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Words to the young cardiovascular surgeon

Palavras ao jovem cirurgião cardiovascular

How to conduct yourself in the initial procedures of myocardial revascularization
Como se conduzir nos procedimentos iniciais de revascularização do miocárdio

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I see two phases of the young surgeon:

1st - Still in the rearward, receiving direct assistance, or having a teacher available.

The simple fact of knowing that there is someone more experienced that can be consulted, already provides him incredible confidence.

In "**solo flight**", for example: **starting a Service** (and this is not the privilege of someone too young): Surely one chill run down his spine, especially the day before, when speaking to the patient's family. If there is no certain fear, there is something wrong with this surgeon. Probably, he is very impetuous.

When starting the surgery, I'm sure there will be some degree of hesitation. I make a parallel to a rookie playmaker on a sports team, with great care, expectations and pressure for performance.

When surgery is very difficult, I always joke with my staff: "Imagine you, in your first event in the new service, operating the Mayor's mother, with this coronary pattern." Or, I say "The eight children are there waiting in the lobby of the operating room, but do not worry, they do not understand much of medicine: One of them is jailer, another is a lawyer - but very annoying, and a professional assassin, but he is on parole! They are waiting for their mummy to be discharged perfectly well! or like in the Northeast, when the Colonel says that the mother will not die alone!"

Even after experienced, we have to take all precautions to avoid trouble:

- perhaps the **first orientation**, wiser, is not to try early in the career making all revascularization without CPB.

Use the CPB, except when treating only the arteries of the anterior wall.

See below a quick overview of current results of surgery with and without cardiopulmonary bypass:

Off Pump CABG

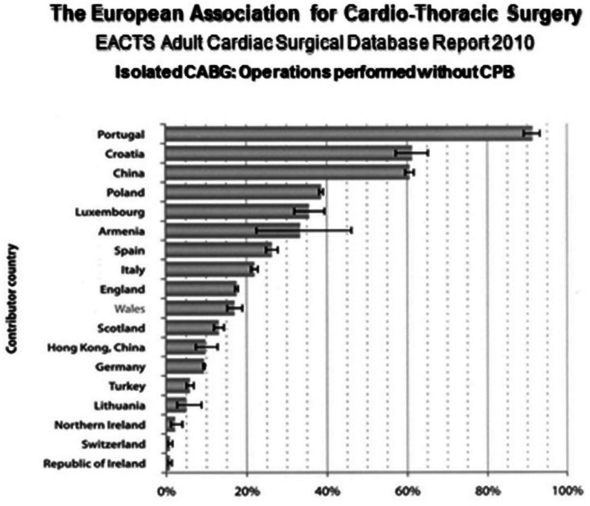
Used > 2 Decade

Variation in the world:

5 % USA

75 % INDIA

0-100 % other centers



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Off pump CABG
Attractive technique
Several initial findings are being refuted

↓ surgical trauma (stroke, myocardial injury, infection)

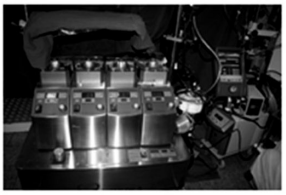
↓ systemic inflammatory response?

↓ blood transfusion

↓ length of stay

↓ hospital costs

- Faster recovery of the patient
- Maintenance of long-term results?



MASS III

CABG without CPB

- RM was safe in both methods
- Reduction in operating time and hospital stay
- Smaller number of grafts per patient
- Differences with no impact on prognosis

CABG without CPB

ROOBY
(Veterans Affairs Randomized on Off Bypass Study)

N = 2203 pts randomizados
on-pump surgery (1099 pts)
off-pump surgery (1104 pts).

N Engl J Med. 2009;361(19):1827-37.

On-Pump versus Off-Pump Coronary-Artery Bypass Surgery
the Veterans Affairs Randomized OnOff Bypass (ROOBY) Study

Graft Patency Rate

Variable	Off-Pump Group	On-Pump Group	P Value
At least one occluded graft - no. of patients/total no. (%)	250 / 685 (36.5)	197 / 686 (28.7)	0.002
Graft patency - no.of grafts/total no. (%)			
Overall	1650/1998(82.6)	1839/2095(87.8)	<0.001
Saphenous vein	967/1262(76.6)	1122/1339(83.8)	<0.001
Left internal thoracic to left anterior descending artery	589/ 618(95.3)	611/ 635(96.2)	0.48
Left internal thoracic to left anterior descending artery, FitzGibbon grade A	550/ 618(89.0)	592/635(93.2)	0.01

NEJM 2009;361(19):1827-37.

Coronary Study

Off-pump or on-pump coronary-artery bypass grafting

79 centers in 19 countries

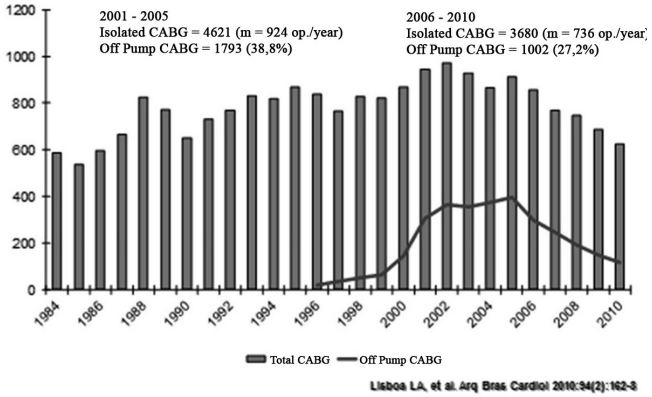
4752 patients - 30 days and 1 year

No significant difference in the primary outcomes:

death, stroke, MI, renal failure

N Engl J Med. 2013. ACC. 2013

Incidence every year of isolated coronary operations
(With No CPB vs CPB)
InCor HCFMUSP



Lisboa LA, et al. Arq Bras Cardiol 2010;94(2):162-8

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INTERVENTIONAL/SURGERY

Off-pump/on-pump CABG: Still no consensus

MARCH 11, 2013 Sue Hughes

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San Francisco, CA - New results from three trials comparing off-pump and on-pump CABG have not been able to make a definitive case that off-pump is better for high-risk patients, despite that still being the belief of all the surgeons leading the studies.

The three trials were presented here today at the late-breaking clinical-trials session at the American College of Cardiology (ACC) 2013 Scientific Sessions. Two trials have also been published online today in the *New England Journal of Medicine* [1,2].

Two large-scale studies—first results from the German Off-Pump CABG in Elderly Trial (GOPCABE) and 12-month results from the CORONARY study—showed similar findings with nonsignificant differences between the two procedures at 30 days and 12 months. A third, much smaller, single-center Czech study—PRAGUE-6—did show a benefit of off-pump, but with only 200 patients, it is difficult to draw conclusions from these data.

A second orientation is to know indicate the surgery. Find the orientation of the Guidelines and of common sense. For good sense is understood:

- Planning surgery with a HEART TEAM: surgeon, clinical and hemodynamicist. If possible, do not consider the latter as an enemy, but as a possible ally in complex cases, or when something goes wrong in the postoperative period.
- Chatting with family, explaining the risks. Many from University Hospitals are not used to it.
- Trying to integrate the anesthetist in the spirit of each surgery. Currently, I always try to show the catheterization of the patient to the anesthesiologist.
- Also, with the perfusionist. Do not forget that for one or more hours, your patient will be in your hands, and poor perfusion can put everything away.
- Over time, you will learn to master the entire environment during operation. It is very common for the surgeon to do a number of alert during operation, for example, the blood is dark, presence of lung atelectasis, the patient's blood is too hot. I've seen asking to stop the lungs momentarily and forgetting to reconnect it.

Do not forget that if there is any problem, surely the greater responsible will be the surgeon, even if he does not have anything to do the complication.

Don't push your luck: For example, foreign body. It is unforgivable to forget gauze, a little compress, even a bulldog inside the patient. I've seen or heard it all and believe me, it is likely to occur. You must be obsessive in such matter!

Also learn to give instructions to the room. The typical example is the shock (I've learned from Dr. Bittencourt). If many ask at the same time to trigger it, it turns into a mess.

A third guideline is that I've learned over time:

- It takes about 10 years to learn to operate. However:
- It takes about 15 years to learn how to indicate surgery.
- It takes about 20 years to learn to contraindicate surgery.

At the beginning, do not feel unable or ashamed to seek advice from those who have been through it all. Often a phone call solves the issue.

Concluding, MRI should be at the discretion of the surgeon. That does not mean that everything has gone well!

I mean that in the immediate postoperative period the surgeon has security to assume an attitude which can also be an addition to surgery in hemodynamics.

The last recommendation is to see the patient in the immediate and late postoperative period. Take this as a routine, which will certainly avoid many problems and improve results.

Be successful!