

and cod liver oil, with valerian as an anti-spasmodic as long as needed. But rickets, common enough in the old world, is rare among the well-fed, shall I say over-fed, children of the new. Next, after the alimentary canal and such constitutional affection as rickets, head lesions may be suspected near the origin of the pneumogastric nerve.

Having, on the other hand, excluded laryngismus, one element in the problem is eliminated. It remains to distinguish the inflammatory affections. Is it false or true croup? Is it catarrhal or pseudo-membranous laryngitis? Here we have the semblance of spasm too. This, however, is only true in the sense that every cough is spasmodic action. It has been said that there is a constant spasmodic condition of the glottis with exacerbations at intervals. This is all wrong. There is the very opposite of spasm, namely, paralysis, producing the dyspnoea with coughing exacerbations. Animals whose pneumogastric nerves have been cut, and in whom by consequence there has been produced traumatic paralysis of the glottis, die with the exact dyspnoea of croup. This difference between the lumen of the glottis in the adult and child is to be borne in mind. In the child the glottis is a uniformly narrow slit bordered on each side by the true and false vocal cords. In the adult the arytenoid cartilages stretch forward turning their extremities inward in ram's-horn fashion, to the centre of which the posterior ends of the true vocal cords are attached with a triangular space between. Besides, the false vocal cords are withdrawn from the median line, giving a triangular cavity for respiration and the play of the cords. In the child, in any laryngitis, we have then an element of paralysis, for a very moderate inflammation of mucous membrane and subjacent tissue will interfere with the free action of the crico-arytenoid muscles which withdraw the cords and so open the glottis. When there is membranous obstruction of larynx we have greater obstruction from both the exudation itself and the greater attendant swelling, and hence both inspiration and expiration are impeded. When from simple paralysis only, such as is present even in catarrhal laryngitis, inspiration is more impeded than expiration. This we have drawn from pathologico-anatomical considerations. In the milder inflammatory affection, then, having a small amount of laryngeal secretion and the child more quiet, we are apt to have

prolonged sleep with accumulation and drying of the secretion in the larynx. This will occur most at night when the child has slept for some time. Hence the family alarm in the night, and our being summoned most commonly at night in false croup cases. Hence, too, with the dislodgement of the dried mass, relief has come before the doctor. The child has raised the mass to the entrance of the œsophagus and swallowed it. Children seldom expectorate. In cases of true croup there is less likely to have been such a remission as to have allowed much dry accumulation. The disease has been more continuous; while, in false croup, when the secretion is cleared away, the child seems almost well. When a child is reported to have had six, eight, or a dozen attacks, we are about safe in considering them false. These repeated attacks have left a chronic laryngeal catarrh, with predisposition to acute exacerbations, in one of which we are summoned. In a child then who has had several such attacks, they are probably of the catarrhal variety, and for the reason assigned. Hence the reputed efficacy of emetics, which by the acts of swallowing and vomiting in that neighborhood of the larynx, the œsophagus, and by the frequent and forcible opening and closing of the epiglottis, in the acts of emesis, have dislodged the dry and adherent secretion. Hence, too, our practical direction to have the child awakened every two hours, for two succeeding nights, and let it cough and drink. It is better to do this than to have more violent attacks of extreme dyspnoea, threatened asphyxia, and a doctor called out of bed.

When the child is old enough the laryngoscope should be used. This is advisable in distinguishing between the inflammatory affections. It is unnecessary in distinguishing between the simply and purely spastic and the inflammatory; in other words, in excluding the latter. Using the laryngoscope is seldom practicable, and so we proceed without it. If we have succeeded in its use we have found either (1) a catarrhal condition of the mucous membrane of the larynx, with or without catarrhal ulceration; or (2) a higher grade of inflammation with pseudo-membrane about to appear or actually present. Even in young children inspection of the fauces is to be employed. In the gagging of children caused by inspecting the throat I have several times seen the epiglottis. The chance of doing this depends upon the size