

portant initiating factors in the development of 'shock,' then every procedure that is capable of reducing capillary permeability is bound to have a beneficial effect. . . . The simplest and most practical way of paralyzing sympathetic action and thus reducing capillary permeability in the traumatized area without damaging the patient is the paravertebral infiltration of the regional ganglia with novocain. This should be carried out as soon as possible—in any case, within the first 1 to 3 hours after trauma. We have seen that the period of increased capillary permeability lasts only 1 to 5 hours, to be followed by a period of decreased permeability. No effect can therefore be expected after 5 hours. These results were obtained in the cat; it is therefore possible that the time limits mentioned do not apply exactly to human beings. An anaesthetic of short effect, preferably novocain, should be used, because the second period of decreased permeability does not develop in the sympathectomized limb, and it is very likely that a prolonged sympathetic block may have a similar effect to that of sympathectomy and fail its purpose. If the lower extremity is crushed the first to fourth lumbar and the first sacral ganglia, if the upper extremity is involved then the stellate and the first and second thoracic ganglia, have to be injected. . . . It is not advocated that other methods which have proved, so far, to be indispensable (blood transfusions etc.) should be neglected."

J. C. M. C.

BURGESS, ALEXANDER M., AND SAKLAD, MEYER: *Inhalation Therapy in the Rhode Island Hospital*. J. A. M. A. 125: 469-472 (June 17) 1944.

The authors previously reviewed many problems they had in maintaining satisfactory oxygen therapy. Some of their constant problems were main-

tenance and up-keep of equipment, maintaining adequate oxygen concentration and seeing that oxygen therapy was intelligently supervised. They decided that the "(1) application of an adequate method to the patient in need of oxygen is no proof that he is receiving his oxygen sufficient for his needs and (2) the correct application of an adequate method with evidence that the patient is receiving oxygen sufficient for his needs is no guarantee that he will continue to do so as long as the method continues to be used."

The authors in 1932 devised a simple open box type of oxygen tent which they later improved upon so that they made a pliofilm open box type of canopy which fits snugly around the neck of the patient, or in a child around its abdomen. Inside of this pliofilm box was placed, in the upper back part, an ice container through which the oxygen flowed so that the oxygen was cooled and would sink to the bottom of the tent near the patient's face. They were able to give a concentration of oxygen between 45 to 60 per cent. This pliofilm tent was finally made into a hanging type of tent which was suspended from a bedside stand.

The Department of Inhalation Therapy was established under the Division of Anesthesia. The duties of this department were to "(1) Train and supervise the required personnel. (2) Order equipment and keep it in repair. (3) Supervise the actual application of oxygen and other gas therapy throughout the hospital. (4) Keep records on appropriate forms and from such records compile and evaluate statistics." The Department of Inhalation Therapy supervises the setting-up of oxygen therapy ordered by the physician and is responsible for checking at intervals the efficiency of the oxygen therapy in use.

The types of oxygen therapy in use at the hospital are: "(1) Oropharyngeal insufflation; (2) Open box (or open top tent); (3) Closed box (or closed top tent); (4) Masks; (5) Positive pressure methods by (a) mask and (b) machine; (6) carbon dioxide absorber methods by (a) mask and (b) machine."

The authors devised a simple closed box technic using a pliofilm and covering the top with pliofilm, and placing a container of exposed soda lime inside the tent. The authors prefer the O.E.M. to the B.L.B. masks. Oxygen was also administered to patients where positive pressure was desired, using an anesthesia machine. They used the anesthesia machine with administration of helium-oxygen, using carbon dioxide absorption.

In the opinion of the authors the oropharyngeal method of administering oxygen is the best in the hands of the untrained personnel where oxygen tents are employed. It is important to have a trained personnel who are constantly checking the apparatus as well as doing frequent gas analysis when other methods are used. They feel that the use of masks can only be of value where oxygen is needed for a short period of time since most patients get uncomfortable with the mask in proper position over several hours.

The authors have set up a good record system for inhalation therapy. They start with a form signed by the physician requesting the type of oxygen he wishes to be given the patient. The nurse technician keeps a daily record on the cases given oxygen she has supervised throughout the day and this sheet is sent to the bookkeeper's office for billing purposes. Then a record of therapy is kept on the patient's charts which notes the "type of therapy, the time instituted, oxygen percentage, the course of the therapy, and

many other remarks which may be of importance." "This form acquaints the physician in charge with the efficiency of the treatment during his absence from the bedside and serves as a basis for any alteration in the method used." The Hollerith method of analyzing statistical data with code numbers and punch cards is used to analyze these records.

In conclusion the success or failure of oxygen therapy depends primarily on "day by day conscientious supervision of the apparatus when actually in use."

M. L. B.

LAMBERTSEN, CHRISTIAN J., AND GODFREY, LINCOLN: *A Small Efficient Hood for Oxygen Therapy*. J. A. M. A. 125: 492-493 (June 17) 1944.

The authors have devised a small helmet or hood which is used in place of the large canopy and is attached by the usual means to the oxygen tent cabinet. This small hood or helmet was devised in an attempt to minimize the psychic objection of claustrophobia and feeling of suffocation that some patients have in a large tent. "This oxygen therapy unit comprises a small, completely transparent hood enclosing the head and neck, designed to be removably attached by outlet and inlet tubes to the air conditioning machine of the standard oxygen tent and to be snugly sealed about the neck of the patient by means of an attached skirt" (pliofilm skirt). The hood is made of a colorless plastic and is the shape of an egg shell bisected longitudinally. Soda lime is used in the air conditioning machine since one is dealing with a smaller circulatory air space. The hood's only contact with the patient is at the lower point where it rests on the patient's chest.

The author does not state what air conditioning machine of the standard oxygen tent type they used; however,