

The extent to which such emigration may go is well shown by Stohr.⁵ A great emigration of lymphoid cells through the epithelium takes place not only in the tonsils, but also in the sebaceous glands, in the solitary and conglobate glands of the intestines, and the bronchial mucosa. The migrating cells shove themselves through between the epithelial cells; it does not appear that they enter the latter. The isolated epithelial cells appear much pressed in, and furnished with grooves, furrows, and notches; in some of the notches the lymph cells still are lying. If the migration is large the epithelium becomes so rarefied that it is pressed together into thin cords, or even becomes unrecognizable. At such spots the protecting epithelial covering is wanting, the tunica propria is freely exposed, which must be practically important; such spots Stohr designates as "physiologisch wunde." That injurious substances can act, and microorganisms penetrate, at these points more easily than elsewhere is probable. In fact, a group of small fungi sat in one preparation upon the surface of such a passage.

It is not easy to form any clear notion of the meaning of this normal and constant migration. Do the excreted elements play some rôle in digestion? Or is the object the removal of superfluous material? The migration does not appear to be connected with digestion, because numerous lymph cells are found even in starving animals. Against this view militates also the migration occurring in the vagina, bronchi, and conjunctiva. If the object is excretory it would be supposed that the migration would cease or be reduced during pregnancy and nursing. Yet in pregnant cats the migration was equal to that in the not pregnant. But in growing animals the migration is small. The author favors the excretory theory, but reserves decision for further research. Often the migrating cells appear to be disintegrating; it is possible that old, used-up lymph cells are thus removed. The structures considered are not to be confused with lymph glands proper.

How surprisingly large the intercellular spaces may become in epithelia has been demonstrated by Mitrophanow,⁶ who has pointed out that the cells contract upon mechanical irritation, and in so doing magnify the spaces about them. The spaces are directly continuous with the lymphatic system, of which they constitute the ultimate rootlets.

From the sum of all the researches on this subject we gather for the first time an intelligible notion of the mechanism of absorption through epithelial surfaces. The lymphoid cells in the epithelial membranes seize the particles and pass with their prey directly into the lymphatics.

HISTOLOGY OF THE MAMMALIAN OVARY.

In an important article, W. Harz describes the cords of cells mentioned by various authors in the ovaries of some mammalia. The cords or canals grow out from the segmental canals of the Wolffian body into the ovary and toward the primitive ova; they must be considered homologous with the canals of like origin in the testis, a homology already established by Braun in the case of reptiles⁷. These

cords are developed to various extents in different species: they are wanting in man and the pig; they are found only in the hilus (sheep), or they may in bulk form the principal part of the ovary (Guinea-pigs, hare, *Cebus capucinus*, and horse), or they may be only the predominant tissue, as in the cat, cow, and Hapale. The cells of these cords find no analogy in other tissues, although they recall the liver cells in appearance. They take no part either in the formation of the granulosa layer around the ovum nor of the corpora lutea.

The ova arise in the epithelium and are overgrown by the neighboring epithelial cells, so that the ova are pushed down into the stroma of the ovary. The ova are not separated from the epithelium by the connective tissue growing in and forcing them apart, as Foulis has maintained. The immigration of ova continues until the tunica albuginea is formed; it is probable that this layer opposes an obstacle to the process. The oldest ova are found farthest from, the youngest nearest, the mesovarium, and the albuginea also develops last near the hilus. The granulosa is probably formed from cells of the stroma; it is certain that each *Urei* leaves the germinal epithelium without being accompanied by any other epithelial cells, such as have hitherto been generally believed to form the ovic envelope.⁸

NERVE TERMINATIONS IN THE HEART.

Openchowski, in a short article, gives a brief résumé of the numerous writings upon the nerves and ganglia of the vertebrate heart. He then reports his own researches, the most important points of which are: (1) In the heart of the frog, newt, and lizard throughout the muscles are very abundant nerve branches; (2) the medullated fibres of the vagi reach the "grundplexus" described by Gerlach, and there lose their sheaths at various heights; they accompany the Remak's fibres, but do not anastomose with them. The existence of the perimyscular net *auct.* cannot be maintained; (3) from the grundplexus the terminal fibres run directly to the muscles, where they end with little enlargements or terminal knots (Ranvier's "taches motrices"); (4) each muscle cell receives a knot; the nucleus of the cell has nothing to do with the nerve termination. Hence the heart, in respect of its innervation, may be regarded as composed of smooth muscles.⁹

New Instruments.

THOMAS'S ANTEFLEXION PESSARY.

BY W. H. BAKER, M.D.

THIS instrument, which is the most efficient one for the majority of cases of antelexion of the uterus with which I am familiar, has sometimes annoyed me in two ways, namely, in a certain class of cases where there exists a shallow vagina; that is, where the vertical diameter of the vagina is very small there is a great liability of the joint or hinge cutting into the posterior wall of the vagina, on account of the irregular and somewhat unfinished end of such joint (see Fig. 1). In another class of cases the movable arm does not increase the

⁵ Sitzungsber Würzburg Phys.-med. Ges., 1883.

⁶ Zeitsch. wiss. Zoölogie, 1885.

⁷ Semper's Arbeiten, iv.

⁸ Arch. mikros. anat., xxii. 374.

⁹ Arch. mikros. anat., xxii. 408.

power, as is necessary in keeping the body of the uterus high enough to give the required relief.

To obviate these difficulties I have modified the instrument, which Messrs. Codman and Shurtleff have had made, so that the first objection is met by the joint itself becoming a part of the posterior

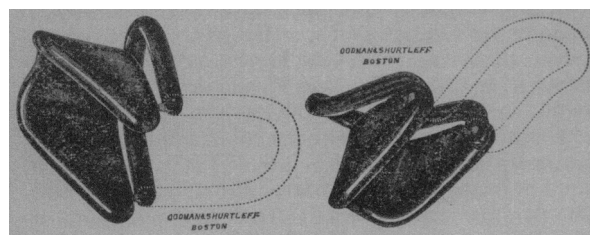


Fig. 1.

Fig. 2.

angle and finished regularly and smoothly with it, thus doing away entirely with the metal pin which supported the joint (see Fig. 2). The second difficulty is not only overcome, but the instrument made much more efficient by making the movable arm after the pattern of the lower part of an ordinary Albert Smith retroversion pessary.

Reports of Societies.

OHIO STATE MEDICAL SOCIETY.

ANNUAL meeting held at Dayton, June 3, 4, and 5, 1885.

DR. C. D. PALMER, of Cincinnati, Professor of Gynæcology, Medical College of Ohio, read a paper on

A RARE COMPLICATION AFTER OVARIOTOMY.

A young, delicate, unmarried woman, aged twenty-two, for three and a half years had an abdominal tumor. For this she consulted a number of physicians in succession, and was tapped, the diagnosis being ascites, eight different times. Her last attendant, Dr. John Kellar, suspecting that she was not suffering from ascites, asked Dr. Palmer to see the case with him. He diagnosed a unilocular ovarian cyst, which was confirmed by the operation. On the twelfth day a fecal fistula formed. This communicated inwardly with the lower small intestine, and the external opening presented midway between the umbilicus and symphysis pubis. At first it discharged several ounces of fecal matter daily. This has diminished gradually, until now, three months after the operation, it is only two to three drachms, and patient is steadily improving. Treatment has consisted only of diet and firm compress. Essayist thought that this fistula was caused by softening from the peritonitis. Spencer Wells found only one fecal fistula in his 1,000 published ovariectomies. Essayist wonders that such perforations, also lacerations, do not occur more frequently. He cited several cases gleaned from the literature. Considering the facts, he suggested the possibility that lacerations and perforations are of more frequent occurrence than supposed.

DR. WM. MILLIKIN, of Hamilton, Lecturer on Medical Jurisprudence and Hygiene, Miami Medical College, read on

EMPHYEMA: ITS TREATMENT BY DAILY ASPIRATION THROUGH THE DRAINAGE-TUBE.

His plan was to make one small opening into the pleural cavity, and daily withdraw the accumulated pus by means of the aspirator. He injected then an amount of antiseptic fluid somewhat smaller than that he had withdrawn, giving the patient a feeling of discomfort for perhaps one hour. This he considered a movement cure. It gradually expanded the other well lung, contracted the chest, and allowed displacement of the mediastinal space toward the affected lung, thus giving the other more room for expansion. He claimed one hole in a man's chest to be better than two; a small one better than a large one; that free drainage would not draw pus out of a pocket, which the aspirator would. He reported two cases where he had used this plan quite successfully.

In the discussion which followed, DR. P. S. CONNOR, of Cincinnati, thought both plans would fail; sometimes the one, then the other.

DR. JOSEPH RANSOHOFF, of Cincinnati, had discarded the aspirator in empyema. Early free incision, he thought, would save most cases. He reported a case of his where a drainage-tube was lost in the pleural cavity for fifteen days. Recovery of both tube and patient.

DR. KINGMAN, of Columbus, spoke in favor of free incisions for empyema. They should be made as soon as fluid is known to be purulent.

WM. T. CORBETT, M.D., L.R.C.P., London, Professor of Dermatology in the Wooster University, Cleveland, Ohio, read on

DISEASES OF THE SKIN OF REFLEX NERVOUS CAUSATION.

He spoke of two distinct varieties of neurosis cutanea, one the senso-neurosis, in which the characteristic symptom is a disturbance of the sensation unaccompanied by any visible lesion. The second variety is the tropho-neurosis, which is characterized by anomalies of nutrition. Pruritus is a representative senso-neurosis and is a disease *sui generis* and not a mere accompaniment of cutaneous inflammation. Pruritus of the palms and soles is usually met with in females having some mild ailment of the uterus of long standing. Pruritis of the scalp, at times accompanied with a sense of weight, is met most frequently in women having a subinvolved uterus or a ruptured perinæum. Pruritis vulvæ unaccompanied by a vaginal discharge is a symptom of pregnancy; less frequently it precedes each menstrual flow. Adult males subject to constipation suffer severely from pruritis in the genito-anal region.

The reader then reported six interesting cases in a complete manner. In conclusion, he said:—

The most marked tropho-neuroses coming under his observation have closely simulated eczema. Unlike eczema, the eruption whether papular, vesicular, or squamous remains as such throughout its entire course.

Derangements of the sebaceous glands have been spoken of previously in this connection. Next to the eczematous group they are the most frequent.

Senso-neuroses, *cæteris paribus*, are more fre-