

Combined with the internal administration of *ol. jecoris*, I have lately kept two children constantly in a mild camphor-atmosphere, by suspending from their necks bits of camphor loosely tied up in a rag. Both children recovered; whether this camphor-atmosphere contributed any thing thereto, more extensive trials may determine.

(b.) *Paralysis Glottidis*.—Paralysis of the glottis is a rare affection. This may appear remarkable, since tumors grow so frequently about the neck, and are liable to exercise pressure upon the vagus and recurrent laryngeal nerves, and thus produce paralysis of the laryngeal muscles. In vivisections after division of the recurrent laryngeal nerves, the glottis is seen neither to dilate during inspiration nor to contract during expiration; but in a very deep inspiration it mechanically becomes narrowed or closed, as the strong current of air gives to the chordæ vocales the form of two segments of a wheel, and their borders are thereby made to approximate, or even to touch each other, and thus be converted into valves. Paralysis of the glottis, resulting from disease of the central nervous system, is observed in most of the dying, and in very rare instances may also be caused by tumors, by large tubercles, or by carcinoma, existing at the base of the brain, a long time before death. Peripheral paralysis of the glottis originates through pressure upon the cervical portion of the pneumogastric, or upon the recurrent laryngeal nerve, which alone, according to the united investigations of *Volkmann*, *Longet*, etc., may give rise to dilatation, as well as to closure of the glottis. The pressure, as a rule, is caused by scrofulous enlargement of the lymphatic glands, lying in the course of the vagus, in which, at the autopsy, this and the recurrent nerves are found embedded and flattened. This fact furnishes a means of explaining the violent paroxysms of dyspnoea that sometimes occur in scrofulous children, in whom the external glandular swellings are often so insignificant that a dyspnoea, induced by their pressure directly, is altogether out of the question.

**Symptoms.**—The principal symptom is an uninterrupted, labored, rattling respiration, which, at every deep inspiration induced by crying, laughing, and strong exertions, terminates in a paroxysm of cough.

The respiratory sound is as loud as in croup, but is distinguished from croupy breathing by the less shrill and more rattling tone, and, in addition, by the ordinarily very slight dyspnoea, which, however, during the cough-paroxysms becomes more marked, and is often aggravated into an orthopnoea. This condition is always chronic, and, when no other afflictions are accidentally present, not attended by

fever. The voice here is rough, hoarse, and even complete aphonia may exist.

The duration of this affection cannot be foretold. On one occasion I saw it disappear spontaneously, although the glandular swelling visibly increased in size. It is presumed that a softening or absorption of the deeper portions of the gland took place, and thus relieved the pressure. Generally, the prognosis is unfavorable, a diffused bronchitis soon supervenes, and not unfrequently pulmonary tuberculosis, which in a short time carry off the patient.

**Treatment.**—As scrofula is almost always at the bottom of this affection, an antiscrofulous treatment will, therefore, be absolutely indicated. Cod-liver oil is decidedly the best remedy for it; locally, painting with iodine, repeated two or three times every week, most rapidly effects a diminution of the glands. If, in this manner, we do not succeed in removing or at least in mitigating the evil in from eight to fourteen days, it will be absolutely necessary to extirpate the affected glands. The effects which the hypertrophied glands produce show conclusively that they extend deeply down, and this operation should, therefore, only be undertaken by a skilful operator, well versed in the anatomy of the parts.

#### C.—THYROID GLAND.

If we exclude the extraordinarily rare thyroiditis inflammatoria, and traumatica, which may occur as the effects of external injuries, such as from throttling, contusion, etc., there will only remain for consideration the various kinds of hypertrophy of the thyroid gland.

**STRUMA.**—By struma we understand all kinds of enlargement of the thyroid gland. Sometimes the increase in size is only transient; generally, however, it is permanent, and constantly progresses. Either the whole gland hypertrophies, or only a single lobe or a small section of a lobe, and the symptoms of compression vary according to the direction in which the enlargement progresses. When the gland enlarges outwardly and anteriorly, the integument covering it will become gradually distended, and, with the exception of the unsightly disfigurement, no further disturbance of the functions of the adjacent organs will ensue. But if it becomes enlarged backwardly and laterally, the sterno-cleido-mastoidei muscle and the large vessels and nerves of the neck will be displaced, and manifold disturbances of the circulation and innervation supervene. With these, serious embarrassments of deglutition and of respiration become associated. When, for example, and fortunately very rarely, it happens that the strumous gland surrounds the oesophagus and trachea like a

ring, the symptoms assume a very serious aspect; and when the lower border of the gland enlarges in length, growing downward beneath the manubrium sterni, it hypertrophies in every direction.

The enlargement of the gland takes place in two ways. Either the granules or cells of the normal gland become developed in greater numbers, and thus produce a perfectly normal glandular substance, but hypertrophied in volume (*struma lymphatica*), or a few thyroideal granules become enlarged into extensive cysts, which even in children a few years old may attain to a diameter of one inch and more (*struma cystica*). The contents of these cysts are a semi-consistent, gluey, yellow, or brown liquid, for which the name of colloid has been invented. In goitre of children the walls of the cyst are invariably attenuated and soft, while in older individuals they are well known to be markedly thickened, and have even been found to have undergone ossification. The cystic goitre has a nodular and uneven feel; large cysts fluctuate distinctly; lymphatic goitres never display any globular distention, and have a uniform consistence in every direction.

Infants occasionally come into the world with congenital lymphatic struma, they are liable to be semi-asphyxiated, and are only with the greatest difficulty brought to life, and, even after that, they breathe loud and laboriously. This goitre of the new-born child disappears spontaneously in a remarkable manner after several weeks. Usually, however, older children, girls particularly often, are affected by it after commencing the second dentition, and here the lymphatic struma is as frequently met with as the cystic. In children the above-mentioned serious symptoms from displacement of and pressure upon the organs of the neck, and of compression of the trachea beneath the sternum, are, on the whole, extremely rare; usually medical assistance is only sought on account of the unsightly appearance.

**Treatment.**—Surgical interference, on account of the dangers attending upon the extirpation of goitres, and even upon simple punctures and injection of the cysts, is only admissible when the symptoms are of the most urgent kind; no operative procedure should be undertaken solely on account of the disfigurement. Lymphatic struma uniformly disappears under the external use of iodine repeated six to twelve times, at from three to six days' intervals. Cystic goitre does not disappear under this treatment, but becomes visibly smaller, or at any rate does not grow larger, so that, with the increasing size of the body, the deformity becomes less striking. Tincture of iodine acts remarkably quick and surer than the compound iodine ointment, and on that account I never use the latter.

## D.—THYMUS GLAND.

As the anatomy and physiology of the thymus gland have already been discussed on page 3, there only remain to be mentioned the few pathological appearances which in rare instances occur in it.

As regards *asthma thymicum*, it has already been stated, in the section on *spasmus glottidis*, that the size and position of the thymus gland probably have no influence whatever upon the spasms of the glottis, for in many autopsies the gland has often been found large, and then again small. But the name *asthma thymicum Koppii* is doubly incorrect: (1), because the thymus has nothing to do with the asthma; and (2), because long before *Kopp*, who published his work in 1829, the greatest authorities, such as *Morgagni*, *P. Frank*, *Allan Burns*, etc., sought to establish the view that the thymus may produce suffocative attacks.

In new-born and in still-born children *F. Weber* found small hæmorrhages into the parenchyma of the thymus. They have been observed singly and in multitudes, associated with intense hyperæmia of the entire organ, and generally do not attain to a size larger than a pin's head. Usually ecchymoses are also found in the other organs. *Weber* attributes all these extravasations to the act of delivery *per se*, and states that they are only absent in rare cases, as, for example, where a small child was delivered from a large pelvis dead, from any cause which could not be ascribed to the circumstances of pressure.

Tuberculosis of the gland not infrequently occurs; and even the large genuine tuberculous masses, which generally have their site in the bronchial glands, have been seen in the thymus gland, while the former were free.

I have twice found carcinoma of the mediastinum anticum in boys five or six years old, the lungs, in both cases, being but very little implicated; the pleuræ and pericardium were also free, and therefore it appeared most probable that the disease originated from the thymus gland.

Affections of the thymus gland, with the exception of carcinoma of the mediastinum anticum, which may be detected by extensive dulness over the anterior half of the chest, and manifests itself by pressure upon the heart, large blood-vessels, and the lungs, cannot be diagnosticated; for the mere existence of dulness on percussion in the region of the sternum by no means allows a conclusion to be formed as to the state of the gland. For these anatomopathological alterations, the symptoms of which are so obscure during life as to preclude a diagnosis, no treatment, of course, can be prescribed.