IN SITU LENGTH OPTIMIZATION OF INTERNAL THORACIC ARTERIES <<<<TIPS AND TRICKS>>>>

IBRAHIM M. YASSIN (1-2),
FAROUK M. OUEIDA(1), MUSTAFA ALREFAEI (3) AND KHALED A. ESKANDER (1)
1- DEPARTMENT OF CARDIAC SURGERY, SAUD AL- BABTAIN CARDIAC CENTER (SBCC), DAMMAM, KSA 2- DEPARTMENT OF CARDIOTHORACIC SURGERY, FACULTY OF MEDICINE, TANTA UNIVERSITY,TANTA, EGYPT 3- DEPARTMENT OF CARDIOLOGY, SBCC, DAMMAM, KSA

Objective:

We thought to describe our operative experience in maximizing the Internal Thoracic Arteries (ITAs) graft length in Coronary Artery Bypass Grafting patients

Methods:

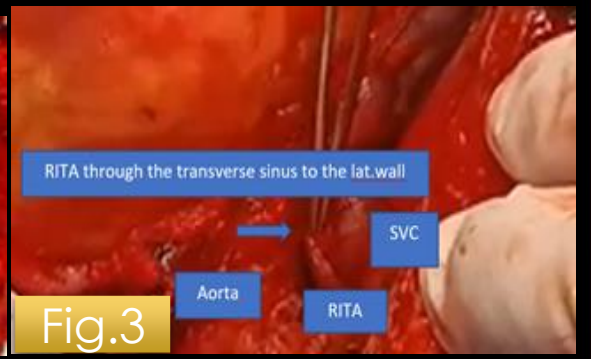
Revision of our operative notes over a period of five years from Nov.2012 to Nov.2017(the period of development of our strategy in this field). Inclusion criteria are elective, stable, isolated coronary patients where both ITAs were used in situ. Emergency, Urgent, Unstable, Combined surgery and Patients with one mammary are excluded

Conclusions:

The above mentioned reproducible simple surgical techniques or tricks are very simple but could maximize the In Situ usage of the ITAs. To our knowledge, some of them are novel and not described in the literature before











Results:

The additional surgical techniques rather than Full length Bilateral Skeletonization of the ITAs form the origin in the subclavian arteries to beyond the two terminal bifurcation arteries are demonstrated

The relative early bifurcation of the ITAs (LITA & RITA) to equal good caliber two terminal branches, although very uncommon, but can be used as a natural Y arterial graft in only favorite anatomy of the LAD and good caliber Diagonal. (Fig1)

Full length skeletonization of the RITA can give a very good alternative to graft the LAD rather than using the LITA giving an additional opportunity for the LITA to supply the lateral wall (1-2 good targets).(Fig.1)

Pleural cavity preservation, Fixation of the apex of the upper lobe to the mammary bed if the pleura is opened can abort any incidence for the ITAs to be stretched specially in cases of voluminous lungs (Fig.2)

Passing the RITA through the transverse sinus (Fig.3) and estimated plication of the enlarged free right atrial wall (Fig.4) can extend the usage of the RITA to supply the OM and PL of the Left system and the PDA of the right system.(Fig.3-4)

In cases of dilated hearts, the targeted area of the anastomosis of the LITA to the LAD can make it relatively short and partial estimated reduction of the oblique sinus with simple 1-2 U-stitches can solve the problem. (Fig.5)

Intra-operative routine transit-time flows, ICU course and the early postoperative 30days cardiac free events was reported uneventful