

is a reality. We strongly believe that since the sitting position is at risk from venous air the Doppler and right atrial catheter should be employed.

LEONID BUNEGIN, B.S.

Instructor in Anesthesiology

MAURICE S. ALBIN, M.D., M.Sc. (ANES.)

Professor of Anesthesiology and Neurosurgery

*Department of Anesthesiology
The University of Texas Health Science
Center at San Antonio
San Antonio, Texas 78284*

REFERENCE

1. Bunegin L, Albin MS, Helsel PE, Hoffman A, Hung T-K: Positioning the right atrial catheter: A model for reappraisal. *ANESTHESIOLOGY* 55:343-348, 1981

(Accepted for publication February 2, 1982.)

Jawalekar, S. R. and H. B. Santos (1982). "A procedure for measuring the length of the catheter in the epidural space." *Anesthesiology* 57(1): 67-8.

A Procedure for Measuring the Length of the Catheter in the Epidural Space

epidural anesthesia is used with increasing frequency in practice. Often an intermittent technique is used and local anesthetic drugs are injected through the catheter as required. With epidural anesthesia, pain relief is always as complete or predictable as with spinal anesthesia and it is probable that inaccurate placement of the catheter tip may account for some cases of failure. Inadequate anesthesia may be caused by an incorrect length of the catheter in the epidural space. If the catheter doubles back on itself, exists the epidural space through an intervertebral foramen,² or lies in the anterior or posterior epidural space.³ Although the procedure of placing the correct length of the catheter in the epidural space has been stressed in many procedures to accomplish this with any commercially available needles and catheters is not well-de-

scribing a method for precise cannulation of the epidural space which can be used with two commercially available epidural trays (Pharmaseal and Travler Anesthesia Trays).

PROCEDURE

During the routine preparation of the patient, the following steps are performed (fig. 1). 1) The epidural needle is advanced into the epidural space. 2) The length of the catheter including the hub remaining outside the syringe is measured. This can be done easily using the 3-cc syringe from the set. The syringe is held against the epidural needle. Step 2: The piston is withdrawn until its front black ring is in line with the end of the syringe. Do not displace this syringe mark. 3) Insert the catheter. When the first mark on the shaft of the catheter coincides with the hub of the needle, the catheter is in the epidural space. 4) When the second mark on the catheter coincides with the hub of the

needle, a 2-cm length of the catheter is in the epidural space. 5) To avoid accidental withdrawal of the catheter, withdraw the needle while advancing the catheter for an additional 2-3 cm (total 4-5 cm). 6) After the needle is

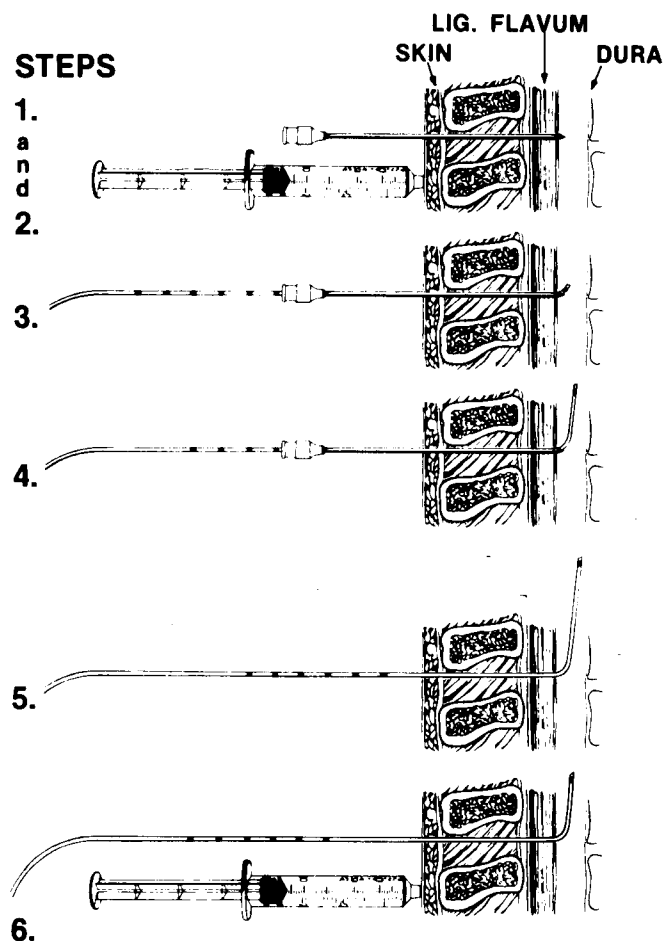


FIG. 1. Procedure for precise cannulation of the epidural space.

removed, place the 3-ml plastic syringe, without disturbing the position of the piston, alongside the catheter. Slowly withdraw the catheter until the third mark on the catheter coincides with the front black ring on the piston. Exactly 2 cm of catheter are in the epidural space.

In patients who are obese, restless, or having edematous backs, one may choose to leave an extra 1 cm of catheter in the epidural space. The catheter is fixed in the routine secure fashion.

We are using this procedure in clinical practice and are impressed with excellent results.

SHREENIWAS R. JAWALEKAR, M.B.; B.S.
Clinical Assistant Professor
Department of Anesthesiology
West Virginia University, Charleston Division
Charleston, West Virginia 25304

Anesthesiology
57:68, 1982

ASA PS Classification Is Not Risk Classification

To the Editor:—We agree with Dr. Bayes¹ conclusion that asymptomatic cigarette smokers should be classified at least as an ASA PS Class II and that smokers have a systemic disease. They may indeed have pulmonary and vascular abnormalities. Bayes, however, made the not infrequent error of referring to this system of ASA PS classification as a "risk classification." This classification has survived less accurate references. In their comprehensive study of perioperative mortality, Beecher and Todd² incorrectly equated physical status with perioperative risk. Feinberg³ erred in the same manner in titling his article on obesity. Goldman *et al.*⁴ erroneously referred to the ASA PS classification as the "Dripps—American Surgical Association (sic)," and mistakenly described it as a "preoperative assessment of surgical risk."

The ASA PS classification was devised by Drs. Saklad, Rovenstine, and Taylor more than 40 years ago.⁵ They originally were given the task of defining a classification of "operative risk." They wisely concluded that operative risk was influenced by too many intangibles and they settled on a system of *physical status* classification alone. Throughout these past four decades the system has endured several minor changes and its spirit remains intact. In the words of the originators, "No attempt should be made to prognosticate the effect of a surgical procedure upon a patient of a given Physical State . . . it may be difficult, at first, for the anesthetist to classify patients with reference to their physical state alone. Subconsciously, he is apt to allow his knowledge of the contemplated surgical procedure to influence him in his grading of patients."

HONORIO B. SANTOS, M.D.
Instructor in Anesthesiology
Department of Anesthesiology
Albert Einstein College of Medicine
Bronx, New York 10461

REFERENCES

1. Moore DC: Regional Block. 4th edition. Springfield, Charles Thomas Publisher, 1975, 424
2. Muneyuki M, Shiraj K, Inamoto A: Roentgenographic analysis of the position of catheters in the epidural space. ANESTHESIOLOGY 33:19-24, 1970.
3. Usubiaga JE, Dos Reis A, Jr, Usubiaga EE: Epidural misplacement of catheters and mechanisms of unilateral blockade. ANESTHESIOLOGY 32:158-161, 1970.

(Accepted for publication February 9, 1982.)

The concept of risk involves danger and the ability to predict outcome. One facet of this is a uniform classification system or a system of taxonomy which makes for consistency regardless of who utilizes it. Since we lack accuracy and therefore this element of consistency in predicting morbidity and mortality, it is far more logical to be precise with a description of physical state. This, after all, has been demonstrated to correlate positively with outcome.⁶

STEVEN J. SCHWAM, M.D.
Research Fellow in Anesthesiology
University of Miami School of Medicine
and Veterans Administration Medical Center
Miami, Florida 33101

MARTIN I. GOLD, M.D.
Professor of Anesthesiology
University of Miami School of Medicine
Miami, Florida 33101

REFERENCES

1. Bayes J: Asymptomatic smokers: ASA I or II? ANESTHESIOLOGY 56:76, 1982.
2. Beecher HK, Todd DP: A study of deaths associated with anesthesia and surgery. Ann Surg 140:2-34, 1964
3. Feinberg GL: Obesity: Class IV anesthetic risk. NY State J Med 71:2200-2201, 1971
4. Goldman L, Caldera DL, Nussbaum SR, et al: Multifactorial index of cardiac risk in non-cardiac surgical procedures. N Engl J Med 297:845-850, 1977
5. Saklad M: Grading of patients for surgical procedures. ANESTHESIOLOGY 2:281-284, 1941
6. Dripps RD, Lamont A, Eckenhoff JE: The role of anesthesia in surgical mortality. JAMA 178:261-266, 1961

(Accepted for publication February 2, 1981.)

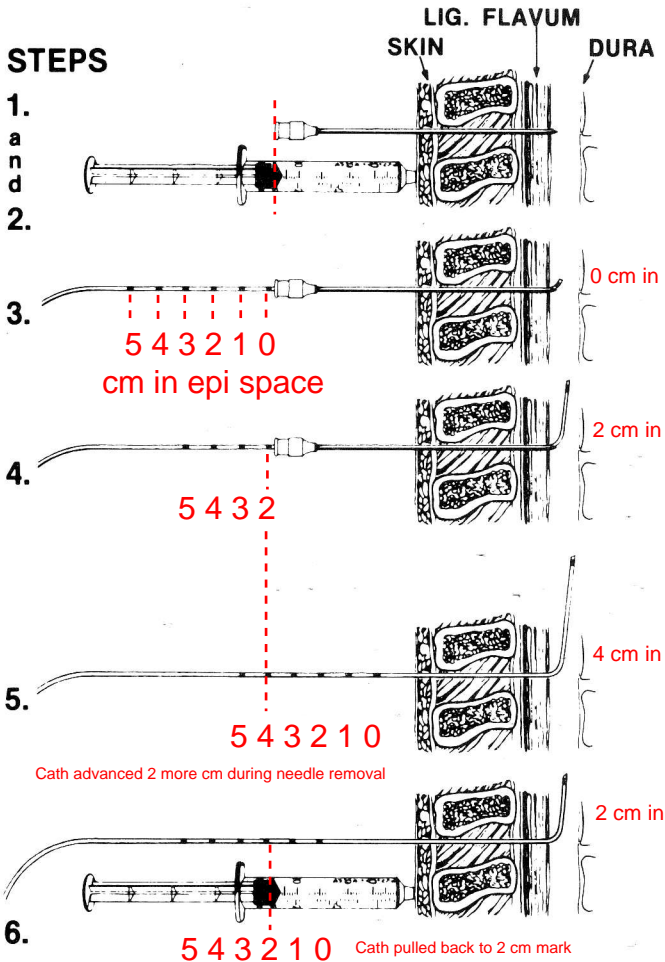


FIG. 1. Procedure for precise cannulation of the epidural space.