

TITLE: COMPUTERIZED RESIDENT EVALUATION
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Introduction: A residency program must have a reliable resident evaluation process which must be unbiased, be based on a large number of observations, assess important resident attributes and be capable of generating evaluation reports. We present here our approach to resident evaluation.

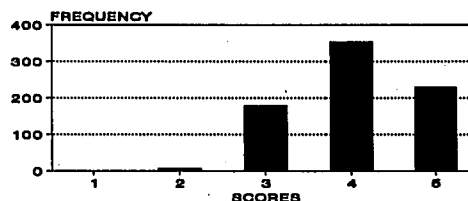
Methods: The following categories were assessed on a Resident Evaluation Form: 1) Knowledge, 2) preoperative evaluation, 3) attitude, 4) manual dexterity, 5) willingness to be educated, 6) attitude towards work and peers, 7) flexibility, 8) willingness to accept criticism, 9) clinical judgement, 10) organization, 11) behavior under stress, 12) communication skills, 13) punctuality and 14) conference attendance. All categories except 12 and 13 were evaluated on a 1-5 scale: 1 - poor; 2 - below average; 3 - average; 4 - above average; 5 - excellent. The supervising faculty member evaluated the resident every day and wrote specific comments. For subspecialty rotations evaluations were done at the end of rotation. Scores for each category, comments and attendance were entered into a computerized data base (DBASE III Plus, Ashton-Tate). A report-writing software (R&R Relational Report Writer, Westborough, MA, 01581-4063) was used to generate the following quarterly reports: 1) mean \pm 1 SD scores 2) staff comments, 3) residents scoring poorly (2 and < 2) and 4) attendance at conferences.
Results: From July 1, 1989 to March 15, 1990, 53 residents were evaluated 1123 times by 54 staff members. Three residents scored consistently 2 or < 2 on one or more items and met with the chairman of the department, following which two residents improved their scores. Eleven percent of the residents had

< 50% attendance at conferences. In each category, a score of 4 was given most frequently (Fig, preoperative evaluation).
RESIDENT EVALUATION REPORT (Sample)

LAST NAME:	FIRST NAME:	DATE:	MEAN	SD	COUNT
ITEM					
KNOWLEDGE			3.5	1.0	21
PREOP EVALUATION			3.9	0.7	19
ATTITUDE			4.3	0.7	21
DEXTERITY			3.6	1.0	21
EDUCABLE?			4.1	0.8	21
ACCEPTS CRITICISM?			4.1	0.8	21
JUDGEMENT			3.8	0.6	21
ORGANIZATION			3.6	0.6	21
STRESS BEHAVIOR			3.5	0.6	21
COMMUNICATION SKILLS			3.5	1.0	21

COMMENT: ATTENDING: DATE:
 GREAT ATTITUDE. NEEDS TO BE MORE AGGRESSIVE.

**FREQUENCY HISTOGRAM
 PREOPERATIVE EVALUATION**



A1082

TITLE: INCIDENCE OF VENOUS AIR EMBOLISM IN RADICAL NECK DISSECTION SURGERY
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Venous air embolism (VAE) is a potentially life-threatening clinical entity that reportedly occurs in a variety of surgical settings including craniotomy, hepatic resection, pelvic surgery, total hip arthroplasty, and head and neck surgery. The incidence of VAE in head and neck surgery is not well documented. This preliminary study is designed to evaluate the incidence of VAE during supine radical neck dissection surgery.

Twelve patients (ASA Class II, III), undergoing modified radical neck dissection surgery were monitored for the intraoperative occurrence of VAE (after approval by the Institutional Review Board, Eye and Ear Hospital of Pittsburgh, University Health Center of Pittsburgh). Intraoperative monitoring systems included EKG, pulse oximetry, end-tidal capnography and mass spectrometry, direct central venous and arterial blood pressures, and precordial doppler ultrasound. Their care was at the discretion of the attending anesthesiologist, but all anesthetics included oxygen (30-40%), nitrous oxide (60-70%), isoflurane (0.5-1.5%), and fentanyl. All cases were performed in the supine

position.

There were 7 episodes of VAE detected by altered doppler tones occurring in 4 of the 12 patients. Associated with these 7 doppler-detected VAE were significant changes in mean arterial pressure (4 declines), electrocardiogram (4 arrhythmias), heart rate (1 decline), CVP (1 elevation), end-tidal nitrogen (3 elevations), and end-tidal carbon dioxide (1 decline). No patients developed long-term sequelae associated with the VAE.

This study revealed VAE occurring in 33 percent of the supine modified radical neck dissections observed at our institution. As noted, the VAE were associated with significant cardiovascular changes in many instances. We conclude that VAE is a significant clinical entity in this setting and warrants appropriate monitoring, including precordial doppler ultrasound, to allow early detection and treatment.

References

1. Anesthesiology, 48:425-429, 1978