

A REPORT FROM ENGLAND
THE NUFFIELD DEPARTMENT OF ANAESTHETICS

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DURING the course of military duty, I have had, for the past four months, the privilege of working in the Nuffield Department of Anaesthetics at the University of Oxford. For this I am indebted to the courtesy of Lt. Col. R. M. Tovell. It may be of interest to American anesthetists to know something of the functions of this Department.

The Nuffield Department of Anaesthetics is situated in the Radcliffe Infirmary. In addition to service to the various surgical departments in the Radcliffe Infirmary, the anesthetists work in the two adjoining hospitals, the Oxford Eye Hospital and the Maternity Hospital. A rich and varied source of clinical material, therefore, is available to the members of the Anaesthetic Department.

Professor R. R. Macintosh, Director of the Department and Professor of Anaesthetics in the University, for many years practised as an anesthetist in London and has visited American clinics on several occasions. He is the author of the book "Essentials of General Anaesthesia" and of numerous papers on various subjects in the field of anesthesiology. At present he is Consultant in Anaesthetics to the Royal Air Force, with the rank of Air Commodore.

While Professor Macintosh is engaged in R. A. F. duties, the direction of the Department is in the hands of the First Assistant, Dr. William Mushin. Dr. Mushin was also previously a London anesthetist. There are three full time residents in the Department.

Instruction is given to medical students in the School of Medicine in the form of lectures and in the use of the common anesthetic agents and apparatus.

The work of the clinical anesthetists in the operating rooms is greatly facilitated by the nurses attached to the Anaesthetic Department—one Sister Anaesthetics, two staff nurses and one student probationer nurse. Their duties include the orderly management of the operating schedule, the care of the patient before induction of anesthesia, and assistance to the anesthetists in preparing trays and syringes for block and spinal anesthesia. They also help in the care of the anesthetic equipment. They are not comparable with anesthetic nurses in America in that they do not administer anesthetics.

Anesthetists in the department are assigned to different surgeons in rotation. Each anesthetist works with one surgeon for an entire list of operations, using the methods and agents which the anesthetist thinks most suitable. The day's operating schedule is posted at 5 o'clock on the previous evening, allowing ample time for the anesthetist to visit patients before operation.

The First Assistant is free, at most times, from a prescribed duty list so that he is available for teaching and advice.

The operating lists are spread throughout the day so that one anesthetist may work in the morning with one surgeon and in the afternoon with another.

The day's work starts at 9 a.m. and continues until the lists are finished, usually by 6 p.m. It is the custom to take a full, leisurely hour for luncheon and to have time for coffee in the morning and always for tea in the late afternoon. These considerations, strange to me at first, are almost religiously adhered to and, I find, are conducive to more vigorous and less fatiguing concentration on the job in hand.

There are at present five general surgical services: two gynecologic services, an ear, nose and throat, eye, thoracic, and accident and orthopedic service, under the direction of Professor Trueta. Several other services require occasionally administration of anesthetics. It is not unusual for a general surgeon to perform ten to fifteen operations—with six of these laparotomies—in one list.

No restrictions are put upon the anesthetist in the choice of agents or methods, since no surgical service calls for a routine in anesthesia. A morning's list may be done with a variety of agents and methods. Certain limitations, of course, are imposed because of wartime conditions of supply. Cyclopropane, for example, is now available only in limited amounts. At the Radcliffe Infirmary, ether is considered to be a valuable and certainly a safe agent. The commonest method of administering it is by means of the Oxford Vaporiser (1), which was developed in the Department. The Oxford Vaporiser is a simple apparatus mechanically, affording a convenient and safe method of vaporising ether. It is employed on all surgical services and I have seen it used in almost every conceivable type of case. It is the belief in this Department that light ether anesthesia skillfully administered fulfills suitably the physiologic conditions necessary for the production of general anesthesia in persons suffering from traumatic shock (2). I have been present on a number of occasions when ether anesthesia was produced by the Vaporiser during operations upon seriously wounded and injured men. The ability to maintain readily a light plane of anesthesia for long periods indicates to me that the Vaporiser satisfies the practical requirements necessary for the production of anesthesia in the individual suffering from shock. I have witnessed its use during five intrathoracic operations requiring controlled respiration for from one and a half to three hours.

The closed technic for the absorption of carbon dioxide is not used except during cyclopropane anesthesia.

The apparatus for continuous administration of intravenous anesthetics (3) designed in the department is used on occasions. The solutions employed are pentothal, 1 per cent, and pentothal 1 per cent with ether, 7 per cent. The large volumes of dilute solutions permit an accurate control of the dosage and maintenance of an even plane of anesthesia.

Spinal anesthesia and regional nerve blocks are given in a large variety of cases. During a two-months' period there were 770 anesthetic administrations in the general theaters. Of these, 186 were some form of regional or local nerve block. It may be of some interest that 10 patients received brachial plexus nerve block and 23 patients received paravertebral nerve block for abdominal operations. Operations upon the ethmoid and maxillary sinuses are performed with nerve block of the first and second divisions of the fifth nerve, respectively.

Amethocaine (in America, pontocaine) is administered very occasionally for local and regional anesthesia but not for spinal anesthesia. Heavy solutions of nupercaine and procaine are employed for spinal anesthesia.

The anesthetic services to the dental and ear, nose, and throat departments are of interest in that they differ somewhat from the usual methods in America.

Tooth extractions are performed by means of nasal nitrous oxide—air requiring a simple apparatus in contrast to that necessary for nitrous oxide-oxygen. The surgical procedure is rapid, seldom requiring more than ten minutes of anesthesia. A considerable number of patients attending the dental clinic every morning and all residents soon become quite proficient in this type of anesthesia. As a wartime expedient, tonsillectomies in children are performed twice a year for a period lasting six weeks. Each day from 15 to 20 tonsillectomies and adenoidectomies are performed under ethyl chloride anesthesia by means of the Sluder method.

Endotracheal methods are used and the Macintosh laryngoscope (4) is employed more and more often. It is difficult at this early stage to assess properly the place of this instrument as an aid to laryngoscopy. I am impressed by the fact that it is not designed to pass beyond the epiglottis in the accepted way, but is made to fit into the angle formed by the epiglottis and the base of the tongue.

The injector principle previously mentioned in connection with oxygen therapy (5) and nitrous oxide-air analgesia (6) has now been extended and incorporated into the construction of a gas-operated injector suction apparatus. This is a small portable unit, employing a 40 cubic foot tank of gas. It has proved of value both in the operating rooms and on the wards when suction is employed during tracheobronchial aspiration. A description of this apparatus will soon be published.

The Oxford Inflator (7) is on hand in the operating rooms and I have seen its use on a few occasions for the emergency treatment of acute respiratory failure. This apparatus is designed to create an intermittent positive pressure for injection of oxygen into the lungs by means of a face mask.

Postoperative ward rounds are made by members of the resident staff and a careful system of records is kept.

Oxygen therapy in the hospital is under the direction of the Department. There is a system of pipes by means of which oxygen is supplied to the wards from a central source. The maintenance and construction of all equipment for anesthesia and oxygen therapy are directed by Mr. Richard Salt, with the aid of three technicians. It was Mr. Salt who was instrumental in adapting the Rotameter in 1937 to a form suitable for anesthetic apparatus (8). This type of meter had been in existence since 1910 (9) for measurement of gases and liquids in industry.

Research in the field of anesthesiology and physiology is under the direction of Dr. Stuart Cowan, aided by H. G. Epstein, a physicist. The latter, with the help of S. F. Suffolk, is engaged in the construction of a chloroform inhaler.

Recently experiments have been performed on a human subject, comparing Eve's method of resuscitation with the Schafer and Silvester methods. The results will be published soon.

On Monday of each week a meeting is held which is attended by the members of the resident, nursing, and research staffs of the department and interested visitors. At these meetings progress reports are made, cases are considered and some topic is presented which is then discussed by all those present. During my stay, the subjects of refrigeration anesthesia, treatment of tetanus, pain and the sympathetic nervous system, and sympathetic block for thrombophlebitis were some of the topics presented. Oftentimes some of the presentations are made by a distinguished visitor or member of the hospital.

One other activity of the department deserves some notice. Twice annually the entire staff offers a two-weeks' course of lectures and demonstrations in the fundamentals of anesthesiology. This course is attended by postgraduate students and by those who intend to take the examination for the Diploma in Anaesthetics.

It is difficult in a factual presentation such as this to picture to the reader the spirit and attitude of mind which exists among this group in the performance of their everyday work.

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Nuffield Division of Anaesthetics. Head. Andrew Farmery. Professor of Anaesthetics. andrew.farmery@ndcn.ox.ac.uk. People. We run nationally and internationally recognised teaching programmes in a range of anaesthetic related areas (e.g. primary trauma care, regional anaesthesia, and anaesthesia in the developing world). Read the history of the Nuffield Division of Anaesthetics. What's new. Motorsport technology helps keep COVID-19 clinicians safe. What is the abbreviation for Nuffield Department of Anaesthetics? What does NDA stand for? NDA abbreviation stands for Nuffield Department of Anaesthetics. Nuffield Department of Anaesthetics can be abbreviated as NDA. What is NDA abbreviation? One of the meanings of NDA is "Nuffield Department of Anaesthetics". What is the abbreviation for Nuffield Department of Anaesthetics? The abbreviation for Nuffield Department of Anaesthetics is NDA. What is the meaning of NDA abbreviation? The meaning of NDA abbreviation is "Nuffield Department of Anaesthetics". What does NDA mean? NDA as abbreviation means "Nuffield Department of Anaesthetics". Online search. Search for "NDA - Nuffield Department of Anaesthetics" i The NHS department is also closely linked with the Nuffield Division of Anaesthetics, part of the Nuffield Department of Clinical Neurosciences within the University of Oxford. Many members of the department are active leaders in clinical and laboratory research, teaching medical students and postgraduates locally and internationally and medical simulation in our state-of-the-art simulator centre. Further information about University activity may be found on these websites: Nuffield Division of Anaesthetics: www.nda.ox.ac.uk. OxSTaR - Oxford Simulation Teaching and Research: www.oxsim.ox.ac.uk