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Complete Nose Closure and Radioaerosol Lung Ventilation Imaging

TO THE EDITOR: We wish to share with *Journal* readers an unusual technical pitfall in the performance of radioaerosol lung ventilation imaging. A 28-yr-old black female with past medical history of pulmonary embolism presented with acute shortness of breath after stopping oral anticoagulants and was referred for lung ventilation and perfusion study. A standard nose-clip could not be applied due to presence of a decorative stud in the patient's right nostril and the patient instead agreed to manually occlude the nostrils. After standard preparation of the aerosol delivery system (Aerotech I aerosol unit, CIS US Incorporated, Bedford, MA), the patient was instructed to breathe normally through the mouthpiece for 5 min. At the conclusion of this period, inspection of the gamma-camera persistence scope revealed virtually complete absence of radioaerosol in the lung fields, tracheo-bronchial tree and mouth with the majority of the activity confined to the nebulizer. Because of suspicion that the nebulizer was defective, a second unit was used with repeat failure of radioaerosol distribution. On further analysis, it was suspected that protrusion of the nose-stud was interfering with proper occlusion of the nostril leading to predominantly nose rather than mouth breathing, thereby limiting delivery of ^{99m}Tc-DTPA to the lungs. The suspect nose-stud was removed and a standard nasal clip placed on the patient, resulting in a subsequent high-quality ventilatory image of the lungs.

The importance of complete closure of the nose is not discussed in the delivery-device package insert (*1*) or in an extensive analysis of radioaerosol delivery (*2*). It appears that proper occlusion of the nose is an important factor for adequate aerosol delivery to the lungs and presence of nasal jewelry can interfere with this process.

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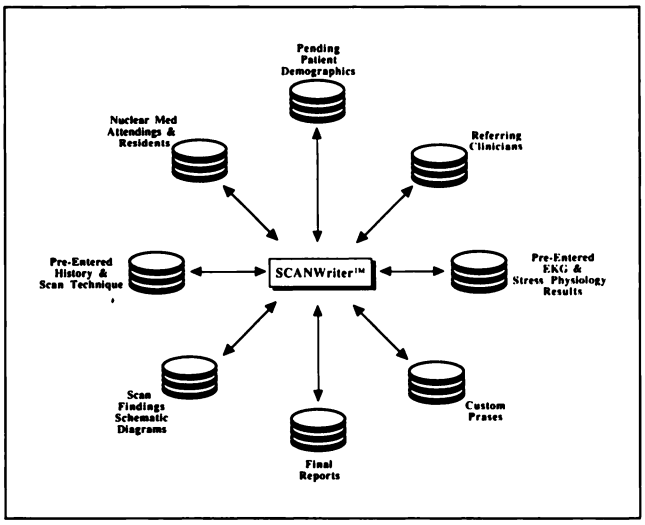

FIGURE 1. Internal database engine of the SCANWriter™.

Advantages and Disadvantages of the SCANWriter™ Report Generating Program

TO THE EDITOR: I read Dr. Sanger's article on a nuclear medicine report-generating program, the SCANWriter™, with personal interest (*1*). I have been a beta site evaluator for 2 yr. Although I am a die-hard MS-DOS user, the SCANWriter™ is far easier than the typical Macintosh-based program. Also, he omitted and downplayed several items that I would like to comment on.

The system is very easy to learn and use without extensive computer knowledge. It is so easy to use that my research assistant, a college sophomore and MS-DOS user, learned the system in a single day.

An important aspect not discussed is the database capability for research. The system has the potential capability to perform disease or result searches with very little effort. I am associated with three teaching institutions where there are no patient or study databases for research. Two institutions keep a log book and use the pharmacy log for research capability.

The Macintosh computer can double as a desktop computer with dictation capability plus word processing, spreadsheet, database and graphics. The typically small reading room might house only a single computer. This computer with all of its capabilities could meet all these needs.

One potential problem not discussed is the lack of portability, which might be overcome with new powerful notebook computers. This has not been a problem in my experience. However, the need might exist for those covering multiple facilities.

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REPLY: I would like to thank Dr. Spieth for his comments regarding the SCANWriter™ report generation system. Being a long-time, dedicated Macintosh™ user and developer, I am not