Ambulatory Patient Screening for General Anesthesia

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The ambulatory general anesthesia patient who has not had a recent medical examination presents the dentist anesthesiologist with a serious challenge. The dentist who uses general anesthesia should establish an office routine for screening such patients as general anesthetic risks.

Taking a medical history is very important, but it is erroneous to assume that the patient is free of disease simply because of a "negative history". Some people can carry on their regular activities for a period of time without being aware of systemic disease and, even though they may think they are in good health, constitute poor anesthetic risks. For example, an unknown uncontrolled diabetic is just as poor a risk as a known uncontrolled one. This makes it apparent that an adequate physical screening technic and laboratory tests are often necessary in the interest of good pre-anesthetic patient care.

RECOMMENDED PROCEDURE

The following procedure is recommended to be performed by the dentist prior to using general anesthesia:

1. Medical History
   The patient should be asked pertinent questions which may give a good index of the medical history and possible existing pathology. This information should be acquired by the doctor and recorded on a permanent record card in the patient's file. The questions should be phrased as follows:

   1. Have you ever had an operation? If so, what kind?
   2. Did you ever have general anesthesia? If so, do you recall your reactions to it? Were there any complications? If so, what were they?
   3. Do you take or have you taken any drugs recently? If so, what drugs? When?
   4. Have you been under a doctor's care recently? If so, for what reason?

   Do you:
   1. faint easily?
   2. have shortness of breath?
   3. ever have pain in your chest?
   4. ever cough?
   5. ever have palpitations?
   6. ever have swollen ankles?
   7. have asthma or hay fever?
   8. have any allergies?

   Positive replies to any of the above questions may necessitate further inquiry along specific lines. It should be realized that these questions are designed only for pre-anesthetic screening. The dentist may wish to ask many other questions in relation to the proposed operative or surgical procedure.

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II. PHYSICAL EVALUATION

A physical evaluation should be conducted routinely for general anesthetic patients which should include:

A. Head and neck
   1. Face, skin, eyes
   2. Ears, nasal passages, throat
   3. Oral cavity
   4. Neck

B. Heart and lungs
   1. Respiration
   2. Pulse and blood pressure (and stethoscopic examination of chest if necessary)
   3. Cardio-respiratory function test

C. Extremities
   1. Hands
   2. Ankles

III. Laboratory Tests

A. Urinalysis
B. Hemoglobin or hematocrit

DISCUSSION

Medical History. Patients with a history of systemic disease which may affect the use of general anesthesia should always be examined by a qualified* physician before anesthesia. Sometimes a telephone call to a physician who has seen the patient recently is adequate. It is the dentist who accepts the responsibility for the patient’s welfare, regardless of whether a physician has given his consent or not. Therefore, the dentist should consult with the physician before accepting this responsibility. During such discussions, it may be decided to handle the particular case in the hospital, or at least to have the physician present for the operation in the event of emergency.

Physical Evaluation. The physical evaluation can be done after the history has been taken in the following manner:

Head and Neck. While examining the oral cavity, the throat, mucous membrane, and tongue can be observed. The throat should be checked for enlarged tonsils. The extent to which the mouth can be opened should be noted. The ears and nasal passages are easily examined with an otoscope. If there is a history of difficulty in breathing or sinusitis, this is especially important. Obstructed nares may severely interfere with inhalation of anesthetic gases and oxygen, as well as the insertion of endotracheal or nasopharyngeal tubes. There should be no hesitation to check the patient’s oral temperature also if there is a recent history of fever or infection.

The color of the skin should be noted; the eyes should be inspected for gross pathology; and the neck should be routinely examined, determining the suitability for cricothyroidotomy or tracheotomy in the event of emergency.

* The word “qualified” is emphasized because not all physicians have adequate knowledge of general anesthesia to understand the implications of pre-anesthetic evaluation.
Heart and lungs. Respiratory movements should be observed and specific odors of the breath detected for the possibilities of upper respiratory or lung infections and diabetic acidosis (acetone). The radial pulse should be palpated and counted. Irregularities of the pulse may necessitate stethoscopic examination of the heart. While feeling the pulse, a simple cardio-respiratory function test can be performed by requesting the patient to take a deep breath and holding it as long as possible. If the pulse varies only slightly in that period and the breath can be held for twenty-five to thirty beats, it usually indicates satisfactory cardiac status. Blood pressure should routinely be taken on all general anesthetic patients.*

Extremities. The patient’s hands, fingers and finger nails, and the legs, ankles, and feet should be observed. It is especially important to observe the patient’s gait as he enters the room. Always check for peripheral edema, particularly in the ankles.

Laboratory Tests. Laboratory data can be easily and quickly acquired during the course of the examination. The urine is usually obtained before the patient is seated and blood can be drawn by a technician by a needle prick of the finger for hemoglobin determination and, if indicated, a complete blood count. If there is a history of anemia, a hematocrit examination may prove to be more accurate.

If the results of the physical screening and the laboratory tests are suggestive of systemic disease, the patient should be requested to visit a physician for further evaluation.

In the absence of any positive findings, the patient can be considered a good risk for general anesthesia.

SUMMARY
A brief history, physical, and laboratory screening technic is outlined and discussed for the ambulatory dental general anesthetic patient. This technic is suitable to determine the patient’s probable reactions to general anesthesia.

Although time is not a primary factor, it should be noted that the entire examination can be performed in a matter of ten or fifteen minutes.

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* The continuous reference to “general anesthetic patients” is not meant to imply that it isn’t desirable to perform the same physical evaluation for local anesthetic patients.

This was the start of an epic in medical history. Doctor Horace Wells, under the effects of nitrous oxide anesthesia, had a tooth extracted and went on record as the first person to have a surgical operation performed under general anesthesia.