

was subsequently supported by Gilbert and Mignot, in France, and Richardson and Cushing, in this country.

Mignot, after careful experiments, states that the chief factors in the production of biliary lithiasis are: (1) The presence in the gall-bladder of an attenuated organism of any variety whatever; (2) a relative inertia of the biliary reservoir, causing partial stasis and preventing the premature expulsion of soft concretions of cholesterolin.—*Johns Hopkins Hospital Bulletin*, August-September, 1899, p. 163.

**Œsophagitis and Phlegmonous Pericæso-phagitis.**—The patient was unable to swallow solid food, and even fluids caused severe pain in the upper portion of the œsophagus. By the use of the sound a stricture was detected in the upper portion of the œsophagus. It was impossible at first to pass the sound beyond the stricture. Later, by using considerable pressure, it was passed into the stomach, but at times caused great pain. Four days after entering the hospital the patient felt well and had no fever. The next night marked dyspnoea suddenly developed, and in a short time the patient was dead. In the jugulum and on both sides of the neck as high as the mastoid processes there was demonstrable emphysema of the skin. Post-mortem examination showed isolated calcified tuberculous foci in both apices. Over the last cervical vertebra there was a pus-cavity which extended into the posterior mediastinum in the region of the bifurcation. The lower portion of the œsophagus was normal. At the beginning of the œsophagus the posterior wall was thickened about 1 cm. Three cm. below the larynx there was an easily dilated stricture about 2 cm. long. The œsophageal mucous membrane was entirely normal. The submucous tissue and the musculature of the lower œsophagus were normal. One cm. below the lower border of the cricoid cartilage there was a spindle-shaped, purulent, strictly submucous infiltration,  $7\frac{1}{2}$  cm. in length. At the level of the thyroid cartilage there was a crescent-shaped, dirty green, gelatinous mass at the beginning of the œsophagus posteriorly. This communicated below with a suppurating cavity which extended into the posterior mediastinum. The cause of this condition is not usually clear. Often there is rupture of a peri-œsophageal abscess, a suppurating gland, cricoid perichondritis, vertebral abscess, or, especially, breaking down of cheesy lymph-glands in the outermost layers of the œsophagus. Circumscribed abscesses in the wall of the œsophagus without demonstrable local causes have been found, especially in consumptives. The author believes that the cutaneous emphysema was caused by the pressure of gas, during the severe dyspnoea, from the purulent foci into the surrounding tissues and under the skin. The fact that the sounding caused great pain and the temporary attacks of dull pain along the œsophagus, and the fact that the sound met with resistance at different distances (this being dependent on the variable filling of the abscess-cavity), could have helped in the diagnosis. The presence of a submucous abscess directly under the larynx and pushing the mucous membrane forward explains why a resistance was met 18 cm. from the teeth on the first sounding. It is remarkable that the œsophagus—which was surrounded for three-quarters of its circumference by a purulent mass—was not perforated by the numerous probings. The investigations of Zenker and v. Ziemssen throw some light on this fact. They

removed an entirely healthy œsophagus from a man killed by accident, and by attaching a weight of 5 kg. increased its length from 17 cm. to 24 cm. When a weight above 5 kg. was attached the musculature near the mucous membrane was torn, but the mucous membrane remained entirely uninjured. A weight of 10 kg. tore the mucous membrane.—HUISMANS, *Deutsche med. Wochenschrift*, 1899, No. 17.

## SURGERY.

UNDER THE CHARGE OF

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**Lesions of the Lateral Sinus.**—GANGOLPHE and PIERY (*Revue de Chirurgie*, September 10, 1899), from personal observations and the study of cases collected from the literature, arrive at the following conclusions:

1. Lesions of the lateral sinus may be produced in cases of traumatic injury of the cranium by a double mechanism; by being torn by spicules of bone or foreign bodies, and by rupture, where the fragments separate in cases of fracture.

2. These lesions of the lateral sinus give rise to the formation of clots, which collect between the dura mater and the skull. Their position and extent is determined on the one hand by the adhesion of the dura mater, and on the other by the extent to which it has been torn away by the traumatism. Frequently there coexists with this hemorrhage one into the arachnoid, a semi-fluid clot, the color of gooseberry jelly, covering that hemisphere of the brain.

3. The symptomatology of the lesions of the lateral sinus is most variable; it is far from realizing always the complete symptomatology of cerebral compression, and frequently produces, feature for feature, the picture of apoplexy from cerebral hemorrhage.

4. Not only is the diagnosis of a torn sinus almost always impossible, but frequently it does not permit one to affirm the presence of an intracranial hemorrhage from traumatism of a bloodvessel.

5. In such a case, where the diagnosis is difficult, although the only elements are an apoplectic attack and a previous traumatism, it is necessary to act as if one were assured of the presence of an intracranial hemorrhage of traumatic origin.

6. The line of action to be pursued is the following:

a. Where the sinus is exposed the wound is tamponed through the opening in the skull after any fragments have been removed.

b. If the traumatism has not exposed the sinus, trephining should be immediately done. The trephine should be placed at the point where the

traumatism took place, and not in the region indicated by cerebral localization from any symptoms. These localization symptoms have in certain cases led the authors into mistakes that have required a second trephining before the actual seat of the lesion could be attacked. When the tear has been located it is closed by a tampon of iodoform gauze.

**Rhinoplasty over a Metallic Frame.**—MARTIN (*Revue de Chirurgie*, August, 1899) says that operations on this principle are only applicable to a certain number of cases, where the bony structures as well as the flesh have been destroyed. Where these conditions exist the operation is very successful if the patient's condition is proper. This has been proved by a case in which there has been no accident or irritation since healing took place during a period of over four years. The patient's respiration has become nasal, while all irritation, which was very marked previously, has disappeared.

The conditions which the author believes to be essential to the success of the operation are:

1. Cure of the pathological process or its local manifestation, as syphilis.
2. The possibility of securing a healthy flap of sufficient size, so that immediate swelling or later retraction will not cause pressure necrosis.
3. The possibility of establishing a sufficiently solid internal layer.
4. The existence of sufficiently healthy bone upon which to fix the metallic support.

Under these conditions a good result is assured, while the method should not be blamed for poor success.

**The Partial Subcutaneous Rupture of a Flexor Tendon of the Forearm, with the Formation of a Degeneration Cyst.**—THORN (*Archiv f. klin. Chirurgie*, 1899, Band lviii., Heft 1-4) reports a case of rupture of one of the flexor tendons in the forearm, with the subsequent formation of a degeneration cyst which had all the appearances of a ganglion.

His study of this case and the available literature on the subject lead him to the following conclusions:

1. Traumatic rupture of the flexor tendons of the forearm may occur subcutaneously. In the case reported the rupture was partial; only the peripheral zone of the transverse section of the tendon was ruptured.
2. The rupture can produce degenerative and reparative changes which cannot be distinguished until after the tendon sheath has been opened. If the extravasated blood has any influence upon these processes it could not be told in the case studied, as it was examined at too late a date.
3. The reparative changes are capable of producing a complete healing.
4. The degenerative processes in the tendon stump and the surrounding cellular tissue can lead to the formation of a cyst which simulates in character a ganglion.

**Interscapulo-thoracic Amputation.**—LE CONTE (*Annals of Surgery*, September, 1899) reports a successful operation which he performed, as follows:

The incision began over the sternal end of the clavicle, and was carried to its middle, and then curved downward to the axillary fold. The skin and superficial fascia are dissected up, exposing the inner two-thirds of the

clavicle. The clavicle is then freed from its sternal and muscular attachments, and the clavicular portion of the pectoralis major is separated from the costal portion of the muscle up to the axillary fold. The clavicle is pulled upward and outward, and if the subclavicular muscle does not readily strip off its attachment to the first rib it is divided. The pectoralis minor is divided and the coracoid portion reflected upward with the clavicle. This exposes the axilla fully. The vessels are seen traversing the axilla from the anterior scalenus muscle; their sheath is opened and the vein dissected away from the underlying artery. Two ligatures are passed around the artery and tied. The arm is then held up, to empty it of blood, while two ligatures are passed around the vein, but these are not tied until the arm is bled. The vessels and brachial plexus of nerves are severed, and the costal portion of the pectoralis major.

A posterior incision is now carried from some point on the anterior incision (as near the tumor as is expedient) directly backward and downward to the inferior angle of the scapula and up to the posterior axillary fold. The skin and superficial fascia are dissected up, the trapezius severed, and the transversalis colli or posterior scapular artery secured and the muscles attached to the scapula divided; then the serratus magnus and latissimus dorsi are cut, and later the posterior axillary fold. If there is sufficient skin for flaps the skin of the axilla is cut across, otherwise a flap can be taken from the internal aspect of the arm.

This method has the following advantages: It gives the widest and fullest exposure of the vessels and decreases the accidents of ligation to a minimum. The disarticulation of the clavicle is simpler, quicker, and easier than a resection of the bone, and the danger of wounding the vessels is less, because these vessels are well protected by the sterno-hyoid and sterno-thyroid muscles. The elevation of the arm, after securing the artery and before the vein is tied, makes a practically bloodless amputation. The suprascapular and posterior scapular arteries are easily picked up before being cut. In malignant growths, where the outer end of the clavicle is involved, there is less risk of return if the entire bone, with its periosteum, is removed. It removes everything in one piece, a better surgical procedure when dealing with malignant growths.

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**The Removal of the Lymphatic Glands in the Inguinal Region and the Iliac and Obturator Vessels in One Operation.**—LENNANDER (*Centralblatt für Chirurgie*, 1899, No. 37) has described an operation which he believes is essential to any radical intervention in cases of malignant disease which tends to involve these lymphatic regions. He believes it to be indicated in case of carcinoma or sarcoma of the lymphatics in the inguinal region, on the condition that the primary tumor can be radically dealt with and where no other inoperable lymphatic involvement is present.

In the second place, it is valuable in cases of severe tubercular lymphadenitis in this region and the iliac fossa, where there is no contraindication to a severe operation.

In the latter instance the extent of the operation differs in that only diseased lymph-glands and surrounding tissue are removed. Sound tissues and fat are allowed to remain, in order that later, by the development of the

lesser lymphatics, a collateral lymph circulation can be established. The same is true in cases of operation for suppurative lymphadenitis.

The operation which the author has developed and employed commences with an incision from the symphysis pubis along Poupart's ligament to the anterior superior iliac spine, and then along the crest of the ilium for one-third or one-half its length. An incision from this over the femoral vessels gives access to the lymphatics of that region. This incision is carried through the muscles and fascia, and by retroperitoneal dissection gives access to the glands in the iliac fossa along the iliac arteries and into the true pelvis. Poupart's ligament is severed from its attachment to the pubic bone.

Drainage is provided from the iliac vessels through the posterior portion of the wound. Poupart's ligament is carefully sutured in its original position and the muscles and fascia united except where left open for drainage.

This operation does not in the least endanger the integrity of the abdominal wall, as it is entirely freed, and its bony and fascial attachments are afterward reconstructed. No motor nerves are in any way injured.

The author has employed the operation successfully in two cases. In cases of suppurating adenitis this incision cannot be carried to its full extent, since primary union of the attachment of Poupart's ligament cannot be depended on.

## PEDIATRICS.

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**The Association of Scarlatina with Diphtheria.**—CHAGADE (*Arch. russes de pathol.*, 1899, p. 208) examined bacteriologically the throats of 214 cases of scarlatina observed in the Hospital Petropavlovsk, St. Petersburg, from December, 1897, to September, 1898. Of these, 98 had a catarrhal angina, characterized by a simple redness of the mucous membrane, without false membrane; 33 had a lacunar angina, the false membrane covering only the crypts of the tonsils; and 83 showed a true pseudomembranous angina, with more or less extensive false membrane upon the tonsils and sometimes even upon the pillars of the fauces, uvula, soft palate, and posterior wall of the pharynx.

In the first group of cases cultures revealed the presence only of streptococci, sometimes associated with staphylococci, but never with bacilli of diphtheria.

In the second group the Klebs-Loeffler germ was found in only two cases, once in almost a pure culture.

In the third group the diphtheria bacillus was found in eleven instances, three times in nearly pure culture and eight times with streptococci.

The question is raised in view of the occasional presence of the Klebs-Loeffler bacillus in the throats of persons in good health, whether, in the cases in which this germ was found by Chobade, it did not exist purely accidentally, without participating in the evolution of the morbid process. This view, however, seems untenable when it is considered that several times the bacilli were found in almost pure culture, and even when associated with streptococci were always very numerous. A second argument in favor of the virulence of the bacillus in these cases lies in the fact that in the cases in which it was found the mortality was higher than in the cases in which the streptococcus alone existed: in 103 cases of the latter the mortality was 38 per cent., while of the 13 cases of angina with the diphtheria bacillus, 8, or 62 per cent., terminated in death. Another fact attesting the virulence of the bacillus was the occurrence of a fatal croup in a child, aged one year, who, with a typical scarlatina, showed a true diphtheritic pseudo-membranous angina. Finally, the author studied twenty-four cases of so-called late or secondary angina, which appeared in from twelve to forty-one days after the beginning of the scarlatina, six cases being lacunar and eighteen pseudo-membranous. The presence of the Klebs-Loeffler bacillus was proven in two cases of the first category (once in pure culture) and sixteen of the second (eleven times to the exclusion of all other microbes). He therefore holds that the secondary anginas of scarlet fever are most frequently diphtheritic in nature.

Chabade concludes that patients showing a mixed infection should be isolated from cases of pure scarlatina, and to this end he recommends the bacteriological examination of all patients showing false membrane. In accord with the practice of many others, he advises that such mixed infections be treated with the anti-diphtheritic serum.

**Intravenous Injection of Antidiphtheritic Serum in Grave Cases.**—GAGNONI (*Annales de Médecine et Chirurgie Infantiles*, August 15, 1899) reports three cases of grave diphtheritic angina complicated with croup, with symptoms of imminent suffocation, in young children, which, with the advice of Professor Sclavo, of Siena, he treated by intravenous injections of antidiphtheritic serum. The results were most satisfactory, the temperature falling to normal, stenotic symptoms disappearing with the expulsion of false membrane.

**Transmission of the Agglutinating Substance of the Eberth Bacillus through the Milk.**—COURMONT and CADE (*Lyon Medical*, September 3, 1899, p. 5) report the case of a mother who had nursed her two-months' old baby for two weeks after she was taken ill of typhoid fever. Three days after the child was taken from the breast it was found that its blood possessed the agglutinating power in a dilution of 1:10, while the mother's milk showed a positive reaction at 1:30 and her blood at 1:200. Eight days after weaning the infant's blood failed to produce the reaction. The case, therefore, serves to confirm the observations of Landouzy and Griffon and of Castaigne, and to demonstrate the possibility of transmitting to a nursing