

Abstracts of publications of Dr. El Zufari, M.D.

1. Chest. 1999 Apr;115(4):987-90.

Routine intraoperative angiography improves the early patency of coronary grafts performed on the beating heart.

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OBJECTIVES: The techniques of performing coronary revascularization without cardiopulmonary bypass are rapidly evolving. However, concern remains regarding the accuracy of coronary artery anastomoses performed on the beating heart. This report reviews the use of intraoperative angiography in the critical appraisal of "off-pump" coronary artery bypass graft (CABG) surgery.

PATIENTS: Intraoperative angiography was performed in 24 consecutive patients undergoing CABG surgery without cardiopulmonary bypass. In all, 24 left internal mammary artery (LIMA) grafts and 18 saphenous vein bypass grafts were assessed for patency, anastomosis quality, distal and proximal runoff, and correct placement.

RESULTS: All of the saphenous vein-to-coronary artery anastomoses were widely patent, although two patients (8%) required revision of their LIMA grafts on the basis of angiographic findings.

CONCLUSION: Intraoperative angiography permits the surgeon to immediately appraise the CABG and to revise, if necessary, any graft abnormality, thus potentially eliminating the need for early repeated surgery. The practice of routine intraoperative angiography is likely to improve the outcome of CABG surgery on the beating heart.

PMID: 10208197 [PubMed - indexed for MEDLINE]

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2. Chest. 1998 Jul;114(1):291-4.

Upper T mini-sternotomy for aortic valve operations.

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OBJECTIVES: New minimally invasive approaches for cardiac surgical procedures are constantly being developed in the hope of decreasing patient morbidity and enhancing the postoperative recovery. This report reviews the use of an upper T mini-sternotomy approach to aortic valve surgery.

PATIENTS: Nine consecutive nonselected patients (5 men, 4 women, mean age, 66 years) underwent isolated aortic valve replacement with the use of this approach. Two patients had isolated aortic valve stenosis, three had isolated aortic valve incompetence, and four patients had mixed aortic valve disease.

RESULTS: In all cases, an excellent view of the aortic valve was obtained, aortic valve replacement with a bileaflet mechanical prostheses was performed, and no intraoperative difficulties were encountered. Mean aortic cross-clamp time was 83 min and mean cardiopulmonary bypass perfusion time was 97 min. All patients were extubated in the operating room at the end of the surgical procedure, and there were no postoperative complications. All patients were discharged home on postoperative day 3, and there were no late complications.

CONCLUSION: Through an upper T mini-sternotomy, aortic valve surgery can be performed in the conventional manner using standard surgical instruments with no alteration in cardiopulmonary bypass and myocardial protection routines. With this method, postoperative pain is reduced and patient recovery is expeditious.

PMID: 9674481 [PubMed - indexed for MEDLINE]

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3. Annals of Thoracic Surgery. 1998 Nov;66(5):1806-8.

Snaring of a coronary artery causing distal atheroma embolization.

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We report a case of total occlusion of the left anterior descending coronary artery with atheromatous debris after "off-pump" grafting. Atheroma break-off and distal embolization probably occurred from proximal snare occlusion of the target coronary artery, and this was recognized by intraoperative angiography. Alternatives to suture snaring should be considered whenever an atherosclerotic artery is to be grafted without cardiopulmonary bypass.

PMID: 9875799 [PubMed - indexed for MEDLINE]

4. Annals of Thoracic Surgery. 1998 Oct;66(4):1431-2.

Intraoperative "direct" LIMA angiography for beating heart operations.

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The importance of the angiographic assessment of coronary bypass grafts performed on the beating heart has been recognized. We describe a simple technique for intraoperative angiography of left internal mammary artery to left anterior descending coronary artery grafts that does not require selective left internal mammary artery catheterization. This method allows immediate appraisal of the graft, hence enabling the surgeon to revise any graft or anastomosis abnormality immediately and to verify optimal results of beating heart operations.

PMID: 9800858 [PubMed - indexed for MEDLINE]

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5. Annals of Thoracic Surgery. 1998 Sep;66(3):941-2.

A taste of Chinese medicine!

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Surgery, Prince of Wales Hospital, The Chinese University of Hong
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Comment in
Ann Thorac Surg. 1999 Mar;67(3):894.

We report a case of profound anticoagulation caused by interaction between warfarin and danshen, a widely used Chinese herbal medicine, in a patient who had undergone mitral valve replacement. Patients taking warfarin should be warned not to take this herb. In addition, physicians should be alert to the possibility of an interaction with herbal medicine when anticoagulation control becomes difficult and no other causes are apparent.

PMID: 9768962 [PubMed - indexed for
MEDLINE]

6. Annals of Thoracic cardiovascular Surgery. 1998 Aug;4(4):205-8.

Minimally invasive left anterior descending coronary artery revascularisation in high-risk patients with three-vessel disease.

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We reviewed our experience over a 12 month period with using minimally invasive direct coronary artery bypass (MIDCAB) for the management of high-risk patients with three-vessel coronary artery disease. Twenty patients (4 females, mean age 67 years) received left internal mammary artery (LIMA) grafts to the left anterior descending (LAD) coronary artery. Associated co-morbidity included: severe chronic renal failure, severe extensive arteriopathy, chronic obstructive airway disease, poor general condition and severely impaired left ventricular function. There was one early postoperative mortality and no other cardiac-related morbidity. Graft patency investigated, using angiography was 90%, and 5 patients underwent follow-up angioplasty to other coronary arteries. All patients remain entirely angina free at a follow-up period between 3 and 12 months. We conclude that MIDCAB is a safe and

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effective approach for managing high-risk patients with three-vessel coronary artery disease.

PMID: 9738122 [PubMed - indexed for MEDLINE]

7. Annals of Thoracic Surgery. 1998 Aug;66(2):580-1.

Training model for "beating-heart" coronary artery anastomoses.

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Comment in

Ann Thorac Surg. 1999 Mar;67(3):893-4.

The principal technical challenge in "off-pump" coronary surgery is to perform an accurate coronary anastomosis on a beating heart. For the purpose of training our residents in performing off-pump coronary artery anastomoses, we have developed a mechanical heart simulator in which trainees can practice performing these anastomoses repeatedly until a satisfactory level of skill and confidence is attained.

PMID: 9725418 [PubMed - indexed for MEDLINE]

8. Annals of Thoracic Cardiovascular Surgery. 1998 Apr;4(2):56-8.

Limited access atrial septal defect closure and the evolution of minimally invasive surgery.

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While minimizing the "invasiveness" in general surgery has been equated with minimizing "access", what constitutes minimally invasive intra-cardiac surgery remains controversial. Many surgeons doubt the benefits of minimizing access when the need for cardiopulmonary bypass cannot be waived. Recognizing that median sternotomy itself does entail significant morbidity, we investigated the value of alternative approaches to median sternotomy using atrial septal defect closure as our investigative model. We believe that some, but not all minimal access approaches are associated with reduced postoperative morbidity and enhanced recovery. Our current strategy is to use a mini-sternotomy approach in adult patients, whereas conventional median sternotomy remains our standard approach in

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the pediatric population. Considerable clinical experiences coupled with documented clinical benefits are fundamental before a certain approach is adopted in routine practice.

PMID: 9576998 [PubMed - indexed for MEDLINE]

9. Annals of Thoracic Surgery. 1998 May;65(5):1513-5.

Hybrid MIDCABG and balloon angioplasty for multivessel coronary artery disease.

Izzat MB, Yim AP, el-Zufari MH.

Comment on

Ann Thorac Surg. 1997 Aug;64(2):545-6.

PMID: 9594912 [PubMed - indexed for MEDLINE]