EYE, EAR, NOSE AND THROAT

SUSPENSION AS I USE IT TODAY*

By R. C. LYNCH, M.D.,
New Orleans, La.

Suspension as I use it today differs so decidedly from that presented to you two years ago that I thought at this combined meeting would be a good opportunity to correct some statements made previously and to bring to you that technique which has stood the test of time and proven so satisfactory as to be practically fixed. There is still room for improvement, however, and you may be asked to consider new principles in the future. Like all mechanical problems which start with an elaborate equipment and technique, progress is along the line of simplification, and so it is with suspension. This seems to have been brought about by the adoption of a new position which is simple and easy to acquire.

As I proceed now, the patient lies flat upon the table with the head extended, the crane is attached as far back on the table as is possible, allowing only sufficient room to turn the handle which moves it horizontally, the verticle position of the crane will now be on a line with the patient's shoulders. The mouth is opened wide by placing an ordinary mouth gag in the left angle of the mouth, and this is steadied by the assistant who has only to keep the head extended in the middle line, there being no need of support, since the head is resting on the table. The hook is the same in its every detail as presented to you before and we have done away with the long tooth plates and dental spoons. The gag of the hook instead of being closed is now introduced sufficiently open to permit a view of the tip of the spatula.

Instead of passing the spatula along the post-pharyngeal wall, I now follow down along the base of the tongue until the epiglottis is seen; then it is lifted with the spatula just as one does in bronchoscopy, and by this time the short tooth plates

will fall behind the teeth, when the gag is opened wide to fix the tongue and epiglottis. Now the hook is placed upon the crane and the worm gear joint turned to bend the hook slightly to an obtuse angle. The crane is lifted in the vertical to flatten the base of the tongue and this will raise the epiglottis so that the larynx will come into view. If the view in this position is not already sufficient, then by moving the horizontal crane toward the head of the table will bring the anterior commissure into view far better and much more easily than the old method.

This differs from the older technique in that the head is flat upon the table and any untrained assistant can hold it steady and the patient is not dragged over the top of the table as before, and the mouth is wide open with a gag, giving plenty of room for the introduction. There is no necessity for the table to be cut as has been described nor for the projecting platform, since the crane is attached far back on the table behind the patient rather than ahead of him. There is no danger of dropping the patient from the crane or from the spatula since the head is not lifted from the table, or, if so, just enough to procure sufficient tension to flatten the tongue.

The spatula will not dig now into the post-pharyngeal wall as it did before because the tip is always in view; the epiglottis will not fold in front of the tip of the spatula since it is seen and picked up by the tip as in bronchoscopy. There is practically no pressure upon the teeth and therefore no need for the dental spoons or modeling compound, and to be rid of these is a source of relief, because they were often hard to introduce after anesthesia had been induced and hard to remove at the completion of the operation. Pieces of the compound have been chipped off and while I did not lose any, this is a possibility. In selected cases a small piece of lead bent to suit the case and only sufficient to cover the biting edge can be used, this protection seems to be all that is necessary now. Armed with the long tooth plates and the dental spoon, the spatula was hard to introduce and under

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the extra-tension made necessary by the short lever, the view seemed hard to acquire and the tooth plate would bend sufficiently to throw the spatula out of line. The short tooth plates are used because the fulcrum is further without the mouth, making the view far better with less tension. There is no need for the occipital strap to relieve the outward pull on the upper jaw and it would seem impossible to fracture the alveolus in this position, as I reported to you while working in the old way. The view is much more natural and if anything clearer and less distorted, since there is much less tension at the region of the hyoid bone and at the base of the tongue. The vocal cords instead of being stretched antero-posteriorly are now more relaxed as shown by the respiratory movements under ether, and by the tones emitted under cocaine. This, of course, permits of more accurate dissection, especially when removing the small tumors such as vocal nodules. One looks now down the spatula along the line of the trachea and can usually see the bifurcation as is shown by the possibility of introducing a bronchoscope deep into either bronchus.

In the old way, one looked from below up along the spatula and it was impossible to get the bronchoscope further down than the fourth ring of the trachea. Consequently, in this new position there is really no need for a table that can be elevated, though it is always a comfort for any operative procedure. Finally, the patient will complain much less of after-pain about the angles of the jaw, back of the neck and of headache. There is much less danger of pinching the tongue between the spatula and the teeth of the lower jaw, and it is much easier, more rapid, and more accurate to introduce in this way than the old way.

As an appendix to this, may I report two interesting situations met with during the last two years? First, the papilloma cases number thirty-seven with five recurrences. In three the recurrences followed upon some definite inflammatory state in the larynx, one after whooping

cough, one after grippe and pneumonia, one after scarlet fever and the other two without reason. One of these yielded after seven sittings with dissection and fulguration; the last was operated upon twenty-one times. This is the case of the little boy in whom the papilloma seemed to invade the deeper structures. This boy is now talking clearly and breathing well after combined dissection and fulguration.

The other condition resembled the same pathology as occurs in rectal tags from hemorrhages. This young girl had a severe whooping cough which lasted for about six months. Following the subsidence of the cough, an increasing dyspnea was noted. This progressed to such an extent that sleep was almost impossible and the dyspnea was marked during the waking hours. Examination with the mirror resembled a condition as seen in a marked tuberculous laryngitis, but without ulceration and the tissue seemed thoroughly organized and there was no pain upon swallowing. Under suspension it was plain to see the cause of the dyspnea. Over each arytenoid cartilage there appeared a round smooth mass covered with normal mucous membrane. Apparently continuous with that overlying the arytenoid and having this aspect for a rather broad thin pedicle. On inspiration, these hemorrhoidal tags would be pulled into the larynx, producing almost complete obstruction. On expiration they would flap over either side of the mouth of the esophagus. By holding them away with the forceps or spatula, respiration would be free and comfortable. The interior of the larynx and the ventricular bands were perfectly normal.

I dissected these masses away, putting four sutures of catgut on each side. Relief was instantaneous; healing was complete in five days; and recovery has been complete. It would have been extremely difficult to accomplish the same end by any other means than suspension.