GRADING OF PATIENTS FOR SURGICAL PROCEDURES

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A COMMITTEE of the American Society of Anesthetists, Inc.* were empowered by that society to study, examine, experiment and devise a system for the collection and tabulation of statistical data in anesthesia. An attempt was made to devise a method that would be applicable under any circumstances. For such a system to be useful it was necessary to set arbitrary definitions of variables. This is important since those who employ it can use standard terms and definitions to the end that a common language and understanding result. Among the many variables to be considered is one which is commonly spoken of as "Operative Risk."

The classification of a patient with reference to his ability to withstand surgery is common practice. The assignment of a grade to a patient may be in the form of a number as 1, 2, 3, 4; a letter, as a, b, c, d, or, in an attempt to be more explicit, a word as good, fair, poor, or serious. This gradation has, in the past, been an attempt to record preoperatively what has been termed the "Operative Risk."

An attempt to assay a patient as a certain grade of "Operative Risk" must consider many factors that may have a bearing on the result. One must, in his mental calculation, include not only the patient's physical condition but also additional factors such as the planned surgical procedure, the ability and skill of the surgeon in the particular procedure contemplated, the attention to postoperative care, the past experience of the anesthetist in similar circumstances, etc. It can be readily seen that the assignment of an "Operative Risk" to an individual will be peculiar to the set of circumstances that prevails at that moment. It may also be understood that a given patient may vary in degree of "Operative Risk," dependent upon the type of surgical procedure to be performed. Thus, a diabetic patient suffering from a mild degree of acidosis may be a good risk if he were to have a paronychia drained, but a poor or serious risk if he were to be operated upon for an acute gangrenous gall bladder.

The attempt to determine a patient's "Operative Risk" may be of value in prognosis, but such grading of patients is useless from a statistical point of view. It is useless from several standpoints: the excessive number of variables to be considered, the tremendous degree

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of variation in different clinics and different physicians and the complete lack of agreement as to definition of terms.

In attempting to standardize and define what had heretofore been considered "Operative Risk," it was found that the term, as employed in the past, could not be used. It was felt that for the purposes of the anesthesia record and for any future evaluation of anesthetic agents or surgical procedures, it would be best to classify and grade the patient in relation to his physical state only.

The patient's physical state can be useful for statistical purposes. The gradation has no relation to the operative procedure, the ability of the surgeon or anesthetist, nor the type of anesthesia the patient will receive.

In considering a classification of the patient as to his "Physical State" fewer variables need be considered. With the smaller number of factors there will result a more nearly common definition. No attempt should be made to prognosticate the effect of a surgical procedure upon a patient of a given "Physical State."

In employing the statistical system as devised by this committee, it will be possible to correlate the relationship between result, the operative procedure and the patient's preoperative condition. It is this properative condition that we term the "Physical State."

Since the system was devised with the hope that anesthetists in different parts of the country would employ this method of collecting statistics and use common terminology, the various degrees of "Physical State" were carefully defined in a booklet published by the American Society of Anesthetists, Inc. The six degrees of "Physical State" and their definitions as they appear in this booklet follow:

PHYSICAL STATE

Class 1. No organic pathology or patients in whom the pathological process is localized and does not cause any systemic disturbance or abnormality.

Examples: This includes patients suffering with fractures unless shock, blood loss, emboli or systemic signs of injury are present in an individual who would otherwise fall in Class 1. It includes congenital deformities unless they are causing systemic disturbance. Infections that are localized and do not cause fever, many osseous deformities, and uncomplicated hernias are included. Any type of operation may fall in this class since only the patient's physical condition is considered.

Class 2. A moderate but definite systemic disturbance, caused either by the condition that is to be treated by surgical intervention or which is caused by other existing pathological processes, forms this group.

Examples: Mild diabetes.
Functional capacity I or IIa.
Psychotic patients unable to care for themselves.
Mild acidosis.
Anemia moderate.
Septic or acute pharyngitis.
Chronic sinusitis with postnasal discharge.
Acute sinusitis.
Minor or superficial infections that cause a systemic reaction. (If there is no systemic reaction, fever, malaise, leukocytosis, etc., aid in classifying.)
Nontoxic adenoma of thyroid that causes but partial respiratory obstruction.
Mild thyrotoxicosis.
Acute osteomyelitis (early).
Chronic osteomyelitis.
Pulmonary tuberculosis with involvement of pulmonary tissue insufficient to embarrass activity and without other symptoms.

Class 3. Severe systemic disturbance from any cause or causes. It is not possible to state an absolute measure of severity, as this is a matter of clinical judgment. The following examples are given as suggestions to help demonstrate the difference between this class and Class 2.

Examples: Complicated or severe diabetes.
Functional capacity IIb.
Combinations of heart disease and respiratory disease or others that impair normal functions severely.
Complete intestinal obstruction that has existed long enough to cause serious physiological disturbance.
Pulmonary tuberculosis that, because of the extent of the lesion or treatment, has reduced vital capacity sufficiently to cause tachycardia or dyspnea.
Patients debilitated by prolonged illness with weakness of all or several systems.
Severe trauma from accident resulting in shock, which may be improved by treatment.
Pulmonary abscess.

Class 4. Extreme systemic disorders which have already become an eminent threat to life regardless of the type of treatment. Because of their duration or nature there has already been damage to the organism that is irreversible. This class is intended to include only patients that are in an extremely poor physical state. There may not be much occasion to use this classification, but it should serve a purpose in separating the patient in very poor condition from others.

Examples: Functional capacity III—(Cardiac Decompensation).
Severe trauma with irreparable damage.
Complete intestinal obstruction of long duration in a patient who is already debilitated.
A combination of cardiovascular-renal disease with marked renal impairment.
Patients who must have anesthesia to arrest a secondary hemorrhage where the patient is in poor condition associated with marked loss of blood.

Emergency Surgery: An emergency operation is arbitrarily defined as a surgical procedure which, in the surgeon's opinion, should be performed without delay.

Class 5. Emergencies that would otherwise be graded in Class 1 or Class 2.

Class 6. Emergencies that would otherwise be graded as Class 3 or Class 4.

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. With care, diligence and attention to detail, he very soon will limit himself to the consideration of the patient's condition in his classification.

In the training of anesthetists and in the teaching of anesthesia, it is much easier to project the idea of "Physical State" than the former term "Operative Risk." In having several individuals grade patients there results a more common agreement than was formerly possible.

Summary.—It is suggested that the term "Operative Risk" be supplanted by the term "Physical State." The advantage of recording on an anesthesia record and for statistical purposes the patient's physical state, rather than operative risk, is advanced. The gradations of "Physical State" are enumerated and examples given.

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At the meeting of the Council on Medical Education and Hospitals held in Chicago on February 16, 1941, that body unanimously approved the motion that the American Board of Anesthesiology, Inc., be made a Major Board, thus severing its affiliation with the American Board of Surgery. This action was taken following the approval of seven boards, namely, The American Boards of Ophthalmology, Otolaryngology, Obstetrics and Gynecology, Orthopedic Surgery, Surgery, Urology, and Anesthesiology.

The Annual Dinner for Diplomates of the American Board of Anesthesiology, Inc., will be held on June 4, 1941, in Cleveland, Ohio. Further details will be announced at a later date.