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ORIGINAL ARTICLE

Day admission for thoracic aortic surgery

G. Silvay

Department of Anesthesiology, The Mount Sinai School of Medicine, New York, USA

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ABSTRACT

Elective cardiac surgical patients can be admitted on the morning of the operation. The day admission surgery is safe with optimal care for patients and provides an economical benefit. In our institution if immediate surgery is not required, patients are entered into program for serial follow up.
An elective aortic intervention for open surgical or endovascular surgery is recommended when the risk of aortic rupture outweighs the risk of surgery. Patients are seen 3 to 7 days prior of day admission surgery in preoperative clinic. On the morning of surgery, the patient undergoes a reassessment to ensure no interval changes have occurred. We hereby describe our three years experience with 350 patients were referred from the Aortic Aneurysm Surveillance Program.
We believe that not only patients, but all medical personal benefit from a complete preoperative evaluation of these complicated patients and this creates harmony during the entire hospitalization!
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The majority of elective cardiac surgical patients in USA are admitted to the hospital on the morning of the operation. The day admission surgery play an important role in the USA health care system, it has proven to be safe with optimal care for patients and provides an economical benefit.
Cardiac and major vascular surgical patients often present with significant comorbidities that warrant thorough preoperative evaluation. In 2006 we evaluated practices of other institutions in the United States and Canada. (1) In April 2006, our institution opened a separate preoperative clinic designed specifically for cardiac operation and thoracic aortic aneurysm patients, scheduled for day admission surgery. Preoperative clinic was located strategically near the cardiac surgical intensive care unit and the cardiac catheterization suite. The preoperative clinic is staffed with a multidisciplinary team, including one attending or fellow from cardiothoracic anesthesia, one nurse with several years of practice in the cardiac surgical intensive care unit, one nurse practitioner from department of cardiothoracic surgery and one nursing assistant.
Early diagnosis of aortic aneurysm is of paramount importance. Patients who experience aortic dilatation are at risk of immediate dissection, further tearing or rupture. Hence, the most difficult decision confronting both patient and physician upon the diagnosis of an aortic aneurysm is whether surgery should be performed or not. Expert consensus rather than solid evidence are often used as indications for surgery. In our institution in 1985 the Aortic Aneurysm Surveillance Program was established

Corresponding author:
George Silvay, M.D., Ph.D.
Department of Anesthesiology,
The Mount Sinai School of Medicine
One Gustave L. Levy Place, Box 1010
New York, NY 10029-6574, USA.
e.mail: george.silvay@mountsinai.org

to follow patients with diagnose of aortic aneurysm and evaluate the competing risk of surgery versus careful serial monitoring of aorta diameter, volume, growth, and location as well as risk factors for dissection or rupture (2). If immediate surgery is not required, patients are entered into program for serial follow up. An elective aortic intervention (open surgical or endovascular) is recommended when the risk of aortic rupture outweighs the risk of surgery. Elective surgery in specialized aortic clinic has the best results (3).

After indication for elective operation, patients were seen 3 to 7 days prior of day admission surgery in preoperative clinic. After obtaining all previous reports from other physicians, additional necessary tests (echocardiography, carotid Doppler, cardiac catheterization, dental clearance, information about pacemaker, defibrillator, and other medical consultations) are scheduled for day of appointment in preoperative clinic. Special attention is required for patients with history of coronary disease (after coronary artery bypass grafting surgery or stents), multiple co-morbidities, elderly on beta blocker, diabetics and with chronic obstructive pulmonary disease. On the day in preoperative clinic a detail history and physical examination, medical reconciliation was performed. Option to visit the cardiac surgical intensive care unit for patient and family is given. All information about hospitalization, anesthesia, surgery, and stay in cardiac surgical intensive care unit and pain management are discussed. Collected data are sent to the cluster of cardiac operating rooms for review by anesthesiologist prior to the day admission surgery and a central electronic record is generated that all staff involved in the patients care may access.

The preoperative clinic team meet the day before surgery to evaluate again all medical, logistics and administrative requirements (operating room schedule, blood bank, antibiotic prophylaxis, blood conservation strategy, plan for optimal monitoring and arrangement in the cardiac surgical intensive care unit).

On the morning of surgery, the patient is admitted to the same preoperative clinic and undergoes a reassessment to ensure no interval changes have occurred. In order to decrease surgical incision delays, intravenous antibiotic prophylaxis is started in the preoperative clinic. (4-6) Preoperative clinic team is routinely visiting the patients in the cardiac surgical intensive care unit.

From January 2007 to December 2009 our computerized database showed 2,869 patients visit (average age 62.2 years) in preoperative clinic. Over 350 patients were referred from the Aortic Aneurysm Surveillance Program (Ascending Aorta 17%, Aortic Arch 21%, Aortic Root 41% and TAA 21%).

Thirty-two patients (9.4%) were seen twice or more due to medical issues (needed additional hematological, dental or other consultation). Forty-one patients were seen in the catheterization suit prior to urgent operation.

For medical or logistical reasons 29 operations were canceled or rescheduled.

We believed that after indication the surgical treatment by cardiologist and surgeon, it would be necessary for an anesthesiologist to see patients directly prior the day admission surgery. With this model, we have seen promising patient/family satisfaction scores with an overall satisfaction rating of 87% (4). Patient satisfaction is not only important on a professional level, but it also improves the reputation of a center with positive effects on referral base. We aim to further enhance patient satisfaction and outcomes by the introduction of new preoperative evaluation techniques. Utilization of rapid psychological tools such as the BATHE (Background, Affect, Trouble,

Handling and Empathy) method has been shown to improve patient's feelings of connectedness to their healthcare practitioners in a family setting (7).

The anesthesiologist's function as "perioperative specialist" has an important role. Preoperative clinics have recently come to light with studies showing reduced costs ordering of unnecessary tests, decreased cancellation, and reduces delays on the day of surgery (8, 9).

Our preliminary observation include increase in patients satisfaction, safety and efficiency in the operating room. We believe that not only patients, but all medical personal benefit from a complete preoperative evaluation of these complicated patients and this creates harmony during the entire hospitalization!

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REFERENCES

1. American Society of Anesthesiologists, Annual Meeting Panel: Silvay G. Best practice in 2007. What we know versus what we think, guidelines, consensus or hunch. American Society of Anesthesiologists Annual Meeting, San Francisco, 2007.
2. Silvay G, Stone ME. Repair of thoracic aneurysm, with special emphasis on the preoperative work-up. Semi Cardiothor Vasc Anest 2006; 11: 205-223.
3. Chiesa R, Civilini E, Melissano G, et al: Management of thoracoabdominal aortic aneurysm. Hsr Proceedings in Intensive Care & Cardiovasc Anesth 2009; 1: 45-54.
4. Flynn BC, de Perio M, Hughes E, Silvay G. The need for specialized preanesthesia clinics for day admission cardiac and major vascular surgery patients. Semin Cardiothor Vasc Anesth 2009; 13: 241-248.
5. Silvay G, Flynn BC. Innovative thinking in the care of cardiac surgical patients. Anesthesiology 2009; 110: 435-436.
6. Weber WP, Marti WR, Zwahlen M, et al. The timing of the surgical antimicrobial prophylaxis. Ann Surg 2008; 247: 918-926.
7. Leiblum SR, Schnall E, Seehuus M, DeMaria A. To BATHE or not to BATHE: patient satisfaction with visit to their family physician. Fam Med 2008; 40: 407-411.
8. Ferschl MB, Tung A, Sweitzer B, et al. Preoperative clinic visits reduce operating room cancellation and delays. Anestheiology 2005; 103: 855-859.
9. Cohen NH. Medically challenging patients undergoing cardiothoracic surgery. Lippincott Williams & Wilkins.Soc. Cardiovascular Anesthesiologists. 2009 ISBN-10:1608312992.