

the oxygen is forcibly sprayed over the whole dorsal surface, beginning as far back as possible and working forward. The point of the applicator is kept against the tongue and worked back and forth until all the papillae project in a hair-like manner. Many organisms are thus removed, because the tongue is an acknowledged collector of infectious material. In cases in which there is a distinct ulcer on any part of the mouth tissue, treatment proceeds as described, but the oxygen is sprayed forcibly over the infected surface. After all this has been completed, the last step in the technique consists in placing the nozzle in the patient's mouth, with the lips tightly compressed. The mouth is completely filled with oxygen until the cheeks and lips are distended; the excess escapes slowly through one corner of the mouth. This tends to distend and stretch the mucous membranes and allow full contact with the oxygen. The patient is then allowed to rinse the mouth thoroughly."

J. C. M. C.

NICHOLSON, H. C., AND TRIMBY, R. H.: *Continuously Recorded Alterations in the Buoyancy of Anesthetized Dogs Produced by Various Respiratory Modifiers*. *Am. J. Physiol.* **137**: 136-142 (Aug.) 1942.

"It is obvious that the volume to mass ratio of the body and consequently its buoyancy is changing throughout the respiratory cycle. Nevertheless, as far as we know, this fact has never been used as a means of recording respiration continuously. The possibility that the continuous recording of changes in buoyancy might possess some advantages over the more commonly used methods of recording respiration was suggested to us by a paper by J. M. Turner on respiratory variations in the weight of a man submerged in water. . . .

The advantage of this method of recording respiration over a spirometer tracing is that changes in the level of the tracing are due solely to changes in chest volume associated with changes in tonus of the respiratory muscles, whereas variations in the level of a spirometer tracing may result from either alterations in the tonus of the respiratory muscles or variations in oxygen consumption, and it is frequently difficult to distinguish between the two. We commonly recorded a spirometer tracing as well as our buoyancy record. This buoyancy method has the advantage over a chest band tracing that changes in total volume of the torso are recorded rather than variations in any one segment.

...
 "Vagotomy is followed by an increase in inspiratory volume of the lungs but a decrease in the extent of expiration, indicating that the vagus previously had been exerting a predominantly expiratory augmenting influence. If the pressure of the liquid in the tank upon the animal's chest is not compensated, thus resulting in excitation of the pulmonary collapse receptors and removal of excitation from the stretch receptors, the above effects of vagotomy are reversed, the extent of expiration now being increased, indicating that under these conditions the intact vagus exerts a predominantly inspiratory augmenting influence. Stimulation of the saphenous nerve increases both inspiratory and expiratory activity. Carbon dioxide administration causes both a deeper inspiration and a more complete expiration. Sodium carbonate apnea may occur at the normal expiratory volume or above it depending upon the relative dominance of inspiratory or expiratory activity. Low oxygen administration results in an augmentation of inspiration but a less complete emptying of the lungs

on expiration. Cyanide acts similarly, except that in cases where the hyperpnea is extreme there may be a second phase of expiratory augmentation, due probably to inspiratory fatigue. Hemorrhage results in an increased expiratory lung volume possibly due simply to the decrease in volume of thoracic and abdominal contents." 6 references.

J. C. M. C.

G. H. CAIGER: *The Role of the Epiglottis in Anesthetic Deaths*. J. Laryngol. & Otol. **57**: 250-263 (May) 1942.

The author cites several cases taken from his own experience and from the literature of severe respiratory obstruction caused by an impaction of the epiglottis in the larynx. The condition is thought to be due to a combination of the factors of muscular relaxation of the tongue and posterior inclination of the epiglottis. The relaxation of muscles allows this tipping backward of the epiglottis which is further aggravated by the downward force of air passing from the wide laryngo-pharynx into the narrower glottis. This may result in the unat-

tached part of the epiglottis being sucked through the glottis. There may also be anatomical variations in the epiglottis which make impaction more likely; the fact that impaction occurred twice in one patient would seem to bear this out.

Obstruction by the epiglottis may occur with no symptoms other than the cessation of respiration. The author's treatment consists in opening the mouth with a gag and drawing the tongue well forward. The forefinger is then used for release of impaction by sliding it under the epiglottis from the side. The anatomy and physiology of the epiglottis were reviewed in this article.

It is believed by the author that many cases are missed because the condition is not looked for. Also, impaction is frequently relieved by the routine measures used for the relief of obstruction such as traction on the tongue, and artificial respiration. Possibly unexplained deaths in the operating room could have been prevented if this condition had been thought of. It is not looked for at autopsy and, furthermore, postmortem changes may alter the structural relationships.

N. B.