ROGERS (W.B.)

Laryngo-Tracheotomy
for foreign body.

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Laryngo-Tracheotomy for Foreign Body.

A CLINICAL LECTURE PRESENTING TWO CASES.

OPERATIONS SUCCESSFUL.

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Case 1. A boy, 8 years of age, four days ago, running in an old field, fell, and, as he went forward made a strong inspiratory effort, that carried a cockleburr into his windpipe. Such is the story of this boy I present you today. He is of average intelligence, and describes in so straightforward a way the circumstances of the accident that the truth of his statement can hardly be questioned. He felt the burr brush off the bush into his mouth as he fell, and "sucked it into his windpipe." A violent fit of coughing immediately took place, and ever since (now for four days) he has kept up an almost continuous cough, not violent, but harassing. He, as you notice, cannot speak above a whisper. Compressing gently the larynx from side to side causes "something to stick," as he says, and at once provokes coughing. There is much difficulty in swallowing, because every movement of pressure on the larynx causes pain. He was in perfect health up to the very moment he describes the fall and entrance of the burr to the larynx; and even now presents no constitutional signs of diphtheria or croup, in the larynx. I attempted a laryngoscopical examination, but he resisted so that I had to desist; and I bring him before you for the purpose of incising the windpipe in search of the burr.

Cockleburr in the windpipe, strange as it may sound, does not appear to be of rare occurrence. I have on three occasions operated for this accident, and each time found the little offender in the larynx. It would seem that the sharp prongs prevent its getting down as far as the trachea. In each case the whispering voice, pricking sensation on lateral compression of the larynx, a slight irresistible cough, very like an effort not to cough, were present; so that in this case I rather expect to find the burr in the larynx. You will, however, frequently find this whispering voice present when the foreign body is in the trachea.

In this case auscultation reveals an irritated condition of the bronchial mucous membrane; rales are abundant over both lungs; there is a hypersecretion of mucus; but, I hope, not yet an inflammatory condition — perhaps that just preceding a bronchitis; I say this because of absence of fever, which would in all likelihood be present if inflammation were present, and as extensive as the rales in this case would indicate.

Chloroform anesthesia is to be preferred to ether in these cases, because the latter tends more to increase the already present bronchial irritation, threatening bronchitis; and while anesthesia is being produced, and the field of operation cleansed, let me say a few words to you on laryngotomy and tracheotomy.

Laryngotomy is opening the windpipe above the cricoid cartilage; tracheotomy opens it below that ring. Laryngo-tracheotomy opens by continuous incision both larynx and trachea; hence cuts the cricoid cartilage and one or more rings of the trachea. These openings into the windpipe are made to prevent asphyxia in diseased conditions, causing obstruction in the larynx and about the upper opening in the larynx, such as diphtheria or croup, œdema of the glottis, tumors and malignant growths, as well as for removal of foreign bodies. Tracheotomy may be done *below* the isthmus of the thyroid body (which lies across the trachea at its upper part; in children, as high almost as first ring; in adults, covering the second and third rings); or the opening may be made *above* the isthmus. Below the isthmus the operation is exceedingly difficult, and especially dangerous in children; and, when the

opening is made, presents few (I doubt if any) advantages over the higher operation. Laryngo-tracheotomy is the operation I usually make, because there you can enter the air tube by an incision long enough for all practical instrumental purposes without endangering either the thyroid isthmus below or the integrity of vocal apparatus above. If in diphtheritic obstruction you find the membrane has reached below your laryngo-tracheotomy, you may rest assured a lower opening would have done no more good; and when searching for foreign bodies, you can do as well through this opening as *below* the thyroid isthmus, except it might be in exceeding rare instances of lodgment of coin, etc., just within one of the primitive bronchi.

Operation. Shoulders were well raised by pillow placed high at the back, head extended by anesthetist drawing chin firmly up, and keeping same well in the median line; hands and arms secured to side by towel pinned around body and arms; table so turned that class could have unobstructed view of each step in the operation; assistant was placed at patient's head, beside the anesthetist; the cricoid cartilage was first located, then an incision was made, directly in the median line, one and a half inches long, its center directly over cricoid cartilage; there was no adipose tissue, and a few light touches of the knife exposed the parallel muscles; these were separated, and with handle of the knife and blunt hook the air tube was laid bare; only one transverse-communicating vein was cut, and this between compression forceps; so that the operation thus far was almost bloodless. The cartilaginous ring (cricoid) was seized with tenaculum, steadied, and the incision made, including the crico-thyroid membrane, cricoid and upper ring of trachea. The edges of tracheal opening were held apart with tenacula, and probe passed upward into the larynx, when foreign body was felt. A No. 6 gum bougie was entered and passed upward, dislodging the burr into the pharynx, where the left index finger, introduced through the mouth, endeavored to secure it. Just here the child struggled and swallowed the burr in a mass of mucus then in the pharynx. One suture of silk gut was placed deeply in the lower angle of the incision; a pad of borated gauze was placed over the

wound, and patient removed to warm room. (Oil administered that night brought away the burr from the bowel next morning. The child had pronounced bronchitis for several days, but made an excellent recovery.)

You have just witnessed the opening of the windpipe under, I may say, very favorable circumstances; but let me caution you that such is not always an easy procedure. Look again on the picture just presented you. A clear, balmy day, well-placed sunlight to guide your every step; every preparation deliberately made; competent trained assistants at the operator's elbow; the patient nicely under chloroform, breathing regularly, almost normally; a rather long neck for an eight-year-old child; no adipose tissue on the neck; anatomical landmarks all standing out, and plainly readable throughout each stage of the operation; a few rapid strokes of the knife, and the windpipe is opened; no hemorrhage, no asphyxia, no haste, no excitement,—all so easily done.

But now look you on this: 'Tis past the mid-hour of a cold, damp night; the little sufferer is just two years old, a bright-eyed, short-necked, chubby little fellow; two days' and nights' obstructed respiration, so increased, that tonight the family physician advises tracheotomy—shifts the responsibility to the surgeon, and promises that as the only means by which the child may be saved; the surgeon arrived, hesitates, because he sees it's *long past "too late;"* but the imploring eye of the little sufferer, with blue, whispering lips gasping and straining for breath, is too much to resist; he proceeds hurriedly to give the only chance for life, and which his experience has told him is but the shadow of a chance's ghost; the room and bed show the terrible struggle between life and disease, that has been waged for hours past; no anesthesia, the child is already cyanosed, and almost asphyxiated; the attending physician holds the little one's head on his knee, the body rests across a pillow on a disheveled bed, while the father, head bowed in submission and grief, holds the struggling child's feet; a neighbor, with head turned away, holds a smoky, dimly-burning lamp; a pocket-case has furnished a bistoury, a tenaculum, a needle and thread; an incision through a thick layer of adipose tissue, and every vein strutting keeps the

wound flooded with black blood; all landmarks are hidden to even the most practiced eye; there's no time for sponging, for waiting; no means for controlling hemorrhage; the finger is the only guide; rapidly through the blood-flooded wound the knife must find its way to the trachea; it is opened; there is a rush of blood into the windpipe; a strangling, struggling child fast asphyxiating, is suddenly suspended head down, while the blood flows from out the windpipe; artificial respiration brings pink slowly back to replace the blue-black lips; the child becomes conscious, and by smiles recognizes, and with those appealing eyes and dumb lips thanks the one who has snatched away the clasping hand of death. But alas! a few brief hours and death is once more at the throat, and claims his victim.

I tell you, you will meet with no more responsible position — no more trying ordeal — than tracheotomy under such circumstances.

Case 2. (At St. Joseph's Hospital January 27—section of class present.) "Child, 13 months old, in perfect health, crawling on the floor where corn is scattered, suddenly taken with a fit of coughing, and almost chokes to death." Such is the story of the mother of this babe. Twenty-two days have passed since this occurred, during all of which time a cough has been continuously kept up, with hoarseness. You hear now a whispering effort at crying. Laryngoscopy in so young a child is hardly practicable; but I find no pharyngeal deposit nor cervical lymphatic enlargements. Auscultation detects abundant rales over both lungs, and the child's temperature is 100½°. Although no one saw the grain of corn put into the child's mouth, the circumstantial evidence is strong; and corroborated, as it is, by absence of diphtheritic obstruction, I propose to do laryngo-tracheotomy in search of a grain of corn.

Operation. The child could not lie on the back, but breathed more freely on abdomen; so, in a semi-prone position, chloroform was administered, with the happiest effect; respiration became even and regular, and cough ceased. An incision one and three-fourth inches long through half-inch of fat exposed

the parallel muscles; they were separated, and with blunt hooks the tracheo-laryngeal junction was exposed. There was no bleeding; so the windpipe was opened, as in Case 1. A probe passed upward failed to detect any foreign body, and so downward for three inches; but there was much coughing produced. A pair of delicate forceps were passed about two inches down the trachea, and blades separated; a violent coughing effort came on, and the forceps on being closed were felt to contain something; they were quickly withdrawn, bringing in their bite a grain of corn, slightly swollen and softened by the heat and moisture. The wound was left open, covered by gauze. Child had three days of sharp bronchitis, but rapidly grew better, and returned home on ninth day.