

Immediate postoperative outcome and complications in patients undergoing Coronary Artery Bypass Graft surgery, with or without Cardio Pulmonary Bypass, warmed either by Allon Thermoregulation system (AT) or by other Routine Thermal Care (RTC).

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Much has been written on the difference between coronary surgery with or without cardio-pulmonary bypass, in terms of morbidity, patient's risk and limitations, complications, hospitalization, resource utilization and even of the difference in mortality. The issue has become a controversy in cardiac surgery.

Another subject of controversy in cardiac surgery that remains debatable is the issue of temperature control during the operation and its consequences. Although there are still some surgeons who believe that mild to moderate hypothermia may play a protective role in cerebral or in myocardial protection, many authors, including our group, have proved the contrary.

It is well documented that maintaining normothermia throughout the entire perioperative period reduces morbidity and lowers mortality either from bleeding, from infections or from other complications.

In our previous reports, we have already showed a better hemodynamic status in the normothermic groups of patients as well as clear reduction in myocardial damage evaluated by cardiac Troponin I.

In the present report, we evaluated retrospectively 200 consecutive patients who underwent CABG with Cardio-Pulmonary Bypass (n=100) and patients who underwent OPCAB surgery (n=100). Each main group was subdivided, one went into the routine thermal care group (RTC) (n=50) and the other subgroup received the ALLON™ thermo wrapping thermoregulatory system (AT).

We evaluated the early outcome within these groups in the immediate postoperative period until patients were discharged from hospital.

The parameters evaluated were major complications that may have a direct influence on cost-effectiveness, such as arrhythmias, infections and renal as well as cerebral complications.

The results of our evaluation are enclosed and found unsurprisingly supportive of basic evidence already established over the past years:

AT patients who underwent CABG with CPB showed less than half the incidence of major infections (5% vs. 12%).

There was almost half the incidence of renal complications (5% vs. 8%)

In AT patients who underwent OPCAB operations there was less than half the amount of atrial fibrillation (9% vs. 20%).

There was lower incidence of renal complications (0% vs. 7%) and less infections (although 6% vs. 7%, NS).

Indeed, all these factors influence duration of hospitalization and thus, hospitalization costs.

The average duration of hospitalization in an uncomplicated case is 5-6 days for CABG and 4-5 days for OPCAB.

In our evaluation, we found that the average elongated to 7-9 days for patients who expressed deterioration in renal function, an arterial fibrillation or an infection of any source.