

Skeletonized internal thoracic artery/ The effects of internal thoracic artery preparation with intact pleura on respiratory function and patients' early outcomes

*Skeletonize internal torasik arter/ Plörotomi
yapılmaksızın internal torasik arter grefti hazırlan-
masının solunum fonksiyonları ve erken dönem
iyileşme periyodu üzerine etkileri*

Dear Editor,

First of all, I would like to congratulate Özkara et. al. (1) for the study published in the October 2008 issue of the journal. Results they have obtained in the study and, accordingly, positive effects of intact pleura on lung functions, have been indicated in former studies as well (1-4). However, there are some points that has gone unnoticed in this study.

When we consider the patient population in the study, the number of female patients especially in the group that pleura were opened (Group 2) is quantitatively larger than in the first group. As we know from clinical observations, pleura's opening incident is higher in female patients group. Is the fact that the patient population is high in Group 2 may affect the results of this is randomized study due to pleura's opening?

Postoperative drainage has been found lower in the group with intact pleura. Was there a difference between the groups in terms of pericardial fluid accumulation in the postoperative period?. Did authors see any case of pericardial effusion and/or tamponade?

Intact pleura is eventually closely related with skeletonized extraction of internal thoracic artery (ITA) (2). Even though this seems to be a desired technique, some thinks on the contrary (possibly due to the concern that ITA damage will be higher) and believes that it is better to extract as button.

Did authors observe postoperative pneumothorax in the group with intact pleura?

In most situations, it is not up to the surgeon to open pleura or keep it intact. Do you have any foresight as to how will this limited gain on lung functions in the early period change in late period?

To conclude, although keeping pleura intact seems to be a right choice, skeletonized ITA will always be subject to more traumas (2- 4). Would it be right to try and keep pleura intact nevertheless?

I would like to thank authors for their study and send my regards.

Osman Tiryakioğlu, Ahmet Özyazıcıoğlu
Department of Cardiovascular Surgery, Bursa Yüksek İhtisas
Training and Research Hospital, Bursa, Turkey

References

1. Ozkara A, Hatemi A, Mert M, Köner O, Çetin G, Gürsoy M, et al. The effects of internal thoracic artery preparation with intact pleura on respiratory function and patients' early outcomes. *Anadolu Kardiyol Derg* 2008; 8:368-73.
2. Bonacchi M, Prifti E, Giunti G, Salica A, Frati G, Sani G. Respiratory dysfunction after coronary artery bypass grafting employing bilateral internal mammary arteries: the influence of intact pleura. *Eur J Cardiothorac Surg* 2001;19: 827-33.
3. Gökşin I, Baltalarlı A, Sacar M, Sungurtekin H, Özcan V, Gürses E, et al. Preservation of pleural integrity in patients undergoing coronary artery bypass grafting: effect on postoperative bleeding and respiratory function. *Acta Cardiol* 2006; 61: 89-94.

4. Türk T, Tiryakioğlu O, Vural AH, Ata Y, Selimoğlu Ö, Yavuz Ş. Effect of skeletonization on flow and length of internal thoracic artery. *Türk Göğüs Kalp Damar Cerrahisi Derg* 2005; 13: 112-4.

Address for Correspondence/Yazışma Adresi: Dr. Osman Tiryakioğlu,
Bursa Yüksek İhtisas Eğitim ve Araştırma Hastanesi, Kalp ve Damar Cerrahisi
Bölümü, Bursa, Türkiye
Phone: +90 224 360 50 50 Fax: +90 224 360 50 55 E-mail: osmantiryaki@gmail.com

Author Reply

Dear Editor,

First of all, we would like to thank the authors for their comments. We would like to answer their important questions.

In a study design, patients were allocated into two groups according to random numbers technique and patients genders were omitted, nevermore difference of males/females ratio of the two groups was not statistically significant. We also believe, this mild difference might have an influence on study results. But as mentioned above this difference is completely related to study design and randomization method.

We used same technique during internal thoracic artery (ITA) harvest in both groups, in pleurotomy group pleura was opened after ITA harvest so we compared semi-skeletonized ITA's.

Thank you very much for your comments.

Ahmet Özkara, Ali Can Hatemi*, Gürkan Çetin*, Mete Gürsoy*
Department of Cardiovascular Surgery, School of Medicine,
İstanbul Bilim University, İstanbul
*Department of Cardiovascular Surgery, İstanbul University
Institute of Cardiology, İstanbul, Turkey

Re-operation for the mechanical valve obstruction with a beating heart technique in an elderly patient with compromised ventricular function

*Bozulmuş ventrikül fonksiyonlu yaşlı hastada çarpan
kalp tekniği ile mekanik kapak obstrüksiyonu için
reoperasyonu*

Dear Editor,

We would like to comment on the recent article by Dr. Çiçekcioğlu and colleagues (1) entitled "Re-operation for the mechanical valve obstruction with a beating heart technique in an elderly patient with compromised ventricular function". The differential diagnosis and management of prosthetic heart valve (PHV) related complications continue to be a confusing state at the present cardiological practice. Although transesophageal echocardiography (TEE) is known to be the most precious diagnostic tool in the evaluation of PHV obstruction (PHVO), the use TEE for the evaluation of the patient is lacking in the present study. Furthermore, although they have mentioned the thrombus formation was detected in the left atrium during the surgery they did not state the reason of PHVO.

In the present case report, echocardiography showed 13/6 mmHg peak/mean mitral diastolic gradient, and no leaflet motion on the prosthetic valve. However, obstruction of the prosthesis is diagnosed when the Doppler mitral valve area is ≤ 1.5 cm² and the mitral valve mean gradient is ≥ 10 mm Hg (2). Regarding this fact there is a serious controversy between mitral valve gradients and the immobility of the PHV. Furthermore, it is very difficult to evaluate the mobility of prosthetic heart valves by transthoracic echocardiography (TTE). Although they mentioned that the patient had bilaterally lung edema observed on chest X-ray, it is not clear why the patient was in New York Heart Association (NYHA) functional class III not in class IV. The type of valve design is not presented since this may be important in assessing the valve function by TTE and TEE. The absence of mitral valve area by TTE, and the role of thrombolytic therapy in the management of PHVO in discussion section are also major drawbacks of this study.

Thrombotic PHVO is an uncommon but serious complication. Urgent diagnosis and treatment are mandatory. Optimal management of these situations remains controversial despite surgery is usually favored (2). According to the current American College of Cardiology/American Heart Association guidelines for the management of valvular heart disease (2), patients with PHV thrombosis who have a large clot burden, greater than 5 to 10 mm, or who are in NYHA functional classes III or IV should undergo emergency reoperation and thrombolytic therapy is advised for those patients in whom surgical intervention carries high risk and those with contraindications to surgery. However, reported mortality rate of surgery is highly dependent on the clinical status, ranging from 8 to 20% for urgent cases and 37 to 54% for critically ill patients (3-4). More recent data (4) have shown that thrombolysis is superior to surgery in the most critical patients (class III-IV) and in NYHA Class IV patients with PHV thrombosis and published results show a lower mortality with thrombolysis (13%) than surgery (33%). Although Çiçekcioğlu et al. (1) described a successful beating heart valve surgery in an 85-years-old male, thrombolytic therapy under the guidance of serial TEE, could be a safer treatment modality if the reason of PHVO was thrombosis.

In an ongoing trial which was presented at American Heart Association Scientific Meeting on November 8-12, 2008 (5), we have evaluated more than 150 patients with PHV thrombosis who were treated with different intravenous thrombolytic treatment regimens under the guidance of serial TEE. We have concluded that low dose (25 mg), and slow (6 hours) infusion of tissue-type plasminogen activator without bolus is clearly superior to other regimens in terms of morbidity and mortality even in older patients. This treatment modality may prevent patients from redo-valve surgery.

Mehmet Özkan, Murat Biteker
Kosuyolu Kartal Heart Education and Research Hospital,
Cardiology, Istanbul, Turkey

References

1. Çiçekcioğlu F, Tütün U, Babaroğlu S, Aksöyek A, Parlar AI, Ulus AT, et al. Re-operation for the mechanical valve obstruction with a beating heart technique in an elderly patient with compromised ventricular function. Anadolu Kardiyol Derg 2008; 8: 389-90.
2. Bonow RO, Carabello BA, Chatterjee K, de Leon AC Jr, Faxon DP, Freed MD, et al. ACC/AHA 2006 guidelines for the management of patients with valvular heart disease. J Am Coll Cardiol 2006; 48: e1-148.
3. Deviri E, Sareli P, Wisenbaugh T, Cronje SL. Obstruction of mechanical heart valve prostheses: clinical aspects and surgical management. J Am Coll Cardiol 1991; 17: 646-50.
4. Lengyel M, Horstkotte D, Völler H, Mistiaen WP. Recommendations for the management of prosthetic valve thrombosis. J Heart Valve Dis 2005; 14: 567-75.
5. Biteker M, Duran NE, Gündüz S, Kaya H, Kaynak E, Çevik C, et al. Comparing different intravenous thrombolytic treatment regimens in patients with

prosthetic heart valve thrombosis under the guidance of serial transesophageal echocardiography: a 15-year study in a single center (TROIA trial). American Heart Association Scientific Meeting, November 8-12, 2008.

Address for Correspondence/Yazışma Adresi: Murat Biteker, MD.
Kosuyolu Kartal Heart Education and Research Hospital, Cardiology, Istanbul,
Turkey Phone: +90 216 488 80 02 Fax: +90 216 459 63 21
E-mail: murbit2@yahoo.com

Author Reply

Dear Sir,

I read the letter written as a reply to our paper (1).

Our belief is that the choice between surgery and thrombolytic treatment varies according to the patient's preoperative clinical condition. In our clinic we prefer surgery if the patient hemodynamic situation is not stable. Our patient had severe dyspnea. We believe that recovery of this patient could be delayed after the onset of thrombolytic treatment. Our experience showed that recovery period would take at least 15 hours. Our patient could not tolerate this time delay. We are competent clinic on surgical treatment of acute mechanical valve occlusion (2). We do also use thrombolytic (tPA) treatment. We have seven patients. Of this group, five patients showed clinical recovery and two patients did not. As a result of our experience, both types of treatment must be considered, but at first thrombolytic treatment must be first procedure if the patients have stable hemodynamic situation as authors declared.

Ferit Çiçekcioğlu, Kerem Yay, S. Fehmi Katırcıoğlu
Department of Cardiovascular Surgery, Türkiye Yüksek İhtisas
Hospital, Ankara, Turkey
References

1. Çiçekcioğlu F, Tütün U, Babaroğlu S, Aksöyek A, Parlar AI, Ulus AT, et al. Re-operation for the mechanical valve obstruction with a beating heart technique in an elderly patient with compromised ventricular function. Anadolu Kardiyol Derg 2008; 8: 389-90.
2. Katırcıoğlu SF, Ulus AT, Yamak B, Özsöyler I, Birincioğlu L, Taşdemir O., et al. Acute mechanical valve thrombosis of the St. Jude medical prosthesis J Cardiac Surg 1999; 14: 164-8.

Address for Correspondence/Yazışma Adresi: Dr. S. Fehmi Katırcıoğlu,
Department of Cardiovascular Surgery, Türkiye Yüksek İhtisas Hospital
06100 Sıhhiye, Ankara, Turkey
Phone: +90 212 224 49 50 Fax: +90 212 296 52 22 E-mail: drferit@yahoo.com

Kemik iliği transplantasyonu sırasında kullanılan yüksek doz siklofosfamide bağlı inferiyor miyokard infarktüsünü taklit eden vazospastik angina olgusu

Vasospastic angina mimicking inferior myocardial infarction due to high dose cyclophosphamide for bone marrow transplantation conditioning

Sayın Editör,

Teke ve arkadaşları tarafından yazılan "Kemik iliği transplantasyonu sırasında kullanılan yüksek doz siklofosfamide bağlı inferiyor miyokard in-