

"The anesthesia of choice for acute head injuries is local infiltration or field block. . . . Many injuries of the face can be comfortably and safely treated under local infiltration or regional block anesthesia. For extensive procedures in which regional anesthesia is not applicable, ether and oxygen administered through a gas machine is the anesthetic of choice. The method used should be intratracheal. . . . When a gas machine is not available, the intratracheal method can be used with a Flagg Can. . . . The upper extremity is an ideal location for regional block. . . . Anesthesia for abdominal procedures: Spinal anesthesia is ideal from the standpoint of relaxation, quiet respiration, etc. It is contraindicated in the presence of shock or in patients that may need to be evacuated within twelve hours. Peridural anesthesia produces relaxation closely approximating that obtained with spinal. . . . For the poor risk abdominal patients or those in shock, Abdominal Field Block, supplemented by inhalation or intravenous anesthesia with oxygen, offers the greatest margin of safety. In the presence of shock there is a varying degree of anoxia present. Any anesthetic which diminishes the supply of oxygen by any means will further increase the degree of shock present. . . . Intra-abdominal cases should particularly have adequate relaxation, a free airway and sufficient oxygen. . . . Anesthesia of the entire leg can be obtained with spinal block, peridural block, or sciatic block plus injection around the anterior crural, external cutaneous and obturator nerve. When it is necessary to operate on a patient in shock due to injury of the lower extremity, some type of regional field block, combined with inhalations of oxygen, or supplemented with gas and oxygen, or pentothal and oxygen, is the safest procedure. For those patients not in

shock, any type of anesthetic available will be satisfactory. . . . Open wounds of the chest, especially those where the opening is large enough to produce paradoxical breathing, require immediate closure. This is best handled with infiltration anesthesia or intercostal block. . . . Any anesthetic which permits the use of a high percentage of oxygen with positive pressure may be used. The shorter-acting ones, such as pentothal and cyclopropane are preferable, because of the rapid return of the cough reflex and normal respiratory movement." 5 references.

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GREENE, B. A.: *Prolonged Intravenous Pentothal Sodium Anesthesia Especially with Reference to Its Application to Military Surgery*. New York State J. Med. 44: 1205-1211 (June 1) 1944.

"We consider intravenous anesthesia to be safely applicable to long surgical procedures, whether they are major or minor, only if relaxation and depth need not be profound. . . . There is no evidence in the literature which contraindicates the application of intravenous pentothal sodium anesthesia as a primary agent for long cases, under proper safeguards and for suitable operations. There are many conditions which are only relative contraindications to the use of intravenous anesthesia for short cases—e.g., moderate hepatic damage, shock, lack of all safeguards. These may be overlooked in many short cases without encountering disaster. But for prolonged surgery these and many other conditions must be corrected, compensated for, or treated before or while subjecting the patient to the anesthesia. . . . Respiration must not be hampered by the slightest degree of obstruction. . . . The postoperative temperatures in our cases have not been higher than ex-

pected from any prolonged anesthetic and surgical procedures. . . . We have observed no unusual tendency toward bleeding in operative areas. . . . Prolonged postoperative sleep is frequently noted after prolonged intravenous anesthesia. . . . The conditions which insure the clinical safety of intravenous pentothal sodium for long anesthetics are: (1) the supervision of the patient by a competent anesthetist; (2) the immediate accessibility and application of equipment for the administration of oxygen under pressure, establishing the patency of the entire airway and stimulation; (3) the use of all aids which decrease the dose and rate of pentothal consumption, enable the surgery to be performed with a lighter plane of pentothal anesthesia, and reduce the incidence of respiratory depression and obstruction; and, (4) finally, the correct choice of the patient for intravenous anesthesia.

"Our 37 anesthetics of one hour or more included the following cases: Eleven cases of fenestration for otosclerosis lasting four hours to six hours and fifteen minutes, and requiring 1.75 to 4 Gm. of pentothal sodium; a seventy-minute transurethral resection in a 101-year-old psychotic male; an eight-hour cerebellar exploration in a 10-year-old boy; a four-hour laryngectomy; a three-hour radical mastectomy; a two-hour removal of tumor of orbit; a two-hour and ten minute esophagectomy; a one-and-a-half hour suspension laryngoscopy and fulguration; a one-and-a-half hour exploration of petrous pyramid; a one-and-a-quarter-hour plastic repair of orbit in a 70-year-old male; a sixty-minute enucleation of the eye in a 66-year-old psychotic female; and a sixty-minute radical mastoidectomy in a 21-year-old toxic male. . . . We consider the following points in technic as important: 1. Premedication is desirable but not

absolutely necessary. . . . 2. Have the patient clear his nose and throat well before induction. This tends to avoid such respiratory irregularities as sneezing, coughing, asthmatic breathing, laryngospasm and mucous obstruction. 3. 'Restrains' are desirable but not absolutely necessary. They reduce the dosage of pentothal sodium for prolonged surgery by allowing the anesthetist an extra margin of light anesthesia. . . . 4. Have the patient well atropinized. . . . 5. Employ local or regional anesthesia as much as possible to decrease the need for greater depth of general anesthesia and larger doses of pentothal. . . . 6. Expertness in the art of venipuncture. . . . 7. Inject small doses, 1-3 cc., of 2.5 per cent solution intermittently, allowing full time for the circulation to distribute the drug and for the central nervous system to exhibit the full effect after each injection, usually one minute. . . . 8. The concentration of pentothal solution should be 2.5 per cent during the first two hours and 1-1.5 per cent thereafter. . . . 9. Give repeated doses of morphine sulphate intravenously when the patient continues to require 0.5 Gm. pentothal doses every fifteen minutes for two consecutive quarters of hours. . . . 10. Maintain an infusion of saline, glucose, plasma, or blood after the operation has exceeded one hour. . . . 11. Avoid the use of an oral airway unless the mouth and pharynx have been numbed by spraying or swabbing with a local anesthetic. . . . 12. Use an intratracheal airway coated with a water-soluble anesthetic lubricant, in a numbed larynx in any case in which there is marked likelihood of some interference with the airway because of the nature of the disease or operation. 13. Maintain the level of anesthesia as low as is consistent with the needs of the surgeon, never exceeding second plane of third

"Lundy has predicted that intravenous barbiturates will be used more often than any other type of anesthetic. Wiggin has stated that it is already the most common general type of anesthetic in service for cases not requiring deep relaxation. Many reports from abroad, especially England, have provided the basis for these statements." 38 references.

MANTELL, L. K., AND McCUSKEY, C. F.
Anesthesia for Military Needs. California & West. Med. 60: 247-256 (May) 1944.

"Anesthesia with Medical Service of the Division.—In order to appreciate the anesthesia problems which confront the surgeon charged with responsibility of the medical service of the Division, a brief review of the organization is indicated. . . . We are primarily concerned with the organization of the Triangular Division, since that has become the nucleus of our streamlined fighting forces. The Triangular Division is so designated because of the position of the assault regiments, namely two regiments abreast and one in reserve. . . . In addition to the Division being served by the Medical Battalion, a unit known as Regimental Medical Detachment is attached. This unit makes up the forwardmost portion of the medical service of the Division. It is entirely separate from the Medical Battalion and is attached directly to the regiment as an integral part of the combat force. . . . Briefly, the Regimental Medical Detachment's function is to render first aid to casualties on the battlefield and evacuate them to the Battalion Aid Station, located three hundred to eight hundred yards in the rear, depending upon the type of action in progress. It supplies two company or Battery Aid Men to each company or battery of infantry or field artillery. These men stay with that particular company or battery at all times, and render first aid to the casualties on the battlefield. They also direct the walking wounded toward the Battalion Aid Station. Litter bearers, who are also supplied from this detachment, evacuate the casualties to the Battalion Aid Station. The function of the Regimental Medical Detachment ends at the Battalion Aid Station from which point the Medical