

Hybrid Cardiac Operating Room: First Year Experience

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Background: Cardiovascular surgery along with interventional cardiology, have been combined recently to allow a new, integrated operating rooms that can handle both procedures simultaneously. The new units are equipped with surgical and angiographic equipment and personnel and therefore require special planning and design, opening a new array of integrated procedures.

Methods: From June 2010 389 patients were operated in the Hybrid operating room. 205 where regular open heart operation, 90 were hybrid cardiovascular procedures and 94 other various procedures. The hybrid procedures included trans-apical/aorta/subclavian aortic valve implantation, mitral and tricuspid trans-catheter replacement (33), hybrid coronary revascularization (8 cases), ascending, arch and descending aorta endovascular stent-graft placement (11 cases), abdominal and peripheral vascular stenting carotid stenting and some genecology hybrid procedures (38 cases).

Results: All cases were done by teams of surgeons (cardiac or vascular) and interventional radiologists or cardiologists. Out of the hybrid cases, 30 day mortality was 2 patients. There were 5 cases that needed placement on CPB machine two of then underwent conversion to open surgery. All those patients survived except of one patient with severe LV that did not recover. In Hybrid revascularization patients, dedicated peri-operative anti-platelets regimen was used.

Conclusion: Recently, there is a clear ambition to combine endovascular procedures during cardiovascular surgery, therefore the need for hybrid suites will grow until these hybrid rooms will be an integral part of every cardiovascular center. The new concept will enable new cardiac surgery therapies and will play a major role in minimally invasive surgery. Careful planning and professional expertise is a key factor for every hybrid room project. The hybrid operating room provides a larger safety net for the patients and by that enables treating safely higher risk patients.