SEPT. 25th—DEADLINE

We did not win nor did we place. There are but 23 Freshmen, three more than in last year's class of 20 which has grown to be a class of 26 Sophomores. 63 Juniors, 47 Seniors and 1 post graduate make a total enrollment of 160.

ALUMNI FOUNDATION
AND
HOME COMING PROGRAM
NOV. 16-17-18th

ANNUAL BOARD MEETING
NOVEMBER 17th
OUR HOBBY—Continued

Well, with the ringing of the school bell yesterday morning, Our Hobby observed its 24th birthday. Nearly a quarter of a century of selfless service to osteopathy and to the osteopathic profession.

Years and years of toil and love have brought Our Hobby from its insignificant beginning in the fall of 1916 to its present outstanding position as the youngest, yet not the smallest of the approved colleges.

We are glad school has reopened. It is with pleasure that we again are in the harness to lend our efforts toward making the 1939-40 session the banner year of all the twenty-four.

After three whole months of vacationing, it is pleasant to know we can apply ourselves to something more useful. Even while at vacation we were not entirely idle as concerns Our Hobby. A few weeks ago we were all thrilled at our expectation that an application for a loan to enable us to erect our Science Hall would be successful. The final result was another disappointment but one of these days we will succeed.

The agents of the company we were approaching were enthusiastic about our financial standing and felt we would meet with no obstacle. However, the matter died at the “home” office. We will just have to try and try. At the worst, in two or three years we can thumb our nose at the boys who loan (or refuse to loan) and do the job “on our own.”

Yesterday was a hard day in our office. Of the approximately two hundred students (see exact figure on front cover page), exactly 110 completed their enrollment on the first or opening day. It will be two weeks before the exact final total can be determined. Some, accepted in the Freshman class, have failed to show up for enrollment. Many upper classmen have yet to enroll. September 25th is the dead line for all classes.

At an opening assembly in Kaiser Hall, Monday morning, September 11th, more than fifty were absent. This, the second day of the session, finds all classes all running to full schedule.

A. A. KAISER, Secretary.

A SYMPOSIUM ON ENDOMETRIOSIS

(As arranged by five members of the Junior class in Surgery of the Kansas City College of Osteopathy and Surgery and presented before that class April, 1939. There is some duplication of thoughts and of words in these several contributions but they are, nevertheless, worked into a fairly comprehensive treatise of this important gynecological subject.)

The following books have been referred to freely in this preparation: Christopher, Textbook of Surgery; Cole and Elman, Textbook of General Surgery, second edition; and Curtis, Textbook of Gynecology, third edition.—Margaret Jones, D.O.)

Endometriosis designates a variety of adenomatous lesions (glandular tumors) found in the female pelvis which present histologic and functional characteristics of normal endometrium.

It is known as a disease of theories because more suggestions as to the origin of these islands of ectopic endometrium have been offered than for any other disease.

Theories of earlier authorities were that these islands were:

1. Adult remains of the Wolffian system.
2. Inclusions of Mullerian rests.
3. Influence of inflammation on the endothelial cells of the peritoneum, causing them to be transformed into cuboidal or cylindrical cells.
4. Metaplasia or effect of inflammation.
5. Implantation theory proposed by Sampson is more widely accepted than any of the earlier theories. He proved that misplaced endometrial tissue, wherever found, is a histologic structure identical with the uterine mucosa, and is governed by the same physiologic factors as the mucosa of the uterus. Uterine or tubal epithelium may escape into the peritoneal cavity during menstruation, and these regurgitated fragments spill into the pelvic cavity, lodge on the various structures, especially the ovaries, become implanted, and eventually develop into adenomatous growths that respond to the stimulus of the sex hormones, the same as normal endometrium.

These adenomatous islands may develop into hematomas filled with menstrual blood, or they may remain as small superficial red or purplish elevations on the pelvic structures. They may cause the formation of ovarian cysts which are filled with old menstrual blood, known as chocolate cysts.

The gradual increase of the contents of the cyst leads to perforation of the cyst wall, with dissemination of endometrial tissue for further implantation in the cul-de-sac, rectovaginal septum, rectum and uterine wall. Fragments of endometrium in the venous and lymphatic systems of the uterus have also been demonstrated, such as adenomyomas of the uterus and lesions far removed from the pelvis.

Sampson’s theories are still greatly discussed and not yet fully accepted by all pathologists and research workers.

—Helen Vaughn.

A. Endometriosis was suggested by Sampson to designate a variety of adenomatous lesions found in the female pelvis which present histologic and functional characteristics of normal endometrium.

B. Called a disease of theories.

C. Cullen gave first definite clue when he proved that the glandular phases of adenomas were derived from the endometrium.

D. Earlier authorities attributed them to adult remains of Wolffian system; inclusions of Mullerian rests; the influence of inflammation on the endothelial cells of the peritoneum, causing them to be transformed into cuboidal or cylindrical cells; and metaplasia, or the effect of inflammation, by which the cuboidal cells of the germinal epithelium are transformed into cylindrical epithelium which resembles mucosa.

A. A. KAISER, Secretary.
E. Sampson whose theory is more widely accepted evolved his theory after an exhaustive study of pathologic changes. The associated pathologic growths involve the pelvic cavity, lodging on the various structures (having a special predilection for the ovaries). The ovaries, although both are involved, are with little rupture is practically important in the female pelvis which present histologic and functional characteristics of normal endometrium. It may be truly called a disease of theories, for more suggestions as to the origin of these islands of ectopic endometrium have been offered than for almost any other phase of pelvic pathology (Christopher). DORLAND defines endometriosis as the presence of endometrial tissue in abnormal situations. It is called intermenstrual when endometrial tissue is found in the pelvic cavity, lodge on the peritoneum, and may eventually develop into adenomatous growths that respond to the stimulus of the sex hormones, as does normal endometrium.

G. These adenomatous islands may develop into hematomas filled with menstrual blood, or may remain as small superficial red or purplish elevations on the pelvic structures. On the other hand, the invasive tendencies may lead to deep involvement of the ovaries, causing the formation of cysts, which are filled with old menstrual blood, commonly called chocolate cysts.

H. The general increase of the ectopic endometrium often leads to perforation of the cyst wall, with a second dissemination of endometrial tissue for further implantation in the cul-de-sac, rectovaginal septum, rectum, and uterine wall.

J. Sampson's conclusions are still the subject of much controversy. R. W. Polk.

The term endometriosis was suggested by Sampson to designate a variety of adenomatous lesion as found in the female pelvis which present histologic and functional characteristics of normal endometrium. It may be truly called a disease of theories, for more suggestions as to the origin of these islands of ectopic endometrium have been offered than for almost any other phase of pelvic pathology (Christopher).

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Page One Hundred Thirty-two

Endometrial hemanomas of the ovary vary in size from minute rectional lesions, involving only the surface of the organ, to large cysts measuring several cm. in diameter. The small cysts are recognized as small or purplish bodies on the surface of the ovary, the color depending on their age and the period of the menstrual cycle. The ovaries may be affected by only one ovary, although both are usually involved. The larger growths have their origin deep within the substance of the ovary. As the adenomatous lesion responds to the ovarian stimulus, bleeding occurs and cyst formation results. Perforation eventually occurs; the irritating contents are widely disseminated in the pelvis, causing secondary transplants that have more invasive tendencies than the original epithelium.

Sampson believes that the ovary acts as a hotbed for the primary implants, and that the secondary growths possess more active properties through having become accustomed to their environment.

Whenver perforation occurs the opening is promptly sealed or walled off by adhesions, and the adhesions that result become so dense that the type is characteristic. Beneath these dense plaques an adenomatous invasion of the deeper structures of the internal wall, rectum, retrovaginal septum, and uterus may be found. It then becomes an infiltrative rather than a destructive process. Only the ovary produces the larger destructive cysts, and the adhesions about them are so dense, owing to the infiltration of the underlying tissues, that removal without rupture is practically impossible. The associated pathologic findings are important from a diagnostic standpoint. The frequent incidence of endometriosis as a complication of fibroids of the uterus is striking; nearly one half of the cases will be associated with fibroids. Retrodisplacement of the uterus and chronic pelvic inflammation rank next in frequency. Next to perforating hemorrhagic cysts of the ovary the most characteristic lesion is endometriosis or adenomatous growths of the retrovaginal septum. The growth usually presents as a diffuse nodular thickening in the vaginal vault, which it involves and fixes the cervix as well.

Cullen's classification is authoritative:

1. Small adenomyomas lying free in the peritoneal septum.
2. Adenomyomas adherent to the posterior surface of the cervix and at the same time to the anterior surface of the rectum.
3. Adenomyomas giving the cervix and rectum together and spreading out into one or both broad ligaments.
4. Adenomyomas involving the posterior surface of the cervix, the rectum and broad ligament and forming a dense pelvic mass that calcified.

Other lesions are those found in the inguinal canal, the round ligaments, the rectum and scars following laparotomy.

PIERSOL says that the most prominent characteristic of endometriosis is the presence of blood which is sometimes fresh, but more often is undergoing disintegration. In the relatively few cases in which fresh blood is found the color is red, but it is far more common to see the accumulation of repeated bleedings which develops a color from reddish brown to purple, or even black.

Physiologic response to hormonal stimulation demonstrates the close relationship to normal endometrium. Enlargement occurs at the height of menstruation, to be followed by regression, the cycle recurring periodically until the menopause. Pregnancy is accomplished by enlargement of the ectopic growth. G. E. Risberg.

**SYMPTOMS**

Endometriosis may be a slow and insidious disease. Amazing destruction may take place with few if any symptoms to point its presence. As a rule the symptoms are progressive and depend largely on the complications. Pain, usually dull and aching in character, and is localized low in the abdomen, back, and always aggravated during the menstrual period, is frequently emphasized. Acquired dysmenorrhea is very suggestive, since they form fibroid, appear in about one-half of the cases, and dyspareunia is more common than any of the other symptoms. They are generally not a single symptom. It is rather the symptom complex that aids in making a differential diagnosis, and empha-
sizes, (1) Age, between 25 and the menopause, (2) Sterility, absolute or relative, (3) Abnormal menstruation, usually menorrhagia, (4) Dysmenorrhea, (5) Dyspareunia, (6) Sacral backache (7) Intermittent lower abdominal pain with incontinence at the time of menstruation, (8) Pain in the rectum or bladder which bears a distinct relation to menstruation.

DIAGNOSIS

The majority of cases of endometriosis are not recognized before operation. The diagnosis of chronic pelvic infection or fibromyoma of the uterus associated with diseases of the appendages. Vaginal examination reveals a tender, densely adherent semi-solid or firm adnexal mass. The uterus is adherent and retrodisplaced. The only distinctive lesions are the nodular fixed masses which are palpated in the cul-de-sac. Rectal examination should always be made, as it reveals more evidence than vaginal palpation. Proctoscopic examination is made in differentiating malignancy. The rectal mucosa overlying the nodular masses is normal in endometriosis, but ragged in carcinoma. Nodules for radiation are in the vaginal vault often show red or purplish spots, and are conclusive evidence when found. The nodules of endometrial lesions may exist without ovarian invasion, but, in outlining treatment, it must be remembered that both are more frequently involved. There are no characteristic symptoms in widely situated lesions, such as in the umbilicus, laparotomy scars and the inguinal area. Persistent activity and upon operation chronic inflammation, ectopic pregnancy or a new growth may be found, any of which may be malignant, either primary or as a resultant factor. In either case positive knowledge should be acquired promptly and the 'tumor removed if practical.

In those cases of endometriosis which are positively diagnosed pressure disturbances are usually at the onset in the important part of the symptom complex. In this event treatment by irradiation is in the process but it does not remove the pathology already present. The pain and disability persist, which to the patient especially is of major consideration.

Operation for pelvic endometriosis carries with it certain special dangers. These are due to the nature of the adhesions present in this condition. These adhesions are not simply agglutination of surfaces as in inflammation. The dangers present are: (1) a tear into the bowel; and, (2) postoperative intestinal paralysis and perforation. In endometriosis adherent walls are fused by tissue growths and attempts to separate them carries the danger of tearing into the intestinal tract. Rough or hurried separation by palpation only is to be avoided for the line of cleavage may extend into the lumen of the bowel. Dense adhesions should be separated by airtight walls, and as far as possible we try to follow conservative surgery. Small chocolate cysts may be removed by resection or cautery. Often one ovary may be saved. Unfortunately, though, many patients of this class may require a secondary operation. Operation is considerably better than irradiation for three reasons: (1) to preserve ovarian activity, if possible; (2) to eliminate malignancy; and, (3) to eliminate a mass causing pressure disturbance. Preservation of ovarian influence is important in the growing period. In this condition there is also a strong possibility of misdiagnosis and upon operation chronic inflammation, ectopic pregnancy or a new growth may be found, any of which may be removed and ovarian activity preserved. Then, if the pathology be that of endometriosis, the pathology may be limited to tissues such as the gynecia can be removed and yet ovarian activity preserved.

In the patient over the age of forty years the elimination of malignancy assumes an important aspect. The supposed endometrioma may prove to be malignant, either primarily or as a secondary factor. In either case positive knowledge should be provided promptly and the tumor removed if practical. In the event of this condition that drainage be provided in every case of operation for endometriosis.

Irradiation. Irradiation stops ovarian activity and thus checks the recurring menstrual exacerbations and progress of the endometriosis. Irradiation may be useful in the following classes: poor operative risks and postoperative activity. Many men advise against irradiation at all, however, because of the possibility of lighting up a latent disease, which may have been mistaken for endometriosis.

In a person seriously handicapped from the operative standpoint irradiation may be used to stop the increasing pain and disability. This is especially applicable in the patient approaching the menopause. The preferable form of irradiation, X-ray or radium, depends upon the structures involved.

Persistent activity in an area of endometriosis after operation is an indication for radiotherapy. It is difficult to completely remove the pathology and a small area left may flare up and cause symptoms. Occasionally there is persistent activity even after removal of both ovaries and the endometriotic growth. In all these conditions irradiation is our only remaining method of treatment.

—from Christopher Textbook of Surgery.

—Elburn Smith.

PROPHYLAXIS AND TREATMENT

An important phase of treatment is prophylaxis. However, concerning this not a great deal can be said. Following the generally accepted theory of Sampson, that of transtubal implantation, the physician should avoid rough pelvic examinations during or immediately after the menstrual period. Operations should not be performed too soon after menstruation as these factors all seem to play a part in exciting the condition.

Treatment of endometriosis may be divided into two classes; palliative or conservative and radical. Conservative treatment may be used when there are sufficient relief. Usually we have to resort to radical treatment however, of which we have two methods of procedure: operation and irradiation.

Operation. Before deciding on operative interference two important points should first be determined: (1) that there is a definite pathology present not relieved by palliative measures; and, (2) that the persisting pain and disability are serious enough to warrant operation. Operation in the young woman requires more judgment than in the older woman who is approaching the menopause.

Operation for pelvic endometriosis is a serious problem in these cases. In endometriosis adherent walls are fused by tissue growths and attempts to separate them carries the danger of tearing into the intestinal tract. Rough or hurried separation by palpation only is to be avoided for the line of cleavage may extend into the lumen of the bowel. Dense adhesions should be separated by airtight walls, and as far as possible we try to follow conservative surgery. SMALL chocolate cysts may be removed by resection or cautery. Often one ovary may be saved. Unfortunately, though, many patients of this class may require a secondary operation.

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In utero the spine is in a position of flexion and is delivered by an extension process. The infant, for a period of several months, has no curves in the spine whatever except a flexion curve to the sacrum. As soon as crawling is begun there is developed the physiological series of spinal curvatures. Support from the lower extremities through the sacrum and by the arms to the dorsal area produces a thoracic kyphotic and lumbar lordotic curve that is accentuated by the weight of the hanging visera. The cervical lordotic curve is the result of holding the head erectly while in the all-four or crawling position. Segmental muscle tone and ligamentous support is encouraged in this all-four position while the youngster is in the crawling age.

Soon, however, when the youngster begins to stand erect, the hip joints are thrown into extension and there is a tendency of an increase in the three physiological curves in the spine above the sacrum. There is an increase then in the angle of pelvic inclination with a resulting increase in the subaponeurotic space with a subsequent relaxation of the abdominal walls giving the characteristic "pot-belly" of the youngster.

Within a period of several years, however, normal segmental relationship should improve so that there is a lessening of the angle of the pelvic inclination, a lessening of the lumbar index as well as a lessening of the thoracic kyphotic and cervical lordotic curves. With a decrease of the angle of pelvic inclination and a decrease of the lumbar index, the vertebral column becomes flattened, the diaphragmatic excursion is increased by the flattening of the ventral wall and flaring of the costal arches.

Any factor that interferes with the development of the normal segmental control and the increased angle of pelvic inclination, along with the increased lumbar index is maintained over a longer period of time than is customary, the decrease of diaphragmatic excursion that characterizes this type of postural predisposes to a prolonged diminution in the rate of venous and lymphatic return from the abdomen. This factor is probably important in the production of an imbalance between sympathetic and parasympathetic control over gastro-intestinal function and is in all probability etiological in the paving of the way for the subsequent developing of many of the gastro-intestinal upset coincident with the first few years of an individual's life.

Prolonged passive congestion in the visera is, of course, not conducive to good vegetative function. It also hastens the subsequent developing of scar tissue and impede proper developing of the organs in the abdomen and pelvis.

With a hyperlordotic curve in the lumbar area there is a decrease in the rate of venous and lymphatic return from not only the abdomen but also from the spine and cord itself. It is in all probability coincidental that this passive or venous congestion and lymphatic congestion in the lumbar and general areas of the cord generally in these areas of the body above the lumbar area.

It has been observed in those instances of brachial paralyis that the cervicodorsal and cervical area is involved in extreme curvature and fairly acute cervico-dorsal curvature in the spine.

Goldthwait states that posture in different types of individuals with regard to stature, undoubtedly influences immunization reactions. This is a hint for Osteopathic research, at least.
FOCAL INFECTIONS OF THE NOSE AND THROAT

W. B. Hartsock, D. O.

(Delivered at the Child's Health Conference—April, 1939)

I believe we all are beginning to realize the importance of sinus infection and its relation to focal infection of the nose and throat, also its relation to systemic diseases. We have found in our clinical experiences that children are not susceptible to nasal hyperplasia and hypertrophy of the turbinates unless there is one of the following conditions: inflammation and retention within the sinuses, diseases of the nasal passages and auto-intoxication which in a large percent comes from improper feeding. I believe we have the ability to prove to a large extent, that retention and infection of the sinuses is the outstanding offending factor. Another thing to consider—the child has not built up a natural immunity and is more susceptible for the reason for stressing sinus infection in this paper.

The nose is subject to more injury and infection than any other part of the body as about 85% of the infection enters the body through the nose and mouth. Moreover the nose furnishes far more cavities of a retention nature. I mean retention of inflammation and infection which is difficult to reach or seriously complicates treatment. The focal of infection is the cause of a great many systemic diseases, of which the nasal accessory sinuses play a large part.

The primary attack has been made on the teeth, tonsils and adenoids, since they are easy to investigate and very few can stand a rigid examination. The result—when the physician has removed these foci of infection he usually believes that all has been done that is necessary and leaves the sinus infection without further examination or treatment. I might say here that very few Osteopathic practitioners or specialists realize or think of the middle ear being one of the accessory sinuses and that it is subject to the same diseases as the other accessory sinuses.

Usually the middle ear doesn't attract attention until the hearing is involved or pain and the patient seeks relief, giving a history of the middle ear being involved over a period of years. I have read articles claiming that deafness is due to bone infection such as temporal bones and mastoid which in a large percent might be true. Also there is a theory which I believe will carry considerable weight that now is responsible for most deafness. Of course we have theories that infection is blood borne or lymphatic. The only method that I give you the method that we have been using for a number of years. With infection of blood stream, etc., With a fair degree of success in making a diagnosis we first take a case history of the child finding out as to whether they are subject to frequent colds, any pains or symptoms of neuritis, growing pains, whether the tonsils and adenoids have been removed and as to how the child gets along in school, whether any nasal surgery, treatment of nasal membrane or any history of ear ache. The ears are checked with a tuning fork and other methods.

For many years we have examined the nose with nasal speculums to see if there is any hypertrophy of tissue, the tonsils as to whether they are nodular or have a solidified material protruding from the crypts. Also examine the post-nasal area with a Pharyngoscope and note the inflammation, the redness of tissue, also whether the adhesions of the Fossa of Rosenmuller is present. Examine the external ears as to size, etc., the cervical spine as to tenderness, also the glands of the throat and neck. Take the temperature, also have the family take the temperature every three or four hours and report back later and finally trans-illumination and X-ray if needed.

Treatment

Remember, in dealing with the nasal cavities we have rigid walls. We still have cavities after surgery and in my experience surgery and electrical cautery have been very disappointing as to results. I consider aching pain and distress of sinus trouble due to swelling and thickening of tissue, and any treatment that will reduce the process that is correct, if not destructive to other tissue.

My method of treating young children is by the osteopathic treatment and diet. In some cases we use X-ray, while on older children and adults use in copper irrigation, vibration and dietary measures. In all these foci of infection cases we find Osteopathic lesions and diet play a large part, while deformities are at times only secondary.

Osteopathy is a science. Its use is in the healing of the afflicted. It is a philosophy which embraces surgery, obstetrics and general practice. An osteopath must be a man of reason and prove his talk by his work. He has no use for theories unless they are demonstrated. Osteopathy is to me a sacred science. It is sacred because it is a healing power through all nature. I am very jealous of it and will accept nothing from any man's pen as a truthful presentation of this science unless he compound investigation and proves by demonstration that every statement is a truth. It is a science that asks no favors or friendship of the old schools; they have long since acknowledged they have never discovered a single trustworthy remedy for any disease. Having been familiar myself for years with all their methods and having experimented with them, they became disheartened and disgraced. A T. Still.

Kansas City College of Osteopathy and Surgery
On reaching London one is immediately impressed with climate in contrast to that country from which you have come. When we stop to consider the difference between London and the United States or Labrador and its climate is made temperate by the Gulf Stream, we appreciate its peculiarities.

It is interesting to note also the effects of this climate on the health of the inhabitants. The dampness, rain and fog are most beneficial to the complexion of the inhabitants and the flowers, but causes many colds and sinus disturbances. Lack of proper heating may have been etiologically responsible for some of the conditions in the clinics. Sixty degrees F. seems to be a maintenance heat for the middle and lower classes. Plumbing is also inadequate for best sanitary conditions. Most of heat is by stoves and fire places as long as they are primitive to Americans who are surrounded by up-to-date, efficient and adequate apparatus. Lack of central heating makes for conditions which are not conducive for patients in general. Self-feeding is an essential part of medical care, and many diets and meals designed for patients are not well constructed as a diet to allow for their proper digestion and absorption. Vegetables and fruits are sadly lacking in the diets of the poor people and thus account for the malnutrition and as a result of this lack of antiscorbutic properties. Dr. Samuel Jones Geo. C. the physician who is in charge of this great hospital. It was he who gave the original description of celiac disease. Dr. Geo. Grederick Still, one of the pioneer teachers in pediatrics and one of the foremost specialists in England, is noted. This physician is on the staff of this hospital.

Another famous great Ormond St. Hospital physician was Walter Butler Cheadle, who first described infantile scurvy, a disease which up to that time was shrouded in mystery. The disease is characterized by pain and tenderness in the extremities, associated with hemorrhages and swelling of the joints. Numerous cases of these symptoms of scurvy and believed that the disease resulted from the use of artificial food which possessed no antiscorbutic properties. Dr. Samuel Jones Geo. C. the physician who is in charge of this great hospital. It was he who gave the original description of celiac disease. Dr. Geo. Grederick Still, one of the pioneer teachers in pediatrics and one of the foremost specialists in England, is noted. This physician is on the staff of this hospital.

It is interesting to note how many contributions to medical literature on rheumatism either in clinical journals or in monographs, have been made by staff doctors of the great Ormond St. Hospital for children.

On my first visit to the hospital, I saw a very modern building with facilities for clinic examination and care of many children. The clinic is rather ideally arranged, with its large waiting room accommodating many children and parents who are commissary. The child's examination and assigning the patients to proper channels.

The method of examining and the instruments used were quite out of keeping with the building—for instance, the examining physician used a peaker spoon for throat examinations which was thrown into a bowl of lysoyl solution when he had finished with it. The great complacency of the English people was displayed by the examiner, who was not in the least perturbed by the large room full of difficult cases, but leisurely examined the patients talking at length with the mother of the patient concerning the progress of the case, and her history of carrying out his former instructions. Both the patient and physician and patient's parent were exceedingly frank with each other and seemed to be satisfied with the consultation. No concern is manifested by the physician in charge if patients are not seen and patients seemed to be willing and contented to return again.

The cases I saw were interesting and unusual. Two cases of amotrophic lateral sclerosis (Charcot type of muscular atrophy) were among the first cases presented. We were much impressed as there are only a few cases of this disease beginning childhood that have been reported. They were in several cases—a sister and brother, aged 7 and 8 years, in whom the malady was first noticed after the boy started to walk and the girl's case was not progressive than the boy's. There was atrophy of both legs and arms and the spasms being of the legs, with probably more atrophy in the arms. There was an increase of the tendon reflexes and fibrillary twitchings, the examining physician taking time to demonstrate all symptoms. The fact that the course of the disease is slow lasting for over several years, was evident as both children were in and were helpless. The cases were uncomplicated by any treatment given from the lack of care. It seemed that the treatment of the disease would be carried off by some infectious disease. Both had badly infected tonsils which were cured for and was probably aggravating the primary disease. There were early signs of bony deformities as the speech was slightly interfered with and the swallowing affected.

The only treatment recommended was the use of artificial food which was not constructed as a diet to allow for their proper digestion and absorption. The cases were uncomplicated by any treatment given from the lack of care. It seemed that the treatment of the disease would be carried off by some infectious disease. Both had badly infected tonsils which were cured for and was probably aggravating the primary disease. There were early signs of bony deformities as the speech was slightly interfered with and the swallowing affected.

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have been because it was warm and the symptoms were not exaggerated or because cases were on a holiday, as the doctors were during August. The highest the thermometer registered was 82 and everywhere there was no complaining of the terrific heat. In America at the same time the thermometer was soaring between 90 and 100 degrees. The fact that physicians and writers have discussed rheumatism extensively in their contributions and apparently have had none in dealing with the condition in childhood.

A collective treatise on diseases of children by Dr. Leonard Parsons and Dr. Seymour Barling published 1933 states in the preface their book entitled "Diseases of Infancy and Childhood," that in America, instruction of students in the subject of Pediatrics was greatly neglected in the British schools, but that there are signs that this reproach may be removed within a few years. The formative years of childhood, they state, offer to the biochemist and psychologist opportunities for study, which may solve many problems in the adult, which hitherto have been completely baffling.

Today the subject of pediatrics includes the study of both the healthy and the sick child not only with regard to curative, but also preventive medicine.

The British Journal of Diseases of Children founded in 1904 and the Archives of Diseases in Childhood (1928) have been published to make conclusions of the various pediatricians available; to give workers an opportunity to submit their observations to public criticism and make discoveries in diagnosis and treatment available for all.

Dr. Leonard G. Parsons of the Birmingham Children's Hospital has contributed much on Celiac disease, fat metabolism and anemia in infancy and early childhood.

In England they have not established well baby clinics on as large a scale as we have in America and although I think the need is doubtless just as great in London as it is in our large cities. The psychology of a well baby clinic is always stimulating as it creates a great interest among the mothers. Everyone wants her baby to be more nearly perfect than her neighbor's and she takes extra pains to carry out the doctor's instructions in order to gain that end.

In America these clinics have done more to reduce infant mortality rate than any one thing.

I spent one afternoon in the Infants' Hospital, Vincent Square, Westminster, observing their feeding clinic which was most interesting. The thing that impressed me very much was the consistent gain in weight of the babies who were put on the various formulas but the physicians were prone to use excessive carbohydrate in the formulas, mostly in the form of dextrose so that there was the weight increase. I think on the whole they probably use more proprietary milks than we do but during a period of adequate nutrition this is much safer to use, proprietary milk than fresh milk.

American pediatricians have evolved a little more thoroughly into the fundamental facts concerning the nutritional requirements of infants, and have established better means for meeting these requirements to a more perfect degree because their facilities are more adequate and their physicians were impressed with the simplicity of the instructions for feeding which were given out on cards at the English feeding clinic. The cards are in no way intricate or difficult to understand.

The doctor in charge was at ease and gave each patient plenty of time. The nurse in charge brought him patients as he dictated and at no time during the afternoon was he aware of the number waiting for him. Their chief handicap, as I saw it, was the inability to include fresh fruits and vegetables in the diets as they are expensive and not plentiful as we see them in America---Even bananas were not much in evidence either in stores or on children's diets. Constipation was a symptom that was regarded most lightly and not considered to be responsible for ills that we attribute to it.

On the other hand, I think diarrhea was a much more common symptom than we meet with, and again I feel it is due to poor methods of preservation of foods and is probably another reason for proprietary foods.

The important reciprocal relationships existing between infections and nutrition in infancy was evidenced by the number of infections that were reocurred with the nutritional disorders. Infants whose diets had been inadequate in total fuel value or vitamins or proteins and which, as a result, had become undernourished, seemed especially susceptible to infections. Infants in general are more susceptible to infections or the rhinopharynx, middle ear and urinary tract than any other individuals, and it is these infections which are especially likely to exert a deleterious effect upon the nutrition.

Because of the fact that any of the symptoms produced as a result of infections are similar to those resulting from an unsuitable diet, a frequent error is made in assuming that the fever is due to some real infection. On the mistaken assumption that the symptoms are due to unsuitability of the food, the diet is often changed by reducing various food elements and this leads only to greater impairment of the nutrition and further susceptibility to infection. Certain infections in infancy are so common and so frequently associated with nutritional and gastro-intestinal disturbances as to deserve special and serious consideration.

While it was August, there were numerous cases of "cold in the head." This was of little importance in itself except that it was a threatening extension into the middle ear or ecrihi. In infancy the chief cause of alarm to the parents, is the refluxing of food and occasional vomiting with slight rise in temperature. Little change in diet is indicated in these cases as it only limits the intake. In most cases the treatment recommended was argyrol or neosilrol in 5% solution and no change in the diet.

A few cases of otitis media were exhibited and several in the malnourished children exhibited diarrhea and the treatment was directed chiefly to the primary lesion and not to the diarrhea. In one case the diarrhea had taken on a more serious aspect and there was marked dehydration with an impending acidosis. Two cases of profuse draining over a period of three weeks were in exceeding degrees to poor nourishment and it looked very much as if there was an impending mastoid. Very little was recommended to the children in the way of nutritional diet or other supportive treatment. Most of the treatment was directed to local treatment; not even fluids forced to combat the dehydration.

There were cases exhibiting ear marks of rickets and the treatment recommended in most of these cases was entirely dietary and vitamin D. As a whole there seemed to be a greater number of undernourished looking children than we find in our clinics, but during the afternoon at the Infants' Hospital I did not see one infant with a history of prematurity, and the fact that there is little published in English pediatric literature on this subject, I feel that it is not a very prevalent condition.

It is very difficult to get the best picture of the English clinics at this season of the year and I am hoping to sometime get to them when the teaching clinics are in operation and more diversified clinic material exhibited.

"Delivered before Children's Health Conference, Kansas City, Mo., in April, 1938."
LYMPHATICS

J. A. Smoot, 1911, Kansas City College of Osteopathy and Surgery

The lymphatic system consists of complex capillary networks which collect the fluid around the various organs and tissues; of an elaborate system of collecting vessels which conduct the lymph from the capillaries to the large veins of the neck at the junction of the internal jugular and subclavian veins, where the lymph is poured into the blood stream; and lymph glands or nodes which are interspersed in the pathways of the collecting vessels, filtering the lymph as it passes through them, and adding lymphocytes to it. This is a closed system. The lacteals, otherwise characteristic lymphatic vessels of the small intestine, contain, during the digestiOn of the food, a milk-white fluid, the chyle.

There are regular lymph nodes, among the lymphatic organs, as well as hemolymph nodes (in which there is a close resemblance to ordinary lymph nodes, with the essential differences of blood sinuses rather than lymph sinuses), the thymus, lingual tonsils, and the spleen, all of which are lymphatic organs, in which lymphatic vessels are not numerous.

Lymph is a transparent, watery fluid, seldom more than a milky cream in most respects. It is usually colorless to slightly yellow, although it may at times be tinged by the presence of red corpuscles or opalescent because of globules of fat. It alike plasma, contains salts, albumen, fibrin and serum.

It also contains in the lymph is its corpuscle, or lymphocyte, which is a variety of white blood cell, arising from the connective tissue of lymph glands and lymph-nodes. Its function is not definitely known, but it may contain a lipolytic ferment. It reproduces by mitosis and is capable of amoeboid movement.

The thoracic duct is the chief terminal lymphatic duct of the body. It drains the lymph from all parts of the body except the right side of the head and neck, the right side of the thorax, heart, and pericardium, the right lung and pleura, and the convex surface of the liver, all of which exceptions are drained by the right lymphatic duct. The thoracic duct has its origin at the cisterna chyli, a small, triangular, lower, and posterior to the right of the aorta and behind it, and in front of the first and second lumbar vertebrae, enters the thorax through the aortic arch and venous azygos, passes up through the posterior mediastinal space, crosses the median plane, and enters the subclavian artery of the thorax, where it forms an arch and the thoracic part of the left subclavian artery, its orifice being guarded by two semilunar valves to prevent the passage of venous blood into the duct.

The larger lymph vessels are similar in structure to veins, their walls, however, being considerably thinner than those of veins. The thymus, lingual tonsils, and the spleen, are composed of a single layer of endothelium which lines on subendothelial fibroelastic tissues; in a thick wall of circular and subcircular smooth muscle fibres; and adventitia of longitudinal elastic connective and smooth muscle fibres. These capillaries are thin and have walls composed of a simple layer of endothelium. These capillaries are found in the skin, subcutaneous, tendons of smooth muscle, joint capsules, peristeaum and haemorrhage canals, kidney (subcapsular), bladder and prostate, prostate, and between the heart, trachea and bronchi, liver, spleen, salivary glands, thyroid, thymus, mesentery, and the mesothelial lining of the pleural, peritoneal, and pericardial cavities. Their presence is disrupted in muscle tissue, as well as in the bone marrow, and they are not found in epidermis, cartilage, or subcutaneous tissue. The vessels form a closed system not in direct communication with the lymph spaces.

There is a great number of factors in facilitating the flow of lymph through the lymphatic system. We know that respiration normally tends to aid the lymph flow as the diaphragm has its movements; the circulatory muscles of the heart, tend to contract and relax. The decreased intrathoracic pressure also allows the normal pressure below to send blood upward, as well as lymph. The heart beat aids in lymph flow, as well as in blood flow. Peristalsis, as well as skeletal muscle action including exercise, is of importance, and their aid is taken advantage of by the valve system of the lymph vessels. It is easy to see the importance of manipulative measures, then, in aiding the flow—both locally in noticeably edematous tissues and generally in the larger vessels and lymph-patches.

For every congested tissue there is a corresponding lymph disturbance. When an area of right internal or left subclavian valve, its orifice being guarded by two semilunar valves to prevent the passage of venous blood into the duct.

The lymph vessels are also affected, according to the amount of blockage and nodular enlargement at certain points. Edema is due to lymph blockage. Nodular enlargement is not always between the terminal lymph drainage and distant disturbance. There may be a reverse lymph flow in spite of the numerous vessels. Enlarged lymph nodes may irritate or over-stimulate nerve endings; such few observations are important for the student and physician to remember as he starts considering a diagnosis. If carcinoma of the breast passes by the mediastinal nodes from the breast, lungs, pleurae, heart, etc., where surgical removal of the affected parts is considered, lymph nodes of the mediastinal nodes seems to take on a new importance. Since there is no way to keep them directly under observation, it behooves us to keep close watch on the part of the lymphatic system that is observable, and after occlusion or destruction we need to see that we can distinguish between different nodal involvements as the experience physician will know better, and between different toxemias by palpating muscle spasticity.

In the case of differentiating appendicitis, as above mentioned, we often find complications. Pathologists ask that the physician be in the field, in sending the specimen to the laboratory for biopsy, send some node other than an inguinal gland, because the inguinal glands tend to have a chance of being involved very early, coming from the leg or venereal infection, which has already caused enlargement. Millard adds that it is impractical, if not impossible, hence, if so treated early enough, may leave the patient perfectly healthy. However, the metastasis easily goes to the mediastinal nodes, so that the carcinoma of the breast, lungs, pleurae, heart, etc., where surgical removal of the affected parts is considered, lymph nodes of the mediastinal nodes seems to take on a new importance. Since there is no way to keep them directly under observation, it behooves us to keep close watch on the part of the lymphatic system that is observable, and after occlusion or destruction we need to see that we can distinguish between different nodal involvements as the experience physician will know better, and between different toxemias by palpating muscle spasticity.

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and other nodes may become the focus for a variety of infections, hence may also furnish a perpetual source of toxins to be fought by the body, as the lymphatic system has complete coverage of the body.

Considering the groups of nodes separately, we see many interesting things. Starting with the ankles, for instance, they may have edema due to a local inflammation of surface, joint, bone, or muscle, or an infection of any kind. The edema may be due to the result of a reverse flow from the inguinal nodes, through the popliteals, if these are inflamed or enlarged from any cause.

The popliteals, it follows, may be enlarged, inflamed, and tender, whether the origin is in the immediate vicinity of the knee or through the ankle nodes or the inguinals. The popliteals have been noticeably affected with no apparent cause more than a bruised or abraded toe, a corn, a skin puncture of the toe or other part of the foot, absorbed dye from stockings, etc.

The inguinal nodes have already been mentioned, but one must mention two more involvements: lymphogranulomatosis inguinale, a filtrable venereal virus disease of venereal origin, involves the drainage lymph nodes. In the characteristic adenitis the nodes of the chain become fused to form a mass, then the process breaks down, with multiple fistulae. Elephantiasis is often, in some countries, the result of the occlusion of these superficial and deep inguinal nodes. Enlargement may sometimes be mistaken for cancer.

Millard considers the liver more important, from a lymphatic standpoint, than the spleen. The tendency of the liver to turn torpid and sluggish makes lymph drainage uncertain. He thinks the lymphatic circulation of the body becomes more evident in its role as a filter of lymph and as a large reservoir for the lymphatic system. The lymph nodes act like a dam in the lymphatic system, preventing the spread of infection to other parts of the body.

The cervical lymphatic network is a closely anastomosing system so that any inflammation of the pharynx, larynx, oral cavity, skin of the head or neck, neck, or chest or thyroid will cause lymphatic involvement of variable extent. It may involve just one gland, an affected gland may be bilateral, or unilateral. Goiter may cause nodule enlargement. Any blockage that can be detected should be drained, and it is significant that manipulation is the only method of drainage of the lymphatic system.

It is significant also that spastic muscles are co-existent with much of the venous and lymphatic blockage we encounter, and that manipulation is one of the most effective methods of relieving spasticity with its edema and hyperesthesia.

Back again to lymph-node focal infection, let me use the information Tice offers: that the nodes are either involved at the site of the injection, the tonsils, nasopharynx, middle ear or mastoid are frequently accompanied by an invasion of the lymph node, that detachment of the lymphatics makes the direction of the nodes, although a general adenitis of the neck, the arms, and occasionally, the inguinal region.

Still, as prophylaxis, breast injuries, in a differential count, in such conditions as leukopenia, pernicious, and exophthalmic goiter, where the number of the cells may decrease in other disorders, the normal percentage among the white cells is about 25-35%, although percentages from 15-45% have been observed in apparently normal persons.

Several manipulative methods of treatment of the lymphatic structures have been offered, but one of the most effective methods of relieving spasticity with its edema and hyperesthesia is still the only method of approaching this area, and treatment of the cervical nodes might be considered as the number of the cells may decrease in other disorders, the normal percentage among the white cells is about 25-35%, although percentages from 15-45% have been observed in apparently normal persons.

One of the most noticeable systems of lymphatic tissue in the body—noticeable because of its recognition of disorders—is the pharyngeal lymphoid tissue known as Waldeyer's ring. Prophylaxis of this ring around the auditory tubes, gives us "adenoids." Retropharyngeal abscess is usually due to a suppurative lymph gland in that area.

Lori has shown that continued cerebral anemia may produce cavitation, scarring and perivascular softening. This may be so difficultly well in the brains of aged people. The part played by disturbances of lymphatic circulation is more obscure, although adenine infiltrations have been produced by lymphatic blockage.

Microscopic study of the lymph and blood is often a boon to the diagnostician, as he may find increases of lymphocytes, in a differential count, in such conditions as leukopenia, pernicious, and exophthalmic goiter, where the number of the cells may decrease in other disorders. The normal percentage among the white cells is about 25-35%, although percentages from 15-45% have been observed in apparently normal persons.

Several manipulative methods of treatment of the lymphatic structures have been offered, but one of the most effective methods of relieving spasticity with its edema and hyperesthesia is still the only method of approaching this area, and treatment of the cervical nodes might be considered.
Diet in Sinusitis and Colds

A. B. Crites, D. O., of the College Staff

Millions of years ago man emerged from the animal world and began to live on his own. His faculties, which enabled him to see himself more and more to the conditions of his environment helped him to be victorious in the struggle for existence. Later his instinctive intelligence and judgment, freed from his primitive environment and subdued the powers of nature to his will. From today's point of view the safety of instincts in primitive people. But as soon as man was able—thanks to his instinctive intelligence and judgment—his primitive environment by technical means, the regulatory security of his instincts became defective. Not only did man become exposed to danger while deviating from the natural way, but even the animals and plants which he cultivated suffered. For the wild animal only one natural way of feeding is possible. The question arises: is this a definitive one only. This is different with domestic animals. No wild animal would take a leaf, for instance, as does the dog or the hog. Neither can we observe diseases among the wild animals that are not among domestic animals. Losing the integrity of the instinct for taking food means, therefore, also the loss of health.

History points out how much indulgence and over-refinement in eating has contributed to the decline of former cultural values. The marked increase in urban population in eating has interrupted the intimate connection between the instinctive intelligence of the individual who cultivates and the soil which produces the living food. Methods of living means, first one must learn to distinguish. Today we are compelled to buy everything. The free choice of food is replaced by that of the capitalist and industrialist who decides what the man may eat and must be served. Second. Restrict salt. Sufficient salt is obtained for the body's needs only when the body obtains sufficient sodium. The additional salt added to food in the kitchen is not sufficient to replace that lost in the urine. It is estimated that the system, particularly the kidneys, are better able to eliminate of the sodium than the body. In fact, too little or no salt, but an army of sick people live among us, who show the consequences of eating too little. The therapeutic effects of salt restrictions are tremendous. It reduces inflammations, swellings and edema. It may be used freely. Eat vegetables, fruits, milk, potatoes and nuts.

Calcium has occupied an important place on the dietary stage for some time. It was thought that calcium was the key to the solution of the problem of hyperphosphatemia, high fever and allied conditions. The extra calcium given probably was not useful because sodium has the stronger affinity for the tissues, particularly of the skin and mucous membrane, so with sodium available calcium is not taken by the cell. If a diet rich in calcium minerals is used, then it is not necessary to give extra calcium, though there is no objection to doing so. A major portion of the diet should consist of foods that have a basic ash reaction. Of the diet's advantages are well established. A simple classification of foods lists as acid the following: cereals, meat, fish, eggs, coffee and at the table floods the body with acid forming chlorine element. The white potato is an excellent food baked or boiled in the national salt added to food in the kitchen. The results obtained from the diet have been highly satisfactory, though rather difficult to definitely evaluate in private practice because of other therapeutic measures in use at the same time. It is highly gratifying to find the general resistance to colds increased, breathing comfort is gained, edematosis lessened even in patients with an allergic diathesis and to find that the systemic disorder, neuritis, neuralgia or what not improves even before the focal infection in the naso-vestibule and sinuses is entirely eradicated.

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Osteopathy is optimistic, enthusiastically so; medicine is nihilistic, to the degree of pessimism.

Some people are like the cells in a cancer, already cancers in limited amounts are, meats, twenty-four ounces weekly, one egg daily, one ounce of sugar daily and preferably unrefined, coffee is consumed daily and potatoes one with each main meal but not fried.avored foods are one quart fresh milk daily with one-half pint of butter, milk, cottage and Philadelphia cream cheese may be used freely. Eat vegetables, salads and fruits both fresh and dried. Of the leafy greens, the herbs except pepper, paprika and mustard.

Before prescribing the diet, urinalysis of the twenty-four hours specimen is made. Besides the routine tests the urinary acidity is determined and what is most important, the amount of sodium chloride eliminated in twenty-four hours is estimated. The normal is ten grams, but many specimens will double this figure. After the diet is followed for a week or two the test is repeated. The amount eliminated drops to between three and five grams and is kept there. This urinary test, easiest done by the centrifuge and the most in need of the dietary restrictions. From these cases is expected clinical improvement. It is also a check-up on the patient for if much sodium chloride is still being eaten then the body's reaction is high and the diet is not being followed.

The results obtained from the diet have been highly satisfactory, though rather difficult to definitely evaluate in private practice because of other therapeutic measures in use at the same time. It is highly gratifying to find the general resistance to colds increased, breathing comfort is gained, edematosis lessened even in patients with an allergic diathesis and to find that the systemic disorder, neuritis, neuralgia or what not improves even before the focal infection in the naso-vestibule and sinuses is entirely eradicated.
CLINICAL SIGNIFICANCE OF THE BASAL METABOLIC TEST

G. N. Gillum, D. O., Director of Clinics

The basal metabolic test has come to occupy an increasingly important place in scientific medicine. Through the use of this test the clinician can gain valuable information regarding the rate of the metabolic processes and apply that information to the diagnosis and treatment of many disorders. Like other clinical aids, the test is subject to error, and often erroneous conclusions can be drawn and one be led far afield, diagnostically and therapeutically. A consideration of the test from the clinician's viewpoint will form the basis, primarily, of this paper.

With thousands of metabolism testers in use throughout the country it is somewhat startling to realize that the first apparatus was installed only in 1911 in Bellevue Hospital. Shortly thereafter units were installed in Russell Sage Institute of Pathology, and Cornell Medical College. Among the pioneers in the development of the apparatus as well as in its clinical applications were Pettenkofer, Voit, Magnus-Levy, Benedict, Lusk, Grafie, Rolly, Boothby. We owe these men, in a large way, many other clinicians a debt of gratitude in the study of disease associated or characterized by an altered metabolic rate.

When is a Metabolic Test Indicated

This cannot be categorically stated. However, one should consider the advisability of the test whenever a patient is nervous, obese, has recently gained weight rapidly, or shows a marked change in facial lineament characteristic of that person. Certainly one is surprised by marked alteration in the metabolic rate when least suspected. Even though the test should prove negative, it will inspire confidence in the doctor as to his thoroughness, reassure the patient, and may allay any apprehensions that are aggravating his condition, and thus act as a psycho-therapeutic measure of great potency.

The Low Metabolic Rate

When the stage of metabolism is generally considered to be from —10 to +10, slight variations from this are not to be viewed too seriously. A very common concept is that the rate is low to immediately implicate the thyroid. This conclusion is based upon the well-recognized physiologic fact that thyroxine acts in the tissues as a catalyst and is a regulator of the rate of energy production and metabolism. It is impossible to categorically classify various states of low energy production, and any brief working formula outline necessities leaving out less important or poorly understood conditions. We will discuss, therefore, the more clinically important diseases.

Before considering specific conditions let us consider the warning as to the metabolic test and its dependability in diagnosis. Dubois states: "Even then the test is not infallible; there is a possible error of 2 or 3 per cent. In addition to this there are rather wide fluctuations in the daily metabolism of certain individuals. The first few tests with a thyroid patient may drop to no more than —40 to —45 per cent.

It is clear therefore that there are factors operating in maintaining the body's metabolism as an index of the thyroid gland. The question then immediately presents itself as to whether the depression of the rate need be attributed to the thyroid. This question cannot be positively answered, but the evidence warrants the conclusion that it is not involved primarily, at least in all conditions with a metabolic rate below the clinically accepted normal.

In support of this view we have the clinical results of thyroid medication. In myxedema and cretinism for example, thyroid extract brings about a rapid and remarkable change physiologically and mentally which may be associated with continued thyroid medication. On the other hand, patients with very low metabolic rates but without the physical and thyroid gland, and thus thyroid states require very much larger doses of thyroid extract to raise the metabolic rate to normal and does not lead to any apparent physical or mental change.

It is very important to consider these facts in examination and treatment of any patient with a low metabolic rate, and not to immediately implicate the thyroid gland. The latter may lead to unscientific medication. It is impossible to categorically classify various states of low energy production, and any brief working formula outline necessities leaving out less important or poorly understood conditions. We will discuss, therefore, the more clinically important diseases.

Low Metabolic Rate of Hypothyroidism

MYPXDEMMA: This hypothyroid state is characterized by the condition arising from marked deficient secretion of thyroxine. It is due to disease, removal of the gland, diminished nerve and blood supply or a combination of these factors.

In the typical case there is a thick purplish appearance of the skin, especially of the hands and face, with pallor, dryness, roughness, and brittle, dry and falling hair. There is usually a gain in weight, lethargy, and dull mentality. While there is an edema-like appearance of the face, the tissues do not pit on pressure. Boothbys considers the thickening of the subcutaneous tissues as being due to a semi-fluid substance comprising more than 15 per cent protein, and not much mucus as is frequently stated. The metabolic rate varies from —20 to —40 or more.

While the above description is that of the typical case, it is to be remembered that some do not gain weight and may be of the thin type. These are in most instances the mild hypothyroid states.

CRETINISM: This endocrine disorder is the counterpart of myxedema, but occurs in infancy or childhood and is symptomatic is conditioned by the physical and mental growth periods of that age. Among the characteristic findings are blue lips, enlarged, protruded tongue, arrested skeletal and general body development and delayed mental development, scanty hair, and very late closing of the fontanelles. The metabolic rate is —20 to —40. The disease is far more common in endemic goiterous regions, but occurs sporadically throughout the world.

Thyroid Extract in the Treatment of Hypothyroidism

It would be clinically barren to discuss the above diseases and not to discuss thyroid medication in these disorders.

Sometimes thyroid extract is given without a metabolic test, the necessity for, or the effect of the extract being judged by the clinical symptoms and the pulse rate. This procedure is to be condemned as being too empirical. Whenever possible it is advisable to judge the necessity for, and the effects of the extract by both the symptoms and metabolic rate.

The action of desiccated thyroid is slow and is somewhat cumulative, and its disappearance from the body requires a considerable period. Because of these facts it is not necessary to give the extract in divided doses daily, but the dosage for the day given at one time. It has been found that upon the discontinuance of thyroid medication in hypothyroid states that the daily
loss of thyroxine is about 6.5 per cent of the amount in the body. The loss is more rapid in the first two weeks and the thyroxine administered is completely gone at the end of a month, thereby to obtain the activity of the thyroid as determined by the metabolic test, one month should have elapsed since dosage. This statement should not be interpreted to mean that metabolic tests are not to be performed regularly in hypothyroid cases under treatment.

Berkman of the Mayo Clinic advises: "As in the absence of Nephritis and cardio-vascular, an initial dose of 12 grains over a period of three or four days may be used, the dose being increased or decreased by a metabolic test should be performed, when it will be found in most cases the rate will be within the normal range. It is best that a grain or more of thyroid be given daily and tests performed every four or five days, the dose being increased or decreased depending upon the metabolic level. Reading of -3 to -5 is more desirable than a zero. "

Low Metabolic Rates Without Primary Hypothyroidism

DEPRESSION: PHYSICAL OR MENTAL STATES: One encounters a variety of patients that can scarcely be classified into either a functional or a physical state. They belong to the depressed group and are more or less in a state of varying exhaustion, but without a demonstrable organic basis. There may be a depressed mental state.

It is not implied by the foregoing statements that the majority of "energy" patients have a low metabolism. In fact, it is only the occasional one who has a definitely decreased metabolic rate.

In our present state of knowledge, one cannot be dogmatic as to the cause or causes of a decreased metabolism. Is it pluriplagial, developmental, nutritional, psychic or one among a multitude of other possible factors? To assume that a thyroid status is the evidence upon a slender hypothesis.

I will illustrate this group by the brief history of a patient with a continuously low metabolic rate of -25 for a year without evidence of myxema or gain in weight. The patient, a male, age 45, with anemia, cachexia, and slight mental derangement, was admitted to the hospital with the symptoms, considerable loss of potential, worry, depression, marked indecision, and psychic disturbances. He had had spinal manipulation and tonsil surgery but had been without benefit. About six months after the discontinuance of all treatment, he regained much of his usual health.

MENSTRUAL DISTURBANCES: Sometimes, menorrhagia, amenorrhea, and oligomenorrhea is accompanied by a low basal metabolic rate. It is difficult to say whether these low reading cases are truly hypothyroid. Haines and Mussey found that 73 per cent of cases of amenorrhea, 72 per cent of those with amenorrhea and 55 per cent of those with oligomenorrhea, improved on thyroid. 75 per cent of the entire group reported considerable improvement in their general health, and that their metabolic rate was normal. Findings vary from general clinical experience with such cases since they serve to render one cautious or not enthusiastic for thyroid extract in menstrual disturbances.

OBESITY: When a patient is seen that is obese, many physicians think of underactivity of the thyroid as the principal cause. Sevringhaus states: "Although the center in the hypothalamus is usually described as being a "pro" obesity and sometimes associated with encephalitis and diabetes insipidus: "As a consequence of these conditions it is increasingly probable that obesity is not a pituitary problem but a condition due to lesions or disturbances of some center in the hypothalamus. One then must consider two points of view, both with competent advocates."

High Metabolic Rates

This usually indicates hyperthyroidism, though by no means in all cases. Many patients think of the vascular system rather than the rule. Sevringhaus too have shown that obese people have an essentially normal metabolism. Their metabolic rates were "1. The total metabolism in obesity increases directly with the weight. "2. The basal metabolism in obesity is usually within normal limits, but tends to be in the lower ranges of normal for the slightly obese and in the higher ranges for the excessively obese."

"3. The increased metabolism favors rapid weight loss on dietary restriction. "4. The employment of metabolic studies to determine basal and high metabolic rates prevail is illogical and contra-indicated."

From the foregoing statements, we can see that obesity is not usually accompanied by a low metabolic reading, and that the use of desiccated thyroid or thyroid extract in obesity often leads to improvement or recovery. HYPOPITUITARISM: It is generally considered that disorders of the pituitary gland are best determined by therapeutic experiments. However, numerous patients have a variable range of metabolic rates and diseases in which thyroid extract is contraindicated. "5. The metabolic rate is a major finding. It is almost always elevated and usually above +20 per cent. It is common to find readings of +40 to +60 or higher. When repeated tests reveal such a constantly elevated rate and clinical signs are present, little doubt remains as to the disease. This is further substantiated if Lugol solution decreases the pulse and nervousness.

Patients suffering from effort syndrome and similar exhaustion states often very closely simulate hypothyroidism. The basal metabolism is usually repeatedly normal, though there is a continual sweating of the hands and rapid pulse. The pulse often decreases in rapidity when the patient is at rest. Often there is a history of frustration or some psychic shock.

It is hoped this discussion of the clinical significance of low and high metabolic rates and diseases in which thyroid extract is contraindicated will serve to stimulate interest in a more extensive use of this test, point out some of the pitfalls, and increase one's diagnostic and therapeutic awareness in such disorders.

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YE EDITOR IN THE YEAR 1922

Our student body this year looks like a million dollars to us. When it is considered that the Kansas City College of Osteopathy and Surgery started only six years ago on a shoestring," so to speak; that it was founded modestly and entirely non-profit; that it has therefore had no attraction to any who might have been investors; that it has never had assets was an enterprising vision and determination to convert the vision into reality; its progress has been marvelous.

The college is now being built, which at a conservative estimate is worth around $45,000.00. Since the opening of this session, one piece of this real estate has been fully cleared and the other is in shape that all indebtedness will be readily met in a short time. The college has equipment commensurate with the student body. This is being gradually and carefully augmented from time to time as occasion demands. A faithful faculty membership of more than a score of experienced instructors has a value to the institution that cannot be measured in dollars and cents. They perform none the less well because their reward is the satisfaction of a duty to their profession and their calling, earnestly and efficiently performed.

The student body looks like a million dollars. That sum could not take their place. In numbers there is strength, and that strength is stronger than ever before. We have, if possible, greater enthusiasm—more vim—added spur to greater endeavor to put over our ideal and realize the fulfillment of our six year vision, making the reality greater and better and fuller than the vision itself ever dared be. Amen.

Starting a college without any money backing is quite an undertaking. So, among the many things calling for serious consideration in years past, has been the student body. This year, the clouds of worry in this regard have commenced to drift aside with the purchase of additional glassware and other small equipment for the laboratories. The laboratories have been enlarged and increased equipment will supply every need for complete class work. As the Laboratories have been assisted upon their journey to graduation, tuition costs have been reduced. Extra hours have been kept out of the student expense accounts, and we have prospered and are growing and are still building toward the ideal—a great osteopathic training institution where the graduates will be taught at cost. Watch the program unfold, the ideal develop, the ultimate resulting triumph.

Mr. T. H. Johnson, father of Dr. Mamie E. Johnson, has been in charge of the laboratory and the college property during the past six months.

We have finished scanning the reports of the Departments and Bureaus for the year 1921-1922 issued by the American Osteopathic Association. We intend to read it carefully and thoughtfully. Every member of the profession ought to be in the A. O. A. The Journal and the annual report are worth the yearly fees; leaving out of consideration the actual good that can be secured only through organization activities. Join the A. O. A.

President George J. Conley, of the Board, and President Hanna Leinbach, of the Trustees, have annually offered prizes to the student supplying the most distinctive college yell. Well, a college without yells and songs and things, would it?

More than a thousand dollars is being spent for the purchase of additional glassware and other small equipment for the laboratories. The laboratories have been enlarged and many changes for the betterment are in progress. As completed, the laboratory will be flooded with light; there will be a maximum of ventilation; the increased equipment will supply every need for complete class work. As rapidly as possible, individual lockers are to be supplied to all laboratory classes. Before all is completed, more than $5,000.00 will have been expended. Opera chairs were recently received which will be used to equip a classroom for the incoming January class.

The dirty fur, as well as the brown fur, and the clean, slick tongue, indicates deterioration of the blood.

8th. The dirty fur, as well as the brown fur, and the clean, slick tongue, indicates deterioration of the blood.

7th. The white coat indicates an inflammatory or sthenic condition.

A CORRECTION

In the article in the August number entitled "A Textbook On General Surgery, A Review," an error was made in ascribing the book to the Saunders Publishing Company, whereas it is a production of the Appleton-Century Company, Incorporated, 55 West 32nd Street, New York, New York.

The College Journal regrets the occurrence of this error and trusts this explanation rectifies it.
RIGHT INGUINAL PAIN

George J. Conley, D. O., Professor of Surgery of the College Staff

"The initial, acute pain (of acute appendicitis) including obstruction, gangrene, or perforation is felt in and especially a little above and around the umbilicus; at a later stage, and only in a later stage, are the signs and symptoms localized in the right inguinal fossa. So true is this that it may be accepted as very probable that when an attack of pain is first felt in this fossa the cause is not to be found in disease of the appendix."

(Addresses on Surgical Subjects, Missouri Osteopathic Association)
realize the magnitude of the effects of the lesions of the lumbo-sacro-iliac area, neither are they aware of the diversity of derangements arising from or affected by these very common lesions. Their sphere of influence ranges from the occiput to the distal extremity of the great toe and no structure between these extreme limits is immune to its derangements.

Appendiceal soreness even to severe colic due to some anomaly of the appendix, congenital or acquired, is a most common cause of right inguinal pain. This disturbance may be of a severe, colicky nature, at or near McBurney's point, followed by nausea or vomiting or it may assume the form of a persistent soreness centering at or near the site of the appendix. In either type fever and leucocytosis are absent. The x-ray usually fails to visualize the appendix; it being concealed behind the cecum and held there by adhesions. Under fluoroscopic visualization direct pressure over the cecum will elicit pain. After a variable period of time when the cecum is clear of the opaque media, the filled appendix may be seen. These anomalies affecting the appendix may consist of intimate adhesions binding the appendix closely to the posterior aspect of the cecum even to the degree of invading it in the cecal wall, or there may be kinks or twists caused by mal-attachments of its mesenteriolum; or the distal end may be attached by adhesion to some other structure such as the ovary, tube, uterus or the liver. Under such circumstances a cecum overloaded or distended with gas would make traction upon it giving rise to an appendiceal colic or pain.

An appendix that fails to visualize under the x-ray may be considered as a surgical lesion. It is like any other male factor that works under the cover of darkness. At best it should be considered a suspicious structure.

Physical examination will reveal pain over the appendiceal area. With the patient lying on the left side with knees flexed, the intestines naturally fall away to the left or lower side, leaving the cecum fairly well uncovered. Deep, gentle palpation will reveal soft tissue soreness in that area. It must be remembered that in very thin patients the fingers may make pressure on the anterior aspect of the right sacro-iliac articulation which, in lesioned subjects, will result in pain. Of course an appendiceal anomaly can coexist with a lumbo-sacro-iliac lesion wherein differentiation might be impossible. In such an event reduction of the lesion should be the first step in determining the causative pathology. If the pain persists after correction of the lesion then an appendiceal anomaly may be postulated. Always one must remember that acute appendicitis rarely, if ever, begins with pain in the right side. If such is the history of the case eliminate every other possibility before saddling the appendix with the odium of an acute manifestation. Measure it with the diagnostic yardstick of the acute abdomen, the Murphy sequence of symptoms, viz: general belly pain centering around the umbilicus, nausea or vomiting, localization of the pain (usually at McBurney's Point), fever and leucocytosis. By so doing your percentage of error will be very, very low.

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The "Aggressive College"
THE A. O. A. MEMBERSHIP CAMPAIGN
1939-1940

The Secretary of the State Board of Osteopathic Examiners of a nearby state was hurrying to an osteopathic hospital with a patient groaning with pain which only a surgical operation could relieve. He was stopped by an officer of the State Highway Patrol for speeding. When the cause of the excessive speed was ascertained the officer remarked, "Why don't you use a registered emblem?" Implying an emblem of this type would provide for special right of way on the highways similar to that granted ambulances, police cars, etc., when need demanded.

Our President-Elect, Dr. F. A. Gordon, with Doctors Klein and Owen was held up and delayed by officers of the Missouri Highway Patrol over near Excelsior Springs, Mo., while enroute to the Dallas Convention. They had no emblem on the car, hence had to identify themselves. A registered emblem would have given them a clear right of way.

Here is a practical idea that can be utilized in every state maintaining a Highway Patrol. Not only is it a good publicity stunt but it acts as an insurance against molestation for minor, justified infractions of the traffic rules. It is also a means of ready identification should an osteopathic physician be stopped for any cause by the Patrol.

With the registration of the emblem of the American Osteopathic Association at the office of the State Highway Patrol membership therein automatically takes on an added practical value of no small import. It becomes a ready means of identification of the occupants of the car as well as a guarantee that cars bearing such emblems will be treated with a dignified degree of courtesy and consideration when traveling the highways of the state. It brings the osteopathic systems of therapy officially to the attention of an important department of the government of the state.

It would be an additional incentive for non-members to become active in organization affairs by renewing lapsed memberships as well as those who never had recognized their responsibilities to the National organization in any way.

The A. O. A. emblem on their cars on the highway would mean something inherently tangible and of value. It would automatically carry with it a sense of security. It would be as a letter of introduction to the officers of the law. In other states the mere mention to traffic officials that the emblem was registered in your native state and given respectful consideration by its highway patrol, would exercise a favorable influence. Finally it costs only the effort to make the contact and establish the relationship officially.

When a non-member gets in a jam with the law his first thought is the Central Organization. Post haste or by wire he calls on it. Any practitioner of the healing art may unintentionally run afoul the law. In such an event he may need all the assistance that he can obtain to clear himself. Organized osteopathy behind him is the strongest factor he can command. Incidentally it is his first thought in such time of trouble.

"In time of peace prepare for war" is an old aphroism. Therefore prepare for trouble by becoming members of the National organization and, having done so, maintain the contact much as you would a sacred obligation.—G. J. C.