. A 2% difference in the EuroSCORE mortality prediction was shown in favor of the lower SES patients (p<0.01).
Nevertheless, we failed to show a mortality difference between the different SES groups.
Among the explanations for these findings we can offer: younger patients in the lower SES group and thus a better mortality prediction; different types of heart surgeries in the different SES groups; a better access of the higher SES group to the private medical system.

The findings should be further investigated.
6. Bibliography


