of the RV was acquired from an apical transducer position. The data were analyzed off-line utilizing full volume algorithms (TomTec). The RV was planimetered in coronal, sagittal and transverse planes at end-diastole. A relative "cast" was constructed of the RV and analyzed for shape (ref: Marcus et al. JASE 2000;13:186): global descriptors - spatial distances between the TV, free wall, AP and PV, regional descriptors - average curvature (avc) of contours in orthogonal planes. Results: Global shape of abnormal RV showed significant (p<0.0001, vs normal RV) elongations of the TV-free wall and PV-AP distances (coronal plane, Fig.), increase in the angulation of the PV-AP relationship (sagittal plane, Fig.) and an increase in the SAX area (transverse plane); avc of the apex (coronal plane) and the RV inflow (transverse plane) was significantly different from the normal RV (p<0.0001). Detailed measures will be presented.

Conclusions: Real-time global and regional RV shape can be measured by 3-D Echo, which may be a better approach for the diagnosis and monitoring of RV deformity and dysfunction.

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Background: The prognostic role of transesophageal echocardiography (TEE) beyond that provided by clinical risk factors in acute type A aortic dissection (AAD) patients (pts) is not known. Methods: We studied 675 AAD pts enrolled in the International Registry of Acute Aortic Dissection. Multivariate logistic regression analysis was used to identify independent associations of in-hospital mortality first using clinical variables found to have marginal association with death on univariate testing (Model 1). The TEE information was then added to build a final model (Model 2). Results: In-hospital death occurred in 28.7% of pts. TEE evidence of pericardial effusion (p=0.04), tamponade (p<0.01), peri-aortic hematoma (p=0.02) and patent false lumen (p=0.08) were more frequent in pts who died than those who lived. In contrast, the presence on TEE of dilated ascending aorta (p=0.03), dissection localized to ascending aorta (p=0.02) and thrombosed false lumen (p=0.08) was less common in pts who died. Model 1 identified age ≥70 years, pulse deficit, renal failure, and hypotension/shock as independent predictors of death (with abrupt onset of pain and abnormal ECG showing a trend). Model 2 identified peri-cardial tamponade to be independently associated with death (OR 2.7, 95% CI 1.1-6.6), while dissection flap confined to ascending aorta (OR 0.2, 95% CI 0.1-0.6) and complete occlusion of proximal true lumen by dissection flap (OR 0.2, 95% CI 0.1-0.6) were protective. Age, renal failure and abnormal ECG lost their predictive significance for death in Model 2. Addition of TEE information improved the discriminatory power of the prediction model (c-index Model 1=0.74 and Model 2=0.78). Conclusion: In addition to confirming the diagnosis and location of AAD, TEE provides prognostic information above and beyond that provided by clinical risk variables.

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Background
The ability of medical students and residents to recognize heart sounds is poor (~21%) and does not improve with lecture interventions. We tested the hypothesis that cardiac auscultation is a technical skill that requires repetition for mastery. Using a computer program with simulated heart sounds, we studied the efficacy of 400 repetitions of 6 heart sounds and murmurs on the ability of medical students to recognize these sounds.

Methods: A total of 42 third year medical students was included in this study. Simulated heart sounds were digitally enhanced to optimize clarity and recorded onto a compact disc (CD) which the subjects listened to twice. Subjects listened to a total of 400 repetitions of each of 4 basic cardiac murmurs of left sided valvular lesions (AS, MR, AR, MS) and 2 extra heart sounds (S3, S4). Two tests of auscultatory proficiency were administered: a pretest before the intervention and a posttest after the intervention. At both tests, subjects listened to prerecorded heart sounds in a randomized sequence and wrote the name of the sound on blank answer sheets.

Results:
The baseline proficiency score was 30.7 ± 17.3% (Mean ± SD) and increased significantly to 76.7 ± 18.4 % on the posttest (p<0.001). The average improvement was 46.4 ± 25.5 points.

Conclusions:
Four hundred repetitions of simulated heart sounds significantly improved cardiac auscultation proficiency in medical students. The use of intensive repetition of simulated heart sounds can produce dramatic improvement in this neglected clinical skill. These results suggest that cardiac auscultation is, in part, a technical skill that requires intensive repetition for mastery. This concept has not been applied to the traditional teaching of cardiac auscultation.