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GUEST EDITORIAL

Wither Off-Pump...!

Coronary Artery Bypass Surgery (CABG) without Cardiopulmonary Bypass (CPB) is an old operation performed to achieve myocardial revascularization. It was the only option available before the advent of heart lung machine. Rapid development of safe techniques in extracarporeal circulation and expansion of knowledge related to cell physiology led to the sole use of CPB as a safe strategy, However, in early nineties, surgery without CPB was reintroduced after the development of different stabilizers and minimally traumatic telescopic devices. In spite of the initial reservations by some, the techniques spread rapidly. Today it stands as an equally safe and effective alternative to the traditional on bypass procedures for most of the patients. There have been a lot of argument for and against both strategies, comparing their results. The objective of this discussion is not to criticize one or the other group, but to present a thought-provoking discussion.
A few questions are being raised for the better understanding of the subject, with special reference to our patient population and working environment in Pakistan, These are;

1. Analysis of CPB related complications
One of the major benefits of Off-Pump surgery is avoidance of CPB related morbidity. Don't we think that exploring CPB related complications, itself is perhaps most difficult task. Even today, the literature does not give us uniform conclusion on some of its major aspects. Don't we think that whether the results of various modes are adequately analyzed. The conclusion may be more subjective, rather than scientific and may have some personal bias.

2. Technical Profile
When comparing both strategies, do we include same technical profile for both the groups. For Off-pump surgery, the number of anastomsis per patients have been relatively less but the clinical results are equally satisfying. If we review the technical details of various reports then we will appreciate that, multivessel disease, arterial conduit, and lateral wall surgery do not limit the use of Off-Pump surgery. But postero-lateral surgery, sequential grafting and vital decision making by the young enthusiast are major limitations.

3. Our Patient population
Another technical aspect is whether Off-Pump surgery is suitable in equal numbers in our patient population as that reported in the West. Many researchers argue that Asians have relatively smaller diameter coronaries. Many researchers have addressed this problem, but the analysis is usually inadequate. So the literature remains inconclusive regarding this issue. A higher incidence of diabetes mellitus with associated diffuse coronary artery disease is another limitation in many of our patients.

4. Myocardial Preservation

Myocardial preservation is a valid superiority of Off-Pump surgery. The critics have a valid argument regarding this point. They say that the patients who need better myocardial preservation may not be benefited by Off-Pump surgery. Because severe electromechanical instability itself is a contraindication for Off-Pump procedure.

5. Patients Perspective

The general incidence of major complications like, CVA, myocardial infarction and mortality are the same in both groups. From patient's perspective, lower incidence of complications like bleeding, less transfusions, short ICU and In hospital stay are not of much value. They are more keen on cost reduction and general post operative comfort. How often we try to make our patient understand the substantial advantages of Off-Pump surgery?

6. Cost reduction

One major advantage of the Off-Pump strategy is the reduction is cost. But we are unable to predict the added cost of treatment when the procedure is converted to On-Bypass type or the patient has to undergo redo procedure after early failure of revascularization. With our limited resources in Pakistan, would this added cost be within reasonable and affordable limits.

7. An important question

Many of us may sometimes wonder that, whether the two strategies are really comparable? Both of these techniques are associated with equal safety profile and clinical results. Still they have their own place in achieving an objective namely, myocardial revascularization.

Perhaps what we can safely conclude that both alternatives have their own indications, contraindications, and limitations. There are certainly some overlapping gray areas, like, any other comparable situation. But definitely they can not be in competition. Choosing the right strategy for the right patient and keeping in mind the limitations of the adopted strategy is all we need to do.

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