

# *The* COLLEGE JOURNAL

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## A. O. A. CONVENTION

June 26th to 30th—Dallas, Texas

Hotels Adolphus and Baker

Be Sure to Go To . . .

### DALLAS!



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## OUR HOBBY—Continued

We question if we should place on paper our thoughts tonight, for we are "blue." Have you ever had the "blues" with or without cause?

In our younger more impressionable years, they were a frequent source of unhappiness. In later years, we felt we had completely overcome them. But tonight, these little devils come to torment us as they did in the long, long ago when we lacked the maturity and the stability which are our pride (?) today.

What is it all about?

Possibly you remember our only attempt at poetry in the ages of youth. It sings through our mind tonight:

"As we long and long again  
For that which seems for other men  
Who knows the torture in the breast?  
Who understands this strange unrest?  
Longing ever. Never, never blest!"

We are wondering if these present "blues" are not occasioned by a question today by a valued member of our faculty as to whether there was any hope of our having our Science Building ready for use next year.

We had to reply that there seemed no possibility of its appearance then or in the near future.

Our Alumni Foundation is concerning itself with thoughts of endowment. Thoughts, at best, can be but progenitors of action. If they do produce action, fine and dandy. If they do not, they simply abort. Are these plans—or dreams—of endowment soon to be brought into realization? We know not. For so long have we had to progress under our own steam, that is hard to conceive of the possibility or probability of any real help.

When we say we have thus far progressed under our own steam, we feel gratified in the knowledge that in the present scholastic year we have been able to lap off \$5,000.00 of our mortgage debt, antedating by several months the due date of the payment. And next year we will undoubtedly be able to do the same.

In fact, we are reminded that throughout our career we have more often antedated payments of this sort and have rarely received a notice of "payment due" on either interest or principal.

So maybe we have no real occasion for our fit of "blues" after all. As we think backward the realization comes that much time—and that is what life is made of—was wasted in our "blues" of the past.

It simply resolves itself into this, we are impatient. The Science Building is a real need—it is a pressing necessity—its final erection is a foregone conclusion—though we may have to struggle on without it next year and the next—until finally we are able to do the job under our own steam.

Yes, the fact is that we are impatient, that the need is pressing, that we are worthy the support and help not only of our alumni but of all "right" members of the profession to whom we have dedicated all of our personal abilities, our fortunes, and life itself.

God grant that we may be spared the necessary years to bring our desires to fruition—for the sake of ailing humanity.

A. A. Kaiser, Secretary.

## POST-OPERATIVE ADHESIONS

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

How many times you have heard a patient upon whom a surgical diagnosis has been made, say: "Yes, and this operation will always have to be followed by another to relieve adhesions." And then she relates the experiences she has heard from Mrs. Smith, Mrs. Brown, Mrs. White and numerous others who had undergone surgical operations for the relief of symptoms, the most pronounced of which was pain, and when the "smoke of battle" had cleared away, the same old pain was in the same old place, only worse; that the surgeon had postulated "adhesions" as the cause of the aggravating pain and that a second operation was necessary to correct the aforesaid "adhesions." This second operation being completed (and the same old pain still persisting) it was followed by the advice for a third operation if the patient would stand for it, if not by the continued suffering on the part of the patient, or to be told finally in desperation by the surgeon that "It's all in your head"—a ghastly joke!

One lady came my way for consultation who had been subjected to five operations (four of which were to relieve the adhesions caused by the first) and another who had had nine major operations for the relief of a pain in the right side following childbirth or to correct damages caused by such operations. Each of these patients never had been freed from the original pain for which the first operation was done.

These are common experiences and the average layman is acutely conscious and apprehensive that a surgical operation must of necessity be followed by a second one before he or she can be well (if ever that result will be obtained). Often times this conviction results in a psychic handicap most difficult to overcome. It is, or should be, axiomatic that, if a pathological condition is the cause of certain symptoms and if a surgical operation is performed which removes said pathology, then the end result should be relief from the aforesaid symptoms and an improved condition of the patient. If the primary symptoms persist after successful surgical removal of the postulated pathology then the assumption of the presence of adhesions to explain the failure is a misnomer. A true statement should have been an error in diagnosis and a more determined search for the causative factor should be instituted. The persistence of the primary pain in the same place following operation is an evidence of error in diagnosis rather than the occurrence of adhesions.

Adhesions as a rule rarely cause serious trouble unless they are so placed as to twist or kink or obstruct

a given viscera or if they bind a movable structure such as an appendix, a fallopian tube or a gall bladder to an immovable one, or which interferes with the freedom of function of the given structure.

An appendix may become adherent to the side of the pelvic wall or it may be caught on a coil of the small intestine or become anchored to the uterus or to a fallopian tube. In which event whenever the caecum would become distended with contents or gas, traction which would naturally fall upon the adherent appendix, would cause pain with nausea or vomiting but with no fever or leukocytosis. There would be a new set of symptoms develop from the changed relationship caused by the adhesions—not the same old manifestations.

Every surgeon of experience has noted and has been impressed with the magnitude of massive adhesions present in an abdomen oftentimes with but a paucity of disagreeable symptoms and, on the other hand, a single adhesion properly placed that produced cataclysmic results. The adhesions resulting from acute inflammatory reactions such as an acute appendicitis, pus tubes or an acute cholecystitis as a rule are absorbed after the need for their protective function has passed. The surrounding structures return to a state of normalcy. Nature compensates in this way. I well remember opening an abdomen of a young woman in her teens who was afflicted with a very serious bilateral pyosalpingitis of non-specific origin. It was associated with an enormous pelvic abscess. It was necessary to drain the abscess.

The abdomen was opened and an



almost impenetrable mass of adhesions, prohibitive from an operative viewpoint, presented, extending from the navel down. All that could be done was to break through into the abscess cavity, insert a large rubber drain tube and close the belly. Later on the tube was removed and the patient elected to return home without further surgery to remove the offending pathology. Some months elapsed. Then she was brought in via ambulance with an emergency appendix. The diagnosis was gangrenous appendicitis with rupture and abscess formation. The belly was opened to the right of the rectus muscle so that the drainage would be to the outside of nature's protective barrier. The abscess was drained but the dense mass of adhesions prevented visualization of the appendix. It would have been bad surgery to have broken the protective barriers in the search for it. The whole belly was a mass of adhesions.

After recovery she returned home and two months later was back again with an acute obstruction of the bowel of the mechanical type. On opening the abdomen I was greatly surprised to find the massive adhesions almost absorbed with a network of fibrous bands extending fan shaped from above downward representing the large veins of the omentum. The omentum had disappeared. A loop of the small intestine had slipped under one of these bands that had a short attachment and had become strangulated. It was released and the remaining fibrous bands were resected. Some months later she was back again with an acute flare up of the original pathology that had caused the first disturbance. The belly was opened immediately to resect the tubes. My astonishment was great to find complete absence of adhesions, except those involving the diseased tubes, even after the belly had been entered three times previously within the year. All of the original massive adhesions had been absorbed.

Again in a case of long standing, pyloric ulcer, a gastro-enterostomy was necessary. The pyloric end of the stomach was buried in an impenetrable mass of dense adhesions which extended, not only over to the liver, but to the right lateral wall. A posterior gastro-jejunosomy was done. The patient's condition was so critical that even an operation of that

nature was a very grave risk. She made a stormy recovery. Five years later she was struck on the abdomen immediately over the site of her operation, by the corner of a board. It produced a recurrence of symptoms and again her life was despaired of. The X-ray postulated a traumatic ulcer at the site of the anastomosis. An exploratory operation was advised and done. Imagine my surprise when I found not a single remnant of the former adhesions. The pylorus was normal and functioning freely. The anastomosis was functioning perfectly. There was no pathology there. A marked kink at the duodeno-jejunal angle was found which was caused by a damaged "Ligament of Treitz" and which had produced a partial duodenal block. This ligament was cut with subsidence of symptoms. Space prevents repetition of case experiences. Enough has been said to suggest the eventual disappearance of adhesions caused by acute inflammatory processes. **I do know positively that when symptoms ascribed to a definite bit of pathology remain after successful correction of said pathology by surgical interference, it spells an error in diagnosis!**

Surgery as a rule deals with effects, rather than with primary causes. For example, a lumbo-sacral lesion may produce circulatory changes in the uterus, for instance, that results ultimately in a uterine fibroid. This may be of such proportions as to interfere, through pressure, with the functional activity of neighboring structures, or it may give rise to alarming hemorrhages. Removal is indicated. Hysterectomy in no wise affects the primary lumbo-sacral lesion. Such a lesion has a penchant for the production of pelvic pain even after removal of the uterus. When this occurs medical surgeons have no way of accounting for the presence of such pain except by postulating adhesions. This in no wise should mislead an osteopathic physician, especially if his or her attention has been directed to the presence of such a lesion and the necessity for its correction stressed. And yet in many instances when surgical patients have been referred for operative treatment, have I written the referring physician that in as much as the surgical treatment was successfully concluded, I was returning the patient to him and called attention specifically to lesions that needed cor-

rection: told him that I had explained to the patient the necessity for such after treatment; that it might take from three to six months, and that the patient was entirely agreeable to the plan. After a varying period of time the patient was sent back with a diagnosis of "adhesions" and further surgery recommended, yes, even insisted on. Questioning revealed the fact that the patient had not received a single osteopathic treatment. When the patient raised the question of my recommendation the attending physician would discount the idea by saying that he was a general practitioner while I was a surgical specialist, hence he was more competent than I to pass upon it. On examination I found conditions innocuous in so far as surgical pathology was concerned and returned the patient to the doctor again for correction of lesions, only to be refused osteopathic treatment. Eventually the patient found an osteopathic physician who knew a lesion when he saw it and was confident of results when he corrected it. The patient was saved from a second and needless surgical operation.

Sometimes I feel that the referring physician is hesitant to treat a patient who has been operated recently for fear the treatment might result harmfully; that the force of the treatment might produce rupture or pull stitches loose. As a result corrective treatments were taboo. When can one with safety administer corrective treatment upon a recent operation? Generally speaking I do not like to administer any treatment that will produce strain upon the stitches before they have been removed. After removal, say two weeks after the operation, one can, as a rule, resort to corrective treatment. Ordinary judgment is, of course, necessary, and manipulations resorted to that will least strain the line of incision. Certainly within a month any type of treatment not prohibited by pain to the patient, can be used. The same postulation holds in the treatment of pregnant women, regardless of the stage. Of course in an "habitual abortion diathesis" caution must always be the rule.

In closing let me reiterate: failure to relieve given symptoms by corrective surgical technic means diagnostic error rather than provocative adhesions.

### CRITES P. G. COURSE

The following doctors took the special one week eye, ear, nose and throat post-graduate course given by our A. B. Crites the latter part of February:

John M. Shellenberger, York, Pennsylvania; Harry D. Taylor, Lamb Hospital, Denver, Colorado; Walter C. Chappell, Mason City, Iowa; Joe F. Reed, Watervliet, Michigan; Owen O. Taylor, Oberlin, Kansas; H. N. Norris, Ord, Nebraska; D. M. Russell, Kansas City, Missouri; John S. Hull, Kansas City, Missouri; C. A. King, Kansas City, Missouri.

Dr. Shellenberger is remaining in Kansas City for one or two months for further work in the clinic.

Dr. Taylor goes on to Europe for a few months more of post-graduate work.

It is the  
"Aggressive College"



Kansas City College  
of  
Osteopathy  
and  
Surgery

2105 Independence Avenue

Kansas City, Missouri



## THE VITAMINS

Leland Jones, Class of 1942.

In these discussions we shall attempt to discuss the vitamins from a research standpoint rather than a purely medical standpoint although an absolute division of these phases of the study is neither possible nor desirable. To outline these discussions we will first give a brief history of the discovery of the vitamins and a review of the technical processes involved in vitamin research. Thence we will give a description of the individual factors as we know them. We will close by a brief discussion of vitamin therapy as pertains to the entire field.

Interest in nutritional studies is not new, in fact the problem of proper eating dates back a considerable distance into history. For many centuries there existed the concept expressed by Hippocrates that there existed a specific universal nutrient principle which he termed "Aliment." Even as late as a hundred years ago this concept was reaffirmed by Dr. Beaumont, the military surgeon who first observed human digestive processes upon his patient Alexis St. Martin. He recognized many different kinds of foods but only one "ailment" which different foods possessed in differing quantities. Contemporary with these studies was the work of Magendie (1783-1855), who began feeding experiments on animals by giving them what we know as a protein free diet in an effort to discover what constitutes an adequate diet in a chemical sense. To Magendie belongs the honor of establishing modern methods of research in nutrition. His techniques have been used to gain a great deal of the knowledge of vitamins.

For centuries it had been occasionally suggested that certain diets of stale foods produced certain pathological conditions, e.g., scurvy among sailors, soldiers and prisoners. These observations were for the most part in the nature of philosophical speculations and no effort was made to determine the effects of an adequate diet on these conditions.

The first nutritional disease to receive any concentrated study was scurvy, probably because of its tendency to affect and incapacitate the military and naval personnel. Scurvy does not seem to have been a severe

problem before 1550. However, there were recorded a few epidemics prior to that time. Probably the first recorded account of scurvy concerns the crusade of Louis IX in the thirteenth century during which time the French Army suffered greatly from its ravages. Scurvy was also known in cities under a state of siege, but it was not until extended sea voyages during the period of exploration in the sixteenth century and following that, scurvy presented a severe problem. The first treatise on the disease was published by James Lind, a surgeon in the British Navy, who records in his "Treatise on Scurvy" published in 1757, a careful study of all the available information relating to this condition. He was convinced that the disease was due to a lack of fresh vegetables in the dietary. He presented irrefutable evidence to support his claims but it required the production of the condition in the laboratory to gain complete acceptance of his findings. At this time, however, due to his findings the British Navy began the routine issuance of limes to the sailors resulting in the appellation of "Lime-juicers" or "limies" by which name the British sailor is still known. The work of Lind on scurvy is considered to be the real beginning of the knowledge of the food principles which we know as vitamins.

A second nutritional condition to be attributed to lack of the vitamins was Beriberi. The earliest descriptions of the clinical picture dates from 2600 B.C. but the Chinese were evidently familiar with the condition long before that. The earliest work on the etiology of beriberi is the work of Takaki, Director general of the Japanese Navy. Between 1878 and 1883 the average number of cases treated medically in the navy was 323.5 per thousand. The principle component of the diet of the sailors was polished rice and fish, the remainder being composed of vegetables. Takaki made a study of the diet and health of the British sailors and decided that beriberi was the result of faulty diet. In 1884 he accomplished a change in the diet of the sailors with the result that beriberi practically disappeared in the Japanese navy.

The first successful attempt to

produce a "deficiency disease" among experimental animals was made by Eijkman between 1889 and 1897. He observed that chickens developed the essential features of beriberi when restricted to polished rice as their sole food. For his work he was awarded a medal by the Franklin Institute in Philadelphia in 1923. His work as a medical officer in the Dutch East Indies was of inestimable value from a clinical standpoint causing the closing of the hospitals for this condition and causing the disease to become almost a clinical curiosity.

At the same time that work was being done on the clinical aspect of nutritional deficiencies there appeared in Germany a paper by Lunin (1881) comparing the growth of mice fed on milk with those fed a diet composed of milk sugar, milk fat, milk protein, and the refined mineral constituents of milk. He found that while adult mice lived in good health for several months on the milk diet they invariably died within one month on the synthetic mixture. He drew the conclusion that "other substances indispensable for nutrition must be present in milk besides caseinogen, fat, lactose, and salts." During the next ten years there were reported several other attempts to nourish animals on synthetic diets without success. It is interesting to note that at this time there was no one who saw the correlation between the clinical findings on scurvy and beriberi and the similar conditions produced in the laboratory.

As late as 1900, Atwater, the outstanding investigator in nutrition in America, in a Bulletin by the United States Department of Agriculture, discussing practices relative to the purchase of foods, discusses dietary requirements purely on the basis of caloric content—the protein, fat and carbohydrate content. As late as 1911 he again reaffirmed his belief in the adequacy of a diet providing the approved amounts of protein, carbohydrates, fats, and calories depending solely upon chemical analysis.

Pekelharing, of the University of Utrecht, expressed in 1905 the belief that an adequate diet must contain substances which were still unknown, basing his theory on experiments on rats finding that a purified diet invariably resulted in starvation.

A most significant advance in this study occurred in 1909 when Stepp

demonstrated that diets that were lipid-free were incapable of supporting the lives of adult mice. The addition of all the known constituents of fats, such as cholesterol, lecithin, etc., did not restore the diet to completeness. He discovered that alcoholic extracts of certain foods such as egg yolk did make the diet complete for mice.

In 1911 Funk, basing his experiments on the work of Eijkman coined the word Vitamine to denote the anti-neuritic principle which was found in rice polishings. An analysis of the word gives us the meaning vital amine, based on the supposed chemical structure of the principle. This name was immediately attacked by those who found that there was some growth promoting principle in fats which was in no way related to the amines. This resulted in the dropping of the final e leaving the word as we know it today: vitamin.

During the years 1911-1915 evidence had accumulated suggesting the necessity of two unidentified nutrient principles, widely different in character, necessary in the diet. The final proof of this premise came in 1915 thru the efforts of McCollum and Davis to discover the cause of nutritive failure of animals fed upon single grains. They found that wheat is rendered complete for the nutrition of the rat by supplementing it with three things, namely, a salt mixture, a protein to enhance its amino-acid content and a fat which furnished the "growth promoting" principle, now called vitamin A. Polished rice was found to be still deficient after the addition of the same materials but an extract of rice polishings did make the diet complete. Upon his findings McCollum formulated, in 1915, a working hypothesis as to what in chemical terms constituted an adequate diet. They stated that the diet must contain in addition to the long recognized dietary factors two as yet unidentified substances, or groups of substances, one of these, called by the Vitamin A is associated with certain fats, egg yolkfats, cod liver oil, and the fats of glandular organs but is absent in fats or oils of vegetable origin. The second substance, vitamin B, is a water soluble substance never associated with fats or oils but is widely distributed in natural foods.

Following the reports of McCollum



and Davis and extending to the present time there has been a tremendous amount of work concerning these food principles resulting in the discovery of an almost undetermined number of so-called vitamins and the chemical identification of many of them.

At the present there are six vitamins definitely accepted and chemically identified: These are known as A, B<sub>1</sub>, C, D, D<sub>2</sub>, E, and G, (B<sub>2</sub>). Lists of controversial factors vary from 6 (Funk, and Ivy) to as many as ten or twelve by less critical authors.

At this time it will be well to define vitamin under the light of present findings. According to Hawk and Bergeim, in "Practical Physiological Chemistry," the vitamins are defined: "A vitamin may be defined as an extremely potent organic compound, which occurs in minute quantities in natural foodstuffs, and must be available to the body from dietary or other sources in order that a specific function of physiologic maintenance or growth may proceed normally." This is the most up-to-date definition and recognizes the fact that the vitamins do not necessarily come from the diet but may be synthesized within the body. This is the case with Vitamin D which is formed by action of irradiation on ergosterol (provitamin D) present in the skin.

The scientific study of the vitamins presents many difficulties, in the first place the vitamins are recognized biologically only by their absence, rather than their presence. This requires, almost, the fortuitous chancing upon some deficiency combined with acute observation to detect a new principle upon which to base further research. This is further complicated by the fact that conditions present in one species of experimental animals may be widely different or entirely absent in other animals or man. This is illustrated in the studies of vitamin C, which in man and guinea pig prevents the condition known as scurvy. In the albino rat, however, a diet deficient in this principle is entirely adequate, indicating most probably that the Ascorbic acid, or vitamin C, is synthesized in the body of the rat. The opposite picture is presented in the action of Vitamin E. It is definitely known that lack of this vitamin in the rat produces in the male the atrophy of the epithelium of the

seminiferous tubules while in the female it prevents the continued development of the foetus and results in reabsorption of the embryo. In the human there has, as yet, been demonstrated no satisfactory clinical description of disorders due to lack of this vitamin, although in the normal diet it would indicate that few individuals receive a sufficient amount. Clinically there have been reports of cases of habitual abortion which have yielded to treatment with concentrates containing Vitamin E. The reports are, however, insufficient and lack sufficient scientific verification to make any observation concerning its nature.

A second complicating factor in the study of these nutritional elements is the fact that there may be several compounds which are capable of producing a clinical result which although they are closely related to are not to be considered as true vitamins, for these compounds the term of vitamin activity has been suggested, this indicates certain biologic properties, this is opposed to the term vitamin which is used to refer to a definite chemical compound. This has led to great confusion in the identification of certain compounds, especially in the vitamin B complex, which includes at least seven related substances with related properties.

A third difficulty in arriving at an understanding of the nature of vitamins is that in the clinical picture especially as we are confronted with it in the United States, the deficiency condition is complicated by a general deficiency of other vitamins and nutritional factors. This condition is termed a polyavitaminosis as opposed to an avitaminosis which occurs when the diet is deficient in a single vitamin. Avitaminosis, needless to say is a condition usually encountered only in laboratory animals.

#### Assay

As stated previously the vitamins are identified only by their absence in the diet, they are present in so small amounts that chemical determination is usually impossible, the usual method of assay for all of the vitamins at present in the United States rests on biological assay, this gives the determination of their activity or potency rather than any definite amount, this is, however the significant value from the nutritional standpoint. The units of potency will be given during the

discussion of the separate vitamins. There are some chemical determinations which promise to facilitate the quantitative determination of the vitamins. Vitamin A is assayed by a color reaction developed by Carr and Price, this technique is recognized as a standard assay by the British Pharmacopeia, but is not in general use in the United States. Vitamins B<sub>1</sub> and C are also found to give characteris-

tic colorimetric reactions which indicate their concentration.

Chemical or physical assay will greatly facilitate vitamin studies. Biological assay is tedious, expensive and in the final considerations still depends to a great extent on individual variations in the animals which renders any data questionable. With increasing knowledge of the chemistry of the vitamins will be found an accompanying development of chemical assay.

## EXTRA—EXTRA

Dr. Russell C. McCaughan is Coming

On April 19, 1939, at 8:00 P. M., Dr. R. C. McCaughan, official secretary of the American Osteopathic Association, will appear in Kaiser Hall at the Kansas City College of Osteopathy and Surgery to address the local members of the profession, their wives and the students of osteopathy.

The privilege of hearing Dr. McCaughan present his popular lecture on "Osteopathic Trends" promises to be a real treat.

This meeting is arranged for and provided by the Kansas City Society of Osteopathic Physicians and is a very attractive feature of the Childs' Health Conference and Clinic being held in Kansas City April 19 to 22. Hostesses at this session are the members of the Auxiliary to the Kansas City Society of Osteopathic Physicians and Surgeons, with Mrs. Joseph M. Peach, their president, officiating. Musical numbers are to be presented beginning at 8:00 P. M. and refreshments will be served after the lecture.

Dr. Charles Alhante, president of the Kansas City Society of Osteopathic Physicians and Surgeons announces that the regular monthly April meeting of the Society is to be omitted this month to encourage attendance at the evening sessions of the Conference—Clinic.

All sessions except this Dr. McCaughan evening are to be held at the Continental Hotel, 11th and Baltimore formerly the Hotel Kansas Citian. Lectures and examinations of children will take place on the roof garden which is reserved entirely for our meeting, and the Banquet will be held in the spacious attractive Continental Banquet Room on Thursday evening, April 20th.

Dr. Arthur E. Allen, president of the A. O. A. will honor us with his presence and give the address of the evening.

Many other attractive features are to be presented by prominent men and women of the profession. Program and other announcements appear elsewhere in this number.

Margaret Jones, D. O.,  
General Chairman.



## COME TO TEXAS

J. W. McPherson, D. O.

Come to Dallas! To Texas! To the Great Southwest! To most members of the osteopathic profession a trip to Texas would be as replete with the same exotic allure and old-world charm as a trip abroad. Here in the Lone Star State you may meet diverse and alien races—the White, the Red, and the Black, each with their age-old customs and traditions which time has not withered nor custom staled in their infinite variety. The American Negro, with his laissez faire, his childlike simplicity, his rich spirituals, his colorful folklore and his deep religious fervor, is impressive and interesting. These Negroes are the best of servants, devoted to their “white folks.” They are a peculiar and gregarious people who make a distinct contribution to the life of our Southland. Really you haven’t begun to live until you have dined upon smothered chicken, gumbo and beaten biscuit prepared as only these delicious viands can be prepared by some good old Southern Mammy.

Not many leagues to the southward lies San Antonio, famed in song and story. Just beyond (a mere two to four hundred miles depending on which place you want to hit) lies the Border Country and Mexico teeming with romance and glamour. Tinkling guitars and castanets, sloe-eyed senoritas and dashing toreadors, and such gustatory triumphs as mole de guajalote, tortillas, tamales y chongos. A fare like this, followed with a spot of tequila, and you will aver, in no uncertain terms, that this is the best of all possible worlds and that you are delighted to be amongst those present. Even confirmed Republicans unbend under this radiance and resplendence and “behave like human beings.”

Dallas itself is one of the most cosmopolitan cities in the Western World—a city of broad culture and thriving enterprise. Its people are progressive and intelligent. We know you will be charmed with our Southern hospitality as well as our “mixed brands” of hospitality. You will marvel at our magnificent distances; you will be enraptured by your sojourn amongst the denizens of the salubrious Southwest. Texas will be expecting you in June.

## PROGRAM—CHILD'S HEALTH CONFERENCE

The program of the Seventh Annual Child's Health Conference and Clinic is nearly completed and is replete with names of nationally prominent osteopathic lecturers. Every practitioner in this section should be deeply appreciative of the opportunity and plan now to hear our National President, Dr. Arthur E. Allen; A. O. A. Executive Secretary, Dr. R. C. McCaughan; and Dr. Leo Wagner, our guest speaker, who is Professor of Pediatrics at the Philadelphia College of Osteopathy and Surgery.

### WEDNESDAY, APRIL 19th (MORNING)

8:00 to 8:30	Clinic presentation with patient.....	Dr. E. V. Jones
8:30 to 8:40	Address and Invocation.....	Rev. Cassius Street
8:40 to 8:50	Address of Welcome.....	Dr. Charles Alhante, Pres. of K. C. Society
8:50 to 9:00	Announcements.....	Dr. R. O. Brennan
9:00 to 9:30	Chorea.....	Dr. G. N. Gillum
9:30 to 10:00	The Art of Handling the Child.....	Dr. Pearl Thompson
10:00 to 10:30	Enuresis.....	Dr. Wm. Warren
10:30 to 11:00	“Heart”.....	Dr. Arthur D. Becker
11:00 to 11:50	Acute Infectious Diseases with special emphasis to Pertussis, Scarlet Fever, and Measles.....	Dr. Leo C. Wagner
12:00 to 1:00	Noon Intermission.	
1:00 to 5:00	Examination of Children.	
7:00 P. M.	Osteopathic Trends.....	Dr. R. C. McCaughan

Wednesday evening will be entirely at the disposal of Dr. R. C. McCaughan, A. O. A. Executive Secretary, that we may have ample opportunity to share the vast store of knowledge and vision that he possesses and so ably presents.

### THURSDAY, APRIL 20th (MORNING) (Kansas Day)

8:00 to 8:30	Clinic Presentation with Patient.....	Dr. K. J. Davis, Kansas City, Kans.
8:30 to 8:40	Address and Invocation.....	Unannounced
8:40 to 9:10	Subject to be Selected.....	Dr. K. A. Bush, Pres. Kansas O. A., Harper, Kans.
9:10 to 9:50	Endocrinopathies in Children.....	Dr. Ray McFarland
9:50 to 10:30	Childhood Surgical Emergencies.....	Dr. H. C. Wallace
10:30 to 11:00	Respiratory Infections in the Child.....	Dr. E. C. Kinzie
11:00 to 11:50	The Commoner Problems in Infant Feeding.....	Dr. Wagner
12:00 to 1:00	Noon Intermission.	
12:30	Luncheons.....	Alumni
1:00 to 5:00	Examination of Children.	

### FRIDAY, APRIL 21st (MORNING) (Missouri Day)

8:00 to 8:30	Clinic Presentation with Patient.....	Dr. H. T. Wittenberg
8:30 to 8:40	Address and Invocation.....	Father Keyes
8:40 to 9:10	To be Selected.....	Dr. W. E. Dickey, Joplin, Mo., Pres. Missouri, O. A.
9:10 to 9:35	To be Selected.....	Unannounced
9:35 to 10:00	To be Selected.....	Unannounced
10:00 to 10:30	Child Psychology Problems.....	Dr. H. G. Swanson
10:30 to 11:30	Focal Infections in the Nose and Throat.....	Dr. W. E. Hartsock, St. Joseph, Mo.
11:00 to 11:50	Simplifying the Heart Murmurs in Children.....	Dr. Wagner
12:00 to 1:00	Noon Intermission.	
1:00 to 5:00	Examination of Children.	

Mark the dates on your calendar now and plan to attend all sessions.

Dr. R. O. Brennan, Program Chairman.



## THE LAD WHO MADE GOOD

A young man, a graduate of the Kansas City College of Osteopathy and Surgery and but recently married, faced an uncertain future. He was without funds, broke in the vernacular, and with no location in sight. The expense of opening an office and of providing a home in a strange locality was a prohibitive handicap. The young wife had a suggestion. Her parents lived in a very small, out of the way community, down in the Ozark Hills of Missouri, veritably a wide spot in the road. The old doctor, who for many years had been the guardian of the health of the community, had passed to his just reward. They would go there temporarily at least. The doctor acquiesced. They went.

With only the meagerest of facilities, but backed by the exuberance of youth, a loyal wife, a confidence in his school of therapy, and an abiding faith in his ability to succeed, he gave the best of himself to his clientele. His practice grew. His sphere of influence expanded so that in a comparatively short time he was known and in demand over the entire country. He purchased a car. He enlarged upon his office equipment. He spent time in study. He attended his district and state meetings. He never overlooked an opportunity to add to his store of knowledge in the practice of his profession. As he developed, the confidence of his patients in him increased proportionately. He was soon a necessity in his chosen field of endeavor. He had grown into the mantle left vacant by the old doctor.

Two years later I was in attendance at the monthly meeting of his district association. He sat next to me on my right during the dinner. Naturally I inquired about his progress and his prospects for the future. He gave me a short resume of his experiences and added that he had just completed for his personal use a modern home and a model office. From his description of it that home was modern to the extent that it would meet the exactions of the most "persnickity" of our city denizens. He was successful in his practice. He had the love, confidence and respect of his community. He was prosperous as well.

In the meantime children had blessed them. As they grew in age and stature the question of a more adequate environment, educationally and socially, for them was discussed. Maybe the doctor had an idea that he had outgrown the possibilities of his community and, like Alexander of old, longed for new therapeutic

worlds to conquer. In any event, he moved his family to a small city adjacent to Kansas City where better educative facilities existed for the children; where city advantages were available for himself and wife, and where he could have access to a modern hospital. He started in to establish himself.

In the meantime his old neighbors, friends and his clientele generally were without a doctor. No new doctor could see any possibilities in such a location. Their need for medical attention was imperative. His friends held a meeting. They decided that their erst while doctor was a community necessity: that they could not get along without him. Having arrived at such a conclusion and possessing an abundance of initiative, they acted.

One morning while the aforesaid doctor was waiting for business to develop in his new location three trucks and a large, enthusiastic committee of his former patients appeared before his home and announced that they had come to move him back. They said he was necessary to them, that they could not get along without him and that the feeling was country wide that he should return. They urged their case so vehemently that he yielded. He concluded if he had made such a place as they said he had in their hearts and in the estimation of the people of that country, he would go back and serve them. He could arrange in some way for the advantages necessary for his children. That doctor was a success in every sense of the word.

In this materialistic age we are prone to measure success in terms of tangibles, money, property, goods or those things upon which a money value can be placed. Success in any given vocation is estimated upon such a basis. The yard stick is repre-

sented by the size of the bank account. The practice of the healing art is no exception to the general rule. We hear doctors boasting of their business methods, the size of their fees, the amount of their collections, their refusal to render professional service to those who are indigent or to those who cannot pay cash for the service rendered. The neophytes in the healing art have this idea forced upon them by the attitude of those older in the practice who glory in telling of their ability to gather in the coin.

Such a concept commercializes the healing art, puts it on the basis of a trade, lowers its status and prostitutes the noblest calling in life, the ministry not excepted. Again the experiences of the last eight years marking the span of the depression to date, has demonstrated the insecurity of such a gauge, the futility of money as a measure of success.

Success in life must be based upon a more secure foundation. It can only be presented by the hole you leave in your community

"—when thy summons comes to join  
The innumerable caravan which moves  
To that mysterious realm, where each  
shall take  
His chamber in the silent halls of  
death."

A consistent and reliable measure of one's success in his community is proportionate to the length of the funeral train that follows him to his last resting place.

Remember in "Tales of the Bonny Brier Bush" under the caption of "A Doctor of the Old School," Ian MacLaren gave expression to the most forceful word picture of a country doctor extant. His Doctor Weelyam MacLure was a family physician in a poor countryside parish in Scotland. He ministered to his people faithfully and without favor, the poorest client was just as much an obligation as the lord in his castle. Distance did not deter him or the elements prevent his calls of mercy. He defied the pains of physical infirmity. He tended his flock.

And then came the inevitable. He died as he had lived—in the harness. His funeral occurred on a notably cold day immediately following a severe and epoch-making blizzard. Every man in the glen was there dressed in his blacks except one, a

patriarch some 82 years of age, who complained bitterly because they would not allow him to attend. Even the great lord from the castle was there dressed in his blacks, a mark of high regard and respect. Before the interment a skiff of snow fell on the casket covering his name. One of the pallbearers knelt reverently beside the casket and brushed it away. With bared heads and great coats removed during the ceremony, they laid him away with all the homage due a great man.

This was the measure of the success of that "Doctor of the Old School;" a vacancy in every heart of every member of his community; a personal loss to every friend and acquaintance in the territory he served. They accorded him a deference, a respect, a love, a reverence that money could not buy nor power compel.

G. J. C.

## Kansas City College of Osteopathy & Surgery

2105 Independence Avenue

Kansas City, Missouri



The  
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## LUMBAR PUNCTURE AND THE CEREBROSPINAL FLUID

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

The cerebrospinal fluid circulates in a closed space, the subarachnoid, about the brain and spinal cord. There is no mechanism by which the fluid is distributed but rather is it circulated by changes in pressure due to breathing, changes in posture, and gravitational influence.

The fluid is secreted primarily in the lateral ventricles by the choroid plexus, and passes into the third ventricle, and thence into the fourth by the interventricular foramina (Foramen of Munro) and cerebral aqueducts, respectively. The outflow into the Cisterna Magna from the fourth ventricle is through the foramen of Majendie, and the foramina of Luschka. There is some secretion of the fluid also in the third and fourth ventricles, by small portions of the choroid plexus situated within those structures.

There is constant replacement of the cerebrospinal fluid, absorption or excretion taking place principally by way of the arachnoid granulations into the Superior sagittal sinus, or into the numerous venous lacunae connected with the sinus. There is some absorption also into the lymph spaces and capillaries of the pia-arachnoid.

### The Normal Cerebrospinal Fluid

The fluid is a colorless, watery, slightly alkaline liquid, with a specific gravity of 1006 to 1008. It has from 0 to 5 lymphocytes per cubic millimeter; protein 20 to 40 milligrams and about 65 milligrams of sugar. It does not coagulate spontaneously.

### Function of Cerebrospinal Fluid

It acts as a water cushion for the brain and spinal cord, thus serving to prevent concussion or more serious injury. It bathes the surface of the brain or rather pia, and follows the channels of the perivascular lymphatics, thus serving to bathe the cortical cells and carry away waste products.

### Changes in the Cerebrospinal Fluid

With this intimate contact of the circulating medium and the brain and cord, it is easily seen that any acute or chronic inflammatory process involving the central nervous system

which in most cases produces changes that are beyond the range of normalcy. There may be alteration in the sugar, proteins, cells, or other constituents or the presence of microorganisms. Frequently there is increase in the quantity of fluid, and therefore the spinal fluid pressure will be above normal. One or all of these findings may be of the greatest significance, and point to the correct diagnosis.

### The Lumbar Puncture

This procedure was first introduced by Quincke. It is best that the patient be placed on his side with the back arched as much as possible, with the knees drawn up toward the abdomen, and the neck flexed. This position of the patient is maintained by an assistant. The puncture may be done with the patient sitting but is not the method of choice, since, in case of fainting or sudden movement there is greater danger of breaking the needle. If the patient is markedly apprehensive, three grains or more of sodium amytal may be given an hour before the puncture.

The lumbar region should be properly prepared by use of soap and water followed by tincture of iodine, which is removed with alcohol. The latter may be used exclusively, but it is questionable whether the antiseptics is complete. Infiltration of the subcutaneous tissue and supraspinal ligament is done with one or two per cent novocaine, in any interspace below the second lumbar, though the third interspace is commonly used. It is best that the operator wear sterile gloves, though some dispense with this precaution. Before the spinal needle is introduced the patient is instructed not to move, even if pain is felt, and the assistant, of course, keeps the spine flexed to the greatest degree possible as this separation of the spinous processes facilitates the introduction of the needle. This is introduced in the midline, holding the skin to keep it from sliding, and at an upward slant of about 15 degrees, and somewhat nearer the lower spinous process than the upper. It is very important that the stylet be in place and that the needle be tested previ-

ously for any weakness by flexing it with the stylet removed. Should bone be struck the needle must be withdrawn to the subcutaneous tissues and reintroduced, never forcing the needle at any time. When dura mater is pierced a "give" is usually felt. The stylet should then be withdrawn. If fluid does not escape, the stylet must be re-introduced and the needle cautiously pushed forward or withdrawn slightly as deemed necessary. Sometimes a piece of meninges may cover the end of the needle, in which case a slight rotation of the needle may loosen it, or asking the patient to cough may remove the obstruction. If the needle is introduced too far, veins on the anterior wall of the spinal canal may be injured and hemorrhage occur, which makes the fluid valueless for all tests except the Wasserman. In such cases, if the needle should be withdrawn and quickly introduced into a higher interspace, it is usually possible to get uncontaminated fluid. Otherwise, one should wait for a period of two weeks or longer, by which time the blood will have disappeared, unless it is an emergency puncture.

### Measuring the Pressure and Collecting Specimens

In the average case there is little need of measuring the spinal fluid pressure, but it is valuable for teaching purposes. A water manometer of the Ayers type, which consists of two jointed, calibrated glass tubes is used. The lower tube may be attached to a special pet cock attached to the needle, or more indirectly by a short rubber tube. The spinal fluid will rise in the manometer to the pressure level of that within the subarachnoid space. This in the horizontal position is normally ten to fifteen centimeters of water. It will be observed that in coughing or breathing, the fluid level rises and falls in the manometer, indicating the effect of such processes on spinal fluid pressure. Should blockage, as from a tumor, be present anywhere along the spinal canal, and above the needle, the Queckenstedt method will often reveal the presence of the obstruction. This consists of firm digital compression of the internal jugular veins, in the lower part of the neck. If there is complete block along the canal the fluid will rise no higher in the spinal manometer. If there is partial obstruction the rise will be very slow,

and the fluid sinks very slowly on release of pressure. Normally, on compression, the cerebrospinal fluid rises rapidly to twice the normal height in the manometer and falls rapidly on release of pressure. The initial rise is explained by the fact that back pressure occurs in the internal jugular veins, which in turn distends the venous sinuses within the cranial cavity and therefore displaces some cerebrospinal fluid.

In collecting specimens there is a routine which is preferable. First, ten or fifteen drops of fluid should be permitted to run into a container, to wash out any traces of blood that may be in the needle, which if present would alter the cell count and lead to erroneous conclusions. This specimen is to be discarded. The second collected in a separate specimen bottle is to be used for the colloidal gold, globulin, and Wasserman tests, total protein estimation, or other tests. Five or six cc. are sufficient. The third specimen is collected for the cell count and need be only a few drops. The reason for using the last specimen for the cell count is that any traces of blood that may have been in the needle, will have been completely washed out. It is best that the cell count be done at once, though if the fluid is kept refrigerated the cell count may be done some hours later.

### Post Operative Care of the Patient

The puncture site should be dressed and the patient turned face-downward with a pillow under the hips so the head is lower, thus preventing seepage of the cerebrospinal fluid through the puncture in the dura, which is believed to be the cause of post-puncture headaches. He should remain in this position for several hours. Parenthetically, it may be stated here that using a small caliber needle, drawing the fluid slowly and in only sufficient amount for the actual test, favors the best post-operative comfort. Strangely enough, those patients whose tests all prove negative are more likely to be afflicted by post-puncture headache. The patients should remain prone for thirty-six hours or longer. Should headache or dizziness develop he should remain lying down for a day or so longer. Analgesics are of little if any value, but intravenous hypotonic salt solution and pituitrin have been used, with varying success.



**Indications for Spinal Puncture**

These are numerous and are often the sole means of diagnosis, or serve to clinch or disprove a tentative opinion. Syphilis, being the most frequent serious chronic infection, calls for puncture in every case if the full value of modern therapy is to be achieved. Ideally, this should be done in the first few weeks of the infection to determine if there has occurred invasion of the central nervous system; and again before the patient is discharged as having a clinical cure. The negative blood should not be the sole criterion of such a cure. Too frequently the infection has been "smothered" and smolders in the central nervous system to disrupt later into the varying and tragic manifestations of neurosyphilis.

Less frequently met with, but even more urgently needed is lumbar puncture in the acute infections involving the central nervous system.

Poliomyelitis, encephalitis, and epidemic cerebrospinal meningitis are the more serious and commonly encountered central nervous system infections requiring early diagnostic spinal fluid studies. To delay at all in meningitis is tragic, since early diagnosis and treatment with specific sera and sulfanilamide reduces the mortality far below that usually given for pneumonia. In many noninfectious afflictions involving the nervous system such as multiple sclerosis, tumor, herniation of the intervertebral fibro-cartilages, as well as numerous other conditions, very valuable leads to diagnosis are often obtained. In fracture of the skull, concussion of the brain, cerebral hemorrhage, uremia, eclampsia, spinal puncture and fluid studies are often of diagnostic or therapeutic value.

**Dangers and Contraindications**

With ordinary aseptic and technical precautions, proper care of the patient, and a reasonable degree of experience on the part of the operator, there is virtually no danger in the procedure. There are contraindications to puncture and these should be weighed in each case. It should not be performed in severe systemic conditions such as marked emaciation, old age, severe diabetes, blood dyscrasias, infections in which there is bacteremia, brain tumor with greatly increased pressure, when located in the posterior fossa, infections near the site of puncture or deep in that area,

severe untreated early syphilis, and pregnancy. There are exceptions, of course, even to these conditions in emergencies.

**Some Abnormal Findings**

In syphilis of the nervous system there is an increased cell count, usually a positive Wasserman, globulins and increase in the proteins. One of the most significant findings in many cases of early paresis is the paretic curve as determined by the colloidal gold test. The significant changes vary with the stage and type of clinical syphilis resulting from the infection, so that no hard and fast rules can be outlined even for clinical types. In poliomyelitis the most important alteration is an increase in cells, at first often polymorphonuclears, but later lymphocytes. Epidemic meningitis is characterized by a milky fluid due to the great number of pus cells with diplococci. For details, references must be consulted, not only for the above mentioned diseases, but a great many others in which the alterations of the fluid are not usually so characteristic or as frequently vary from the normal.

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**THE ENDOCRINE GLANDS**

(Summary of an article in the 1938 Year Book of Pediatrics, written by Dr. Isaac A. Abt. "Hormones in Relation to Growth and Development.")

Annie G. Hedges, D. O., of the College Staff

In the above mentioned article, the editor gives a comprehensive review of progress made in this subject. He states that there are only a few of the hormones which are of proved clinical value and advises considerable conservatism in the use of those of doubtful value.

In a general way, we think we understand the functions of most of the glands of internal secretion, but when we recognize the fact that there are many inter-relationships between the various glands and know that the normal balance of one cannot be disturbed without a disturbance of the balance of one or more of the others, it is impossible to know to just what extent the disturbance will go. No doubt many diseases whose etiology is obscure, such as Mongolism, may eventually be traced to disturbances of a number of glands.

In addition to the influence of these glands, there are many other things which affect the growth and development of an individual. Natural inheritance, environment, nourishment, etc. Dr. Abt points out that the problem of growth depends on "the effect of heredity and the orderly development of the germ cells and chromosomes" though the general plan of growth may be modified by external conditions. Any interference with the proper supply of oxygen or food materials, chemical or toxic products of disease, excess or deficiency of hormones or infections of the fetus itself affect growth and development, and affect it largely through their influence on the glandular system.

We must assume that the cerebral centers have an influence on growth. It has been reported that after encephalitis, permanent lesions have been produced in the hypothalamic area causing obesity or a disturbance of the posterior portion of the pituitary gland with resultant diabetes insipidus. Details of the inter-relationship between the various endocrine systems are incomplete.

"Autocoids" is a term used to denote the catalytic agents derived from the endocrine glands. Two types are recognized and Dr. Abt applies the terms "hormones" to those which stimulate *physiologic* activity in gen-

eral and "hormozones" to those which stimulate only growth or development. He defines hormone as a "chemical substance produced in an organ, which, being carried to another organ by the blood stream, excites in the latter organ a functional activity." The majority of the hormones are excitants. A few have an inhibitory action.

Experiments which have been made on animals indicate that early in fetal life, the secretory organs develop to the extent that a large part of the growth and development of the fetus can continue without the assistance of maternal hormones. On the other hand, maternal hormones which normally are present in great quantities are stored up by the fetus for future use and may constitute a certain protection for the new-born. An example of this is the cretin, a condition which is rarely recognized until several months after birth. It is only when the stored up supply of hormones received from the mother has become exhausted that the characteristic symptoms develop. Many other abnormal conditions present at birth, such as functioning of the mammary glands of the infant, swelling of labia, passage of blood, etc., may be attributed to the action of hormones derived from the mother. The pregnant woman may show secondary sex changes due to hormonal stimulation. There may be a change in the size of her hands, feet or features due to excessive activity of the anterior lobe of the pituitary gland which is known to hypertrophy during pregnancy. In about 75% of cases, there is an enlargement of the thyroid gland and a decrease in its iodine content during pregnancy. Excessive pigmentation of various parts of the skin of the mother's body may have a relationship to the adrenal cortex, as the adrenal gland enlarges during pregnancy.

The human placenta contains two forms of estrin. One is termed estrone and is an ovary-stimulating principle. The other is an "anterior-pituitary-like substance." It is thought that the placenta produces some substance which inhibits the pituitary gland during pregnancy and this hormone, whatever it is, maintains the corpus luteum of pregnancy and inhibits



ovulation during pregnancy. The theory is held by some that a hormone is liberated from the body of the embryo itself which performs these functions.

Certain hormone-like substances are found to be important in the growth of plants. A substance termed "auxin" is present in the endosperm of many seeds. Auxin has been recovered also from human urine, malt and maize germ. This substance promotes the growth of both stalk and fruit and its absence retards growth and development. A female sex hormone has been found in the blossom of certain plants.

#### Relationship of the Glands to the Nervous System.

There appears to be a close connection between the glands of internal secretion and the nervous system. There may be cells in the mid-brain of the human being which secrete hormones. This intimate connection between the hypophysis and mid-brain might explain psychic disturbances and mental retardation.

#### Relation of Vitamins to Hormones.

Numerous studies have been made and are continuing, to determine the relationship between vitamins and hormones. Deficiency of vitamin B may produce colloid goiter. Buchanan has proved his vitamin to be an anti-thyrogenic agent. Vitamin B deficiency also produces hypertrophy of thyroid and adrenals. Deficiency of B<sub>1</sub> and B<sub>2</sub>—hypertrophy of pituitary and atrophy of thymus in some cases. Vitamin A deficiency causes increase in weight of the pancreas. The growth-producing vitamin A is inhibited by the administration of thyroxine.

Vitamins are not all exogenous. Many are elaborated by the body itself. A is formed in the liver by the splitting of carotene. D is formed in the skin under the influence of the ultra-violet ray. Sir Frederick Gowland Hopkins refers to the vitamins as "exogenous hormones." The same substance may act as a vitamin in one species and as a hormone in another. One example is vitamin C which acts as a vitamin for guinea-pigs, rabbits, monkeys and man, but a hormone for chicks, rats, mice, dogs and other animals. In the former it must be ingested—in the latter it is synthesized in the body.

Up to the present, it has been impossible to distinguish by chemical processes the similarities or differ-

ences of the vitamins and the hormones.

There is evidence that the glands of internal secretion are regulated to some extent by the vitamins. In avitaminosis there is often atrophy of the endocrine glands and a hormonal deficiency.

With these facts in mind, we can well understand why we should be extremely cautious in the use of glandular products and they explain somewhat the meaning of R. Boller (Germany) when he says "SINCE THE VARIOUS VITAMINS MAY WORK AGAINST EACH OTHER, USE OF COMBINATION PREPARATIONS IS UNWISE."

#### BASAL CELL EPITHELIOMA (rodent ulcer)

C. A. Povlovich, D. O., College Staff  
Case Report:

Patient was a white female 67 years, with an ulcerated lesion on her face, just below the orbit.

**PRESENT HISTORY:** The mass first appeared about 18 months prior to the present examination, it had been slowly getting larger, in the beginning it had simply seemed to be a thickening of the skin, this had a tendency to scale, and the patient was under the impression that she may have bruised the area, or that it was some simple skin irritation. She applied different ointments locally, there seemed to be no particular improvement or relief. It never seemed to bother her from the symptomatic standpoint, being present on the face the patient was cognizant of its presence. About 6 months ago was the first time it showed any tendency or evidence of breaking down and showing a central necrosis with subsequent ulceration. The ulceration steadily progressed, and the ulcerated nature of the process became more apparent as time went on. Because of failure of the patient to heal the ulcer, she came to the realization that it was not a simple process, and finally decided to seek advice as to the nature of the condition.

**PAST HISTORY:** The patient's past history was of no relation to the present condition.

**PRESENT PHYSICAL FINDINGS:** Physical examination showed a well developed, but somewhat undernourished, elderly white female, who did

not appear acutely ill, height 61 inches, weight 101 lbs., the head appeared normal as to size and shape. Eyes were negative, the pupils reacted normal and were equal in diameter, ears negative. Nose and throat were negative. Heart and lungs were normal. Abdomen apparently negative, there was lack of tone of the anterior belly wall. The extremities were negative, no other ulcerations noted except the one on the face. The ulcer was located just below the orbit on the left side, this was approximately about 1.5 CM in size. This showed a central area of ulceration filled with a scaly like mass of necrotic debris and clotted blood. The edges of the ulcer were not undermined, but were rather sharply demarcated and with a indurated consistency suggestive of fibrosis. The entire lesion was slightly raised above the level of the surrounding skin surface.

The gross picture was characteristic of the appearance of the typical basal cell carcinoma, the most common form is of the "rodent ulcer" type.

**LABORATORY EXAMINATION:** Nothing of importance was found in the laboratory findings. Urinalysis, negative. Blood Kahn, negative. Hemoglobin, 70% Erythrocytes, 3,980,000. Leucocytes, 6,200, with 68% neutrophiles.

**SUBSEQUENT HISTORY:** A tentative pre-operative diagnosis of basal cell carcinoma of the rodent ulcer variety was made. The patient was advised to have the lesion removed surgically because of the closeness to the eye, rather than have it treated with radiation therapy.

The site was well cleansed with soap and water, rinsed with alcohol and ether, then the lesion and surrounding skin was painted with tincture antiseptic. Then infiltrated with 1% Novocain, an elliptical incision was made with removal of the lesion and the underlying subcutaneous tissue, the incision was closed with metal skin clips. A year later nothing but a faint scar was visible at the site of the operation, and at that time no recurrence was evident.

**GROSS APPEARANCE OF SURGICAL SPECIMEN:** Specimen consisted of a skin fragment which was elliptical in shape, being approximately 2.5 CM. long and 2, CM. wide. It appeared sharply demarcated from the

surrounding tissue as though it may be encapsulated, this capsule appeared to be a part of the corium as a hyalinized layer, sharply limiting the growth from the underlying subcutaneous adipose tissue, the center of the specimen an ulcerated area which was of the "rodent ulcer" type.

#### Histopathological Report of Microscopical Section.

The section was taken thru the middle of the ulcer and histologic examination of the tissue presents a picture of solid masses of darkly staining cells which extend down into the underlying dermis, the cells are small and compact tending to be hyperchromatic, with little cytoplasm. Mitotic cells are only rarely encountered. There was no evidence of pigmentation. The columns of cells extend down to a uniform level, and their ends have a clubbed appearance. The overlying epidermis is almost completely destroyed; just a few strands of keratinized epithelial cells. The tumor appeared as a large cellular nodule in the center, toward either side of the nodule the epidermis gradually takes on a more uniform and normal outline and the different layers are easily recognized. The tumor itself is more or less circumscribed and almost spherical in shape. The connective tissue surrounding the mass formed a definite capsule. The tumor was composed of cells arising from the cylindrical layer of the germinal layer of the epidermis, they were almost columnar which is characteristic of that layer.

**IN CONCLUSION:** The basal cell carcinoma is a variety of squamous cell carcinoma, with this difference, it is relatively benign, or rather slow growth, and does not involve the regional lymph-nodes, squamous (epidermoid) carcinoma is highly malignant. The most common site for this type of tumor is above a line drawn from the tip of the ear to the angle of the mouth, it occurs elsewhere but rare. These tumors rarely metastasize, they show little or no tendency to recur, the tumor slowly erodes the deeper structures, and in this way it may cause extreme destruction locally, for this reason it is commonly called "rodent ulcer." These tumors may be disregarded from the mortality standpoint, as long as they are identified early and promptly removed. If neglected, however, they may even become malignant.



## BREECH MANAGEMENT

Margaret Jones, D. O., of the College Staff.

**BREECH PRESENTATION** is one in which the pelvis of the child is the leading pole—is farthest advanced down the birth canal. The location of the sacrum in the mother's pelvis is the determining factor of presentation, e. g. S. R. P. The frequency is about 3%, including prematures.

**VARIETIES** of breech include (1) complete, full or double breech (normal intrauterine attitude) the presenting pole being the breech end of the child; and (2) incomplete (errors of attitude), (a) single or double footling, (b) single or double knee, (c) singling or frank in which legs extend along the ventral trunk with the feet against the face or over the shoulders. There are six possible positions but two are mostly observed—S. L. A. and S. R. P.

The **CAUSES** of breech are not always distinguishable. About 25% of all pregnancies are breech at some time during the last part of pregnancy. While the causes are speculative they seem to include any abnormality or irregularity which disturbs regular normal anterior occiput and include abnormally shaped uteri, multiparity, fetal malformations (hydrocephalus being a special illustration), pelvic tumors, polyhydramnios, prematurity, large maternal pelvis or any other contributing incompatibility.

**DIAGNOSIS:** Many breech presentations are not suspected till meconium apparently oozes out through the scalp, at which time the physician is likely to become so agitated both by the realization that he has made a faulty diagnosis of position and by his knowledge of the disagreeable circumstances of the breech case as to unfit him for intelligent management of the task that follows. Close observation early in labor or even late in term should reveal; (a) a hard, round readily ballotable body occupying the fundus up under the liver or the spleen, compression of which may give crackling sensation; (b) the irregular breech (before engagement) is freely movable in the lower uterine end gliding upward between the examining hands or fingers on Pawlik's grip leaving the inlet empty; (c) the uterine ovoid presents a three cornered contour, the upper portion being broadened, the babe's back on one side or the other usually opposite to

the fetal head; (d) if a fetal body is in the midline it is suspicious of body straightening (frank breech); (e) between the shoulders and head a deep sulcus exists; (f) fetal heart tones are heard on the side which the back occupies and are loudest above navel level; (g) the mother's pelvis (on rectal or vaginal examination) is filled by an irregular mass, (with labor well advanced the edematous breech simulates the head); (h) upon pelvic examination several small bony fetal prominences should be palpated also the genital crease with the pointed sacrum at one end of it; (i) diagnosis of breech, however, should not be concluded by discovery of a foot, because it may have prolapsed alongside the head in a cephalic presentation. Remember that the X-ray serves a very beneficial purpose in determining not only the presentation but also reveals the attitude of the babe and thereby affords valuable information for management of the case. Utilize it when any doubt exists.

The **MECHANISM** of breech is very much the same regardless of fetal attitude; movements of (a) breech, (b) shoulders and (c) head must be regarded. Even in primipara the breech remains high until labor is well advanced, maybe till dilation is complete and membranes are ruptured. Bitrochanteric diameter of the breech descends slowly and passes through cardinal movements, one hip turning anterior and stemming under pubes while the posterior hip rolls over perineum. Frank breech fits into the os better but the folded or complete attitude breech provides larger dilation for aftercoming body and head. Shoulder movements are similar to those described for hips. The anterior shoulder stems under the pubes while the posterior is delivered over the perineum. As the shoulders pass through the vulva the head should be entering the inlet. If the head is arrested above the brim until the shoulders are fully delivered great stretch is placed on the neck. Ideally the chin remains flexed on the chest in which event the head and chest present their smallest diameters but obviously inverted because in head first mechanism the blunt occiput advances while in an aftercoming head the narrow plane (neck to biparietal) goes first. **THEREFORE** the head

travels through the pelvis quicker and easier when it comes last.

The **ANTERIOR OCCIPUT** is by far the preferable mechanism. With a chin in the sacral hollow the nape of neck is the center of extension and the chin, face and brow pass (in order named) over the preineum after which the occiput escapes the pubic arch. Remember well that "in all labors the tendency is for the lowest portion of the presenting part to slip under the pubic arch." DeLee. If the back rotates to the sacrum the fetal belly and face pass under the pubic arch which forces the shoulders through transversely. Usually assistance, in such mechanism, is necessary or the infant perishes. Singling or frank breech is difficult because the leg or legs splint the body making fetal body lateral flexion difficult or impossible. Also the breech end thus makes a small dilator. The arms may extend up over the head or cross behind neck which require assistance. This constitutes a very dangerous complication of any breech delivery. Obviously operative delivery is not to be undertaken or even spontaneous expulsion encouraged until the cervix is completely dilatable, the vagina accommodating and the perineum either relaxed or incised. The dilating bag is an effective means of accomplishing cervical and vaginal preparation and the episiotomy a well recognized procedure for preparing the perineum.

The **CLINICAL COURSE:** Epigastric distress is aggravated before labor, lightening occurs not, fetal movements are low in abdomen. First stage of labor is tedious, second stage rapid (4 to 8 minutes), although it may require 15 minutes to an hour; e. g. in such prolonged operative techniques as mutilations. The membranes rupture early; meconium may escape freely, but it is inconsequential. Third stage complications are more frequent. A rapidly emptying uterus predisposes to postpartum hemorrhage; also we are more likely to have lacerations, due to maneuvering to hasten delivery.

The **PROGNOSIS** for mother is slightly worse than in cephalic presentations due to exhaustion, trauma, contamination. For the child prognosis is much worse (10-15%) due to dry labor, cord prolapse (4% of all breeches), cord compressions, operative measures, abruptio placenta, tentorial tears with subsequent intracranial hemorrhage and spinal cord injuries.

**TREATMENT** of breech: Attempt version by posture if discovered well in advance of labor. Have patient assume knee chest position, maintaining it a few minutes and coming down slowly in lateral Sims on the side to which the fetal brow points. If this fails, attempt external version directing child as above with the patient on her back or knee chest; anesthesia may be necessary. Although this condition is one of faulty mechanism primarily, the woman who has received good prenatal care is better fortified for the ordeal of breech delivery and its associated complications. Therefore, the desirability and the wisdom of having given the patient Osteopathic prenatal care is apparent. I mean the kind of care which includes a real genuine osteopathic treatment at regular two weeks' intervals during pregnancy.

First stage of labor. Version may be tried if membranes are intact but no anesthesia is to be used at this time for there is danger of placental separation. Treatment, therefore, is watchful expectancy with complete preparation for operative delivery if necessary. Give enemas, nourish patient and encourage walking early. When labor is well established yet little progress has been made give morphine and scopolamine with rest in bed. Beck suggest that morphine 1/6 grain with scopolamine hydrobromide 1/133 gr. be given in the muscle. The latter is repeated every 45 minutes for three doses depending on the patient's condition and reaction. This followed by chloroform properly administered is considered almost ideal in the normal case at the University of Washington. Necessarily breech analgesia and anesthesia must be modified for the mother's efforts are necessary during the second stage. No morphine is given so late in labor that its influence will be effective during the second stage. But during the long tedious painful first stage the patient may need analgesic relief. If labor is progressing satisfactorily and the patient is not in dire need of rest and relaxation it is far better to dispense with analgesias and anesthetics till the fetus passes over the perineum. Use dilating bag if parts are rigid or the hand can prevent prolapse of extremities or cord; protect the membranes; and guard the fetus by frequent fetal heart observations.

The second stage should be short. The patient is placed on the table, pre-



pared, supported, and encouraged to bear down. Protect the exposed fetal parts with a warm wet towel. Traction tends to extend the arms alongside the head which is a serious complication. Also the membranes usually rupture early in breech presentation. Guard the fetal heart continuously. Avoid aid unless child's condition indicates it. Use anesthesia sparingly, episiotomy is good practice especially in primipara. It is to be done before the shoulders appear. DeLee says, "If you will wait until the navel is out you will halve the fetal mortality." Again he says, "When the navel appears, the rest of the birth must be rapidly, but not precipitately, completed. The woman is told to bear down with all her power. If she is anesthetized or cannot, the assistant, spreading his hands evenly over the fundus, exerts pressure in the axis of the inlet." (Kris-teller's expression). This strengthens the uterine and abdominal actions, and keeps the arms against the chest, preventing their ascent alongside the head, which would much complicate the delivery. If both fail, manual aid is rendered. (Manual aid means the delivery of the shoulders and head, after nature has accomplished the expulsion of the navel. It must be very sharply distinguished from "breech extraction" which means bringing down the breech in some way and "delivery of the whole child from within the birth canal.")

Pull down the cord as soon as it is born to relieve tension and to determine the condition of the fetal heart. Take the shoulders out simply, not by twisting the body because of dangers to the abdominal viscera especially liver, spleen and adrenals. Use well distributed firm supportive grasp with both hands. Deliver anterior or posterior shoulder first as seems propitious. When both shoulders are delivered induce an anterior occiput, free the mouth for cleansing and wait for spontaneous expulsion of the head a few minutes if both patients are all right.

Piper advocates early forceps extraction of the head. Forceps delivery of the aftercoming head is good procedure—far preferable to strenuous pulling on the body or extreme downward pressure on the head. High fetal mortality in breech presentations, especially in those much assisted, is attributed to tentorial lacera-

tions and the associated intracranial hemorrhages. Injuries of the spinal cord have been observed. Also when the head is forced down by suprapubic pressure the "medulla may protrude through the foramen magnum and actually become herniated into the spinal canal." These disagreeable accidents are obviated or at least minimized by the application of forceps to the after-coming head. The instruments which bear Piper's name are much preferable to any other because of the pelvic curve in the shank portion of the branches. However, the Simpson's all purpose forceps can be used satisfactorily.

Use care in handling the fetal body so that the spine be not over extended. Remember that up till delivery the babe's body has always been flexed. A nuchal arm in the nape of the neck may be brought forward by rotating child's body in the direction of the hand. If this is not effective an arm may be brought forward even though fractured.

**BREECH EXTRACTION** if indicated for mother or babe is a valuable procedure when properly performed. In extraction of frank breech use care about producing "congenital hip." Use only one finger in the groin. If done judiciously the assistant may make well distributed fundic pressure downward while traction on the leg is made in the direction of the pelvic inlet axis. The posterior foot is delivered spontaneously or by a finger in the posterior groin. With thumbs over sacro iliac areas apply traction till navel appears. Pull the cord down and study its pulsations. Continue traction till the anterior scapula appears under the pubic arch. Extract the anterior arm by following the arm to the elbow with a finger and sweeping the fetal arm across the chest. If possible avoid fracture by using elbow adjustment. It may be easier to deliver the posterior shoulder and arm first. In this event, it may be wise to convert the anterior shoulder to a posterior by rotating the body through a sweep of 180 degrees carrying toes down on the way around. Thus the second shoulder also is delivered posteriorly.

With the shoulders delivered, the child's body lies on the operator's arm while two fingers are inserted into the babe's mouth to keep head flexed. With the other hand placed over the child's upper dorsal grasp two fingers

over each shoulder to maintain traction. During these maneuvers suprapubic pressure augments the force of expulsion (Smellie-Veit or Mauriceau maneuver) as the head travels along the curve of Carus. The precautions set forth above are obviously applicable here also.

Cleanse the mouth when it appears, raise the body by elevating feet but again do not over extend body. Extract the head with forceps if need be for haste or if too much traction or pressure is needed. The baby should be delivered within 3-5 minutes of the appearance of navel at the vulva, and a longer time subjects the babe to relative dangers, 8 minutes being usually considered extremely serious.

#### Conclusions

1. Intelligent management of the breech begins by carefully determining the presentation of all cases well in advance of labor.

2. Every physician doing obstetrics should occasionally review the illustrated mechanism of the breech in order to be familiar enough with it to visualize it at will.

3. The complete breech (the normal intrauterine attitude one) presents a larger mass to the birth canal than any of the incomplete varieties, and thus serves as a better dilator. Therefore, do not disturb the folded legs.

4. Diagnostic findings include a hard globular mass in the fundus; an irregular freely movable fetal portion above the inlet which, before labor is easily displaced by the examining hands; a sulcus exists between the head and the body; the fetal heart sounds are loudest above the navel.

5. Clinically the breech presents some rather reliable prodromes to labor including epigastric distress, low fetal movements and absence of lightening. The first stage of labor is tedious and annoying, membranes rupture early, undiluted meconium is observed and cord may prolapse.

6. The prognosis of breech cases is slightly worse for mother and much graver for infant.

7. Treatment of breech properly includes attempt at version by posture or manipulations or both before labor begins or during the first stage of labor, bearing in mind the possibility of disturbing the placental site. Failing in version watch ex-

pectantly, prepare for operative delivery, support the patient with nourishment, order enemas, provide analgesias if absolutely necessary and administer Osteopathic manipulative treatment to 7th and 8th dorsal early in labor and through the lumbar and sacral sections during second stage of labor.

Avoid hurry, aim to withhold assistance or interference till the navel appears, pull cord down as soon as it is born. Deliver shoulders simply as possible. Do not twist baby's body. Induce an anterior occiput. Apply forceps to the aftercoming head if it be unduly delayed. And better fracture an arm than to sacrifice a babe's life.

8. Breech extraction means delivering "the whole child from within the birth canal" and needs to be resorted to if rapid delivery is necessary in the interest of either patient, remembering that the birth canal must be first prepared for the child's passage.

(The above is an address delivered at the Detroit Osteopathic Hospital on January 19, 1939.)

## Kansas City College of Osteopathy and Surgery

The  
"Aggressive  
College"

2105 Independence Ave.  
Kansas City, Missouri



## A DOCTOR PATIENT

R. H. Wahl, D. O., Junction City, Kansas.

The patient is a D. O. and also an M. D. He has been in a general practice for several years. He is allowed to work in our "Community Hospital." (I cannot enter this hospital due to either my D. O. degree or the MEDICAL MONOPOLY.) He is not a member of any Osteopathic society. The patient's friendship has been in a cooperative spirit, although the routine relations have been more sincere than our professional acquaintance.

He has remembered me with cigars for osteopathic manipulative treatment. The treatment was always given in his office, due to his request the treatment be given confidentially. He did not want the medics to know that he possessed some respect for treatment osteopathic. The treatments were given because his frequent advice about his past experiences was valuable to me. The doctor's ever-ready "Howdy, Doctor"—was a reality, the other medics in town always failed to reciprocate with even a mere grunting form of the usually manly recognizance.

About four weeks passed since I last saw the D. O., M. D. One evening the telephone rang, the doctor was calling for a treatment. My office was empty, but I was expecting a patient to come to see me, so I told the doctor and he said: "Never mind, I will go home."

After my supper I telephoned his home. His wife told me that the doctor was very ill with "acute indigestion." His wife also told me the family had called an M. D. to see my friend through his illness.

Three or four days went by and then I began to receive some of the doctor's former patients for only osteopathic treatment. My duty was to call the doctor's home to thank him for the referred work. By conversation with his wife I learned that the doctor was remaining ill, this time with "bile trouble."

Several weeks elapsed until I telephoned the doctor's home. This time his wife asked me to stop to see her husband. The visit, under their request, was to be social. The call must be made after dark so the neighbors would not inform the medics about the Osteopath professionally calling.

The visit was limited to greetings which were appropriate in any room of sickness, but the doctor freely discussed his symptoms.

Without detailed clinical observation or laboratory tests my diagnosis was formed while driving home.

In a few more nights the doctor's wife telephoned me. This time the home visit was for professional advice, but with restrictions made necessary by the predicament of his medical associates.

The patient's case history revealed that four years ago he had his gallbladder removed for acute gallbladder pains. The post operative report was: an inflamed G. B. which was thickened, but without obstructive stone formation. There was not a history of jaundice. The clinical symptoms were partially sufficient to justify such an operation. Since the operation he has complained of similar pains of a referred character, especially these pains occur after or during physical activity.

The doctor's present complaints started with symptoms referable to the acute indigestion. The discomfort he said was located sub-sternal, the belching of gas brought some minor relief. The usual anti-acids were not effective.

Treatment for indigestion and bile trouble had been given until the doctor in charge, through a more accurate case history, elicited the previous referred heart pains. Medication was then increased to include heart trouble.

Four or five more days passed then the patient complained of anorexia, nausea, vomiting, restlessness with some chest pain. The smell of food was so nauseating that all food was cooked away from the home. His loss of weight was in accordance to the anorexia. The doctor's kidneys were reported as less active, and there was no swelling of feet or ankles. The blood pressure was now 132-82. The wrist pulse was now 84 with only a few dropped beats. There was a positive history of an occasional fast heart to the extent of a pulse around 140. During my examination I found no relation between the pulse beat and heart sounds. The heart sounds were more irregular than was the pulse

beat. The doctor complained of some left chest pain.

The diagnosis was not told. The treatment was a mild relaxing type to the upper dorsals.

The symptom chart was drawn in my office. The next morning I called the doctor's home to inquire if the patient had been taking digitalis.

The answer was: "Yes." (1½ grain digitalis leaves, t.i.d.) Some fluid digitalis had been given before the leaves.

My suggestion was to stop the drug. His wife informed me that the other doctor in charge knew his own business. My answer to her was: my idea could be rejected or accepted, I told her that her husband could be sensitive or toxic to digitalis. The doctor's wife said she would tell the husband of the opinion, but for heaven's sake for me not to mention to anyone the possible mistake in medicine.

From good friends I learned that the doctor was much better in 48 hours. (I did not go back to see him.) He was reported without nausea and he did not vomit. The food eaten absorbed the bile. The heart was some better the wife had told a caller and the caller told me.

### Discussion

The patient's age is 68. He is short and stout built. Height about 5 feet 10 inches. Weight about 188. His case history of anginal pains were important. The acute attack could have been mistaken for referred pain due to coronary artery disease or other heart conditions.

The anorexia, extreme nausea, vomiting, restlessness, decreased kidney action, or heart block did not occur until after he became sensitive or toxic to the digitalis. The symptoms cleared after the drug was discontinued. (Was the improvement coincidental?)

In this case the weight loss could have continued to extreme emaciation. The heart block if continued could have killed the patient.

### Conclusion

To complete the story the doctor patient has since shown signs of tachycardia with shortness of breath. Since his history of occasional palpitation and irregular beats with coronary artery disease the diagnosis could now be Paroxysmal Ventricular Tachycardia. The electrocardiogram

has never been made. Digitalis does not help P. V. T.

### Some Facts About Any Kind of Digitalis

1. There is no standard dosage for any digitalis.
2. Digitalis can cause a reflex action in the vomiting center in the brain.
3. In toxic or sensitive amounts digitalis is NOT a diuretic.
4. Digitalis requires, at least, a daily observation of the patient until the proper dose has been established, then proceed with caution.
5. Digitalis should not be used in every type of heart condition.
6. Digitalis heart block is difficult to diagnose from other forms of heart block, especially without the cardiogram, even then there may be a question about the true condition.

Later report: Patient died at 9 P. M., on February 7, due to gun shot wound, either suicidal or accidental.

"See well what you do and do well what you see" is a surgical aphorism worthy of emulation.

Thirty grams of meat protein (one ounce) is the equivalent for the building up of body tissue of fifty-four grams of bean protein, seventy-six grams of bread protein and one hundred two grams of corn protein.

## Kansas City College of Osteopathy and Surgery



"The Aggressive College"



## SOME PERTINENT POINTS

George J. Conley, D. O.

In a recent article by Dr. G. W. Crile, of Cleveland, Ohio, on "The Dangers of Cold and Exposure to the Abdominal Viscera" he states that "chilling of the intestines produces a deleterious and warming a beneficial effect." Also, that the "temperature of the liver together with the temperature of the brain, fell progressively when the viscera were exposed;" that "cold practically eliminates the essential function of the liver;" that the "extent to which the liver of the patient is functionally impaired largely determines the surgical risk of operative interference."

Dr. Crile advances the theory that "cooling of the liver results in a general cooling of the blood in the important organs within the chest wall" and that as a prevention of post anaesthetic pneumonia he is using "diathermy delivered through the bases of the lungs."

All of this is decidedly interesting, as well as instructive. Dr. Crile is a man of importance and distinction in the medical and surgical world. When he speaks or writes, it is well to pay attention to what he says for he is not prone to follow stereotyped paths. He is apt to delve into the unknown and to deliver original ideas upon very practical and essential subjects.

In the light of his investigation that "chilling the intestines produces a deleterious and warming a beneficial effect" we naturally wonder what are the beneficial results of the ice bag in acute appendicitis? It has long been known that the defensive agencies are most active at a temperature of 101 degrees to 104 degrees Fahrenheit. Does not the prolonged use of the ice bag upon the belly wall tend to depress the temperature of the appendiceal area below the minimum of the requirements of the defensive agents to the extent that their effectiveness is impaired and the consequent chilling of the intestines exhibit a deleterious, rather than a beneficial result?

This is a matter for sober thought! Every doctor reading these lines has just as much right to think about these observations and to draw his own conclusions as the greatest au-

thority in the world, and he should.

Again we wonder, as we observe the various anaesthetists in action, just what is taking place in the lungs and in the liver so closely associated therewith, when the ethylchlorid ether sequence method is used. From the use of ethyl-chlorid we can see the frost crystals piling up on the gauze of the mask. We know that that part of the mask is freezing cold. We know, too, that air passing through that frigid area must be chilled and passes into the lungs in that state, thereby depressing the temperature of the tissues and the blood which it contacts. When ether is poured upon the mask to continue the anaesthesia, its rapid evaporation continues and prolongs the chilling began by the ethyl-chlorid, the liver, the thyroid gland, the suprarenals and the brain receiving an immense amount of blood thus depressed must of necessity fail to maintain anything like their normal state of functional efficiency, which in turn increases the gravity of the surgical risk.

"A change of 1 degree temperature affects the chemical activity of either a physical or biological system 10%." Let this fact soak in!

In a serious surgical operation, when you see can after can of ether used, ponder well the facts stated in the above lines, and perhaps light may dawn as to the reason for this very grave condition known as surgical shock; and a little thought might suggest a change in the method of anaesthesia which would result in the complete elimination of this very serious and unnecessary condition.

Surgical shock more closely concerns the anaesthetist and the anaesthetic used than it does the surgeon and his technique.

Blood sugar may rise from 20 to 40 mg. per 100 cc after the administration of morphine.

The average time for the presence of symptoms leading to a diagnosis of peptic ulcer is about seven years; while those leading to a diagnosis of carcinoma is between six and seven months.

## THE INDUCTION OF LABOR BY RUPTURE OF MEMBRANES

R. T. Almquist, D. O., Morris, Oklahoma

Artificial rupture of membranes to induce or hasten labor is the oldest method known. Denman first mentioned it in literature in 1796 and it was practiced for years before this time. However, experience has taught us that this operation must be reserved for individual cases only.

DeLee states that there are five general principle objections to early rupture of the membranes, either spontaneous or artificial, in uncomplicated cases. These are injury to the fetal head, prolapse of the umbilical cord, intra-uterine infection, increased injury to the cervix, and prolongation of labor. He makes the following statement: "There is no doubt that labor can be brought on by puncturing the membranes, and that when the cervix is 2 or 3 c.c. dilated and soft, the pains are strengthened and delivery is hastened by the procedure. This is my experience and the general experience."

In Multiparae the course of labor may not be markedly influenced, but primigravidae the absence of this natural dilator may favor cervical lacerations, and the fetus may suffer brain injury due to prolonged pressure in the birth canal. Theoretically, a soft water bag forms a better mechanical dilator than a bony hard head. The value of the bag of waters is the hydrostatic effect because thru the law of hydrostatics that fluid pressure, whatever the cause, is always equal and opposite in all directions. Hence the fetus is not affected by contractions of the uterine musculature. Imitation of nature is the key to management of normal labor. This does not mean interference, but watchful waiting, interfering only when the resources of nature prove insufficient. It is a known fact that slow dilatation of the cervix is preferable to rapid dilatation. DeLee has records of two fatal cases following too rapid dilatation of the cervix, also many deep cervical lacerations. He does not favor routine rupture of the membranes, either to bring on or to facilitate labor, but believes that we can extend the indications for this operation. Quoting DeLee, "Some times we are too slow in dispensing with the bag of waters."

M. P. Rucker in the Year Book of Obstetrics gives the opinion that the rupture of the membranes is an efficient means of inducing labor at term and a useful method in certain cases of marginal placenta praevia and toxemias of pregnancy. With proper technic there seems to be less risk of infection than in uncomplicated spontaneous labors. Apparently there is some risk of a contraction ring developing. The risk to the baby is not great and there is a small chance of the cord prolapsing, especially if the presenting part is not engaged.

E. L. King of Tulane University of Medicine has found that premature rupture of the membranes is not necessarily followed by dystocia, and it appears that when dystocia develops it is usually due to some abnormality which is independent of the loss of the amniotic fluid. King prefers to induce labor by Slemmon's method as labors occur with greater ease and rapidity; an eight hour labor in a primipara is not uncommon. In a series of 200 cases compared with 200 cases which were allowed to proceed normally, King found that labors were shortened by 1/3 in deliberate rupture of the membranes early in labor. Also the percentage in which interference was necessary was less and morbidity was lower. However he sees no good reason for the rupture of membranes early in normal labor. "The less interference with the normal progress of labor, as long as it is normal, the better for all concerned." (King) In case that early spontaneous rupture of membranes should occur there should be no cause for alarm.

In nine out of ten cases contractions will begin within 24 hours after rupture. In cases where membranes rupture early in labor and before any great degree of dilatation has taken place we some time have to deal with what is often designated as "dry labor." The general belief is that this results in an unduly prolonged and painful labor, but Schultze contends that, in the absence of abnormality, the reverse is the case as was found in a series of 600 cases. She found that the duration of labor was shorter. Williams concludes that the dangers



of dry labor have been greatly overestimated. There is a distinction between dry labor and the complications which frequently give rise to it. Early rupture of the membranes, per se, apparently does not increase fetal injury nor appreciably increase the tendency to infection, while it does definitely decrease injury to the cervix and shortens the duration of the stage of dilatation in uncomplicated cases. Bland says; "a truly dry labor is a very rare complication!"

It is very important that the proper preparation of the patient be made before any effort is made to rupture the membranes. The bowels should be emptied by enema, the bladder should be evacuated and the vagina irrigated with a 1% Lysol solution. The external parts should be antiseptically prepared so as to prevent any possible infection. The importance of aseptic precautions cannot be too highly emphasized. The technic of rupturing the membranes must be done with caution. Rupture must be done between pains in order to prevent prolapse of the cord. An Ochsner's forceps may be used being careful to make a very small puncture and holding finger against the point of rupture to prevent a too

sudden gush of fluid. The ring devised by I. F. Stien is made of malleable metal and can be fitted to the gloved fore-finger just behind the first joint and has proven very satisfactory in this operation.

In the Kansas City College obstetrical clinic we have found that rupturing the membranes when dilatation has become practically complete has been a very valuable procedure in hastening labor. Proper osteopathic care is of the utmost importance to protect the membranes. Danger of premature rupture is materially reduced. Normal blood and nerve supply to muscles and membranes is certainly of great value in labor. Possibilities of accidents are diminished and labor is more normal. It is known that the 1st stage of labor is lessened on the average of 25% under pre-osteopathic care. Osteopathy in Obstetrics has been proven to be of untold value. We can truly look forward to a most important future in Obstetrics.

Reference: Practical Obstetrics: Bland, Yearbook of Obstetrics: DeLee. Practice of Obstetrics: Edgar. Practice of Obstetrics: DeLee. Manual of Obstetrics: Davis. Practice of Obstetrics: Williams.

**W**E are listing herewith the Accredited Colleges of Osteopathy. These colleges are approved by the American Osteopathic Association, are in good standing with the various State Examining Boards and are members of the Associated Colleges of Osteopathy.

**Chicago College of Osteopathy**

**College of Osteopathic Physicians and Surgeons  
(Los Angeles, Calif.)**

**Des Moines Still College of Osteopathy**

**KANSAS CITY COLLEGE OF OSTEOPATHY AND SURGERY**

**Kirksville College of Osteopathy and Surgery**

**Philadelphia College of Osteopathy**

## OUR EFFORTS ARE NOT IN VAIN!

Dear Friends:

There is so much that God has given to fill my life with joy and gladness, reaching proportions and depths of far greater significance than words can impart and again my heart is overwhelmed with inexpressible gratitude and appreciation because I am deeply conscious of Heaven's most priceless benediction, the gift of "Friendship."

Would that it could be truly known how much it means to feel the incessant interest and nearness of those whose love and cherished friendship I treasure beyond expression, and I am indeed profoundly grateful for the many good wishes again jointly expressed through Yuletide Greetings and varied gestures of kindness.

Most assuredly with the realization of such immeasurable love and friendship behind me, coupled with continued professional efforts, my hopes and continued expectations for ultimate physical victory remain undaunted.

I am grateful to Dr. G. N. Gillum for referring student Dr. Heber Hixson to me during the absence of both Dr. C. Kenneth Edwards and Dr. L. G. Ballard, and although my physical behavior of recent weeks has again been somewhat unfavorable, through the wholehearted efforts of Dr. Hixson my condition is again most perceptibly improved and I am indeed mindful of the unquestionable evidence of physical gain made in the past ten months under Osteopathic therapy above all adverse pathological obstacles and hindrances.

In a room radiantly bedecked with Christmas cheer and blossoms reflecting the intrinsic value of friendship little wonder why my heart swells to the bursting point of thanksgiving, so as in thought my spirit clasps your hands extending warm greetings of good will I am hoping that to all concerned this has been a "Season" crowned with the loveliness of Him whose name we honor and whose birthday we commemorate.

With every good wish for success, health, and happiness the coming New Year, I remain,

Sincerely yours,  
S. C. M., R. N.

Dear Friends:

It is not your new year, of course, but it is a new year, and a year throughout which you will operate, regardless of school semesters.

It is not only when I need the blessings of osteopathy that I think of my attachment for your school—that is only the time when I think of it most poignantly!—the time that I wish I could be there, but that various circumstances prohibit.

Of all the halls of learning that I have encountered, I seem most at home in yours—there is an atmosphere about them that stays fresh and flexible. "Halls of Learning," what a snare and delusion they can be sometimes, for while people attend them, presumably to learn—something happens along the way that seems to actually stop learning once and for all. Perhaps it is that dangerous bit of paper which says that they are entitled to the degree of so-and-so. I wanted one of those once, but refusing to take mathematics sufficient to warrant it, I have ever since been glad that I did not get the bit of paper, for I too would doubtless have stopped learning after having acquired that document—that passport—that paid-in-full receipt!

I have learned so many good things since that would not have been in the curriculum of any hall of learning, that I know good things when I meet them. Thus I am permanently grateful for my contact with your system, and I wish that it may grow, not only year by year, but month by month, into the far-reaching philanthropy that it is, for the greatest charity of all is to help people to help themselves.

I am therefore carefully calculating when I say that your clinic is one of the greatest benefactions in the city—on the one hand—and unreservedly enthusiastic from my personal satisfaction on the other—just as I have two hands that are both in good use, thanks to your good treatment.

A most properous and altogether Happy New Year, and decades and decades of them!

Sincerely,  
C. C.



Dear Friends:

By separate post I am sending a copy of the February READER'S DIGEST with an article (whose title on the front page is marked in red) on osteopathy.

It may be that this article merely eulogizes the preventive aspect of osteopathy, but an ounce of prevention is worth ten pounds of cure. If I could have prevented a lot of things I would have been very greatly better off today.

It occurs to me that this is an enormous lot of free advertising, as the DIGEST has thousands of readers, and we are such "cussedly" stubborn people that this article might carry far more weight than a medical article by the osteopaths on its total merits.

Anyway, the magazine is an expression of my own deep-lying gratitude for the science of osteopathy.

Yours very truly,  
C. C.

**HOSPITAL NEWS**

Our hospital kitchen has been brought up to date by the installation of an electric dishwashing machine and a disposal, an electric device that grinds up and disposes of all kitchen refuse by way of the sewer, thus relieving us of the expense of use of our gas incinerator. A supply of heavy aluminum cooking utensils have also been added.

One day in January found every bed in Conley Clinical Hospital occupied. Recently it has not been unusual to have thirty of the thirty-five beds taken.

When Conley Clinical Hospital was opened, we decided a five compartment bassinet would fill all future needs. A recent experience of having to call into use a couple of stray baskets has influenced us to install the counterpart of the original installations. We are now prepared to care for ten babies at a time.

An electric cautery has been purchased for use in the hospital. Herebefore, we have depended on our surgeons to furnish their own.

Prior to the Home-Coming last November, painters refinished the

walls of the reception room and all hallways. It is expected the entire interior will be given an overhauling before the next Home-Coming.

A devious supply of splints now are housed in the X-ray department, obviating the previous necessity of renting as occasion demanded.

We are glad to pass on the report that Lakeside Hospital seems to be enjoying a banner business. We regret so many people require hospital care. We are glad Lakeside is prepared to offer the best in hospital service.

On February 1st, one-third of the senior class took up service in Conley Clinical Hospital, replacing the third who spent the first semester therein and who have now returned to the College to complete the didactic work of the senior year. At the end of the year, every senior will have had a four month internship period.

Not including patients going direct to the hospital, 2665 new patients entered the general clinic in 1938, an average of 222 patients per month.

For about a year, a routine Kahn has been in order in the general clinic with startling results. During the past few months a routine tuberculin test has been run on all new patients. This latter service is under the supervision of Luther Swift, one of our own graduates, and the latest addition to our staff where he is primarily associated with the obstetric department, which now consists of Margaret Jones as head obstetrician, R. A. Murren, field obstetrician, and Luther Swift, first assistant.

"Treat the sick quickly, safely and with as little pain as one can." Galen.

"The human body is a machine. It can be worn out quickly, or it may be preserved with intelligent care."—*Johnsonian Memo-Grams.*

"Whether he realizes it or not, the doctor in the small town is an ever-present example for the youth of the community. He must be well qualified morally as well as professionally, otherwise his light dims prematurely."—*Johnsonian Memo-Grams.*

**RESERVE APRIL 19, 20, 21 AND 22, 1939  
FOR THE SEVENTH ANNUAL CHILD'S  
HEALTH CONFERENCE**

The Seventh Annual Child Health Conference and Clinic will be held at the Continental Hotel (Hotel Kansas Citian) on April 19, 20, 21, and 22. Easter comes on April 9th this year, so this is an ideal time for our Conference.

The Clinic material this year is better than ever before. As usual an excellent group of speakers has been arranged, including Dr. Leo Wagner of Philadelphia and Dr. Arthur E. Allen, President of the A. O. A.

Dr. A. E. Scardino has lined up more exhibitors for this year than we have ever had before. Dr. R. O. Brennan, Program Chairman, reports that the list of speakers this year will be on the same high plane as those of previous years. Dr. Margaret Jones, General Chairman, has had several meetings with the complete staff and reports prospects for a bigger and better Clinic. Dr. E. V. Jones reports an excellent staff of clinicians has been arranged and more are being added to the list daily. The other doctors working on this affair are most optimistic for the success of the Clinic.

The Grand Banquet on Thursday evening will be held in the Continental Banquet Room and we hope to have 500 present. Dr. Mable Andersen has arranged an excellent program, including dinner and an address by Dr. Allen. An excellent orchestra for dancing has been obtained for the evening. Tables may be arranged for from 4 to 20 guests.

Dr. Alhante is endeavoring to hold a City Association meeting during the Child Health Conference, so that we may have the benefit of hearing more from our out-of-town guests.

Dr. Shablin is indeed optimistic over prospective registrations. Dr. Mamie Johnston reports that children will be judged more closely than ever before for the cup awards.

We are again assured that this Child Health Conference and Clinic will satisfy the Missouri Board for re-registration of license.

Every indication points to a bigger and better Child Health Conference this year. Again we say, "We'll be seeing you there."



## THE A. O. A. MEMBERSHIP CAMPAIGN

1938—1939

The new A. O. A. Directory is short some 400 names as compared with the 1938 issue. Four hundred names at twenty dollars a name: eight thousand dollars to be exact. And this does not take into account the "turnover" potential that each dollar received in the membership exercises during the year. This ratio is close to three to one. Had the membership held up to the high of last year the financial status of the central organization would have been improved materially.

Every osteopathic physician in the states contiguous to Kansas is aware of the battle being waged in the legislature there to define and secure their practice right. It is the hottest legislative fight seen in Kansas for years. The Kansas State Osteopathic Association is organized and is functioning as it never has before. It is absolutely imperative that every osteopathic physician, whether actively engaged in practice or not, support the state association. Every resource is needed to carry the fight on to successful completion. That Kansas bunch is as mean an aggregation of fighters as you ever saw. They don't know when they are licked. And they are not licked yet by a long ways. Believe you me, every medical doctor in Kansas, as well as the A. M. A., understands by now the caliber and the fighting qualities of the Kansas State Osteopathic Association.

Now what is transpiring in Kansas locally can easily be visualized on a national scale and, as the necessity for a strong state organization is demonstrated there, so is it the more reasonable to have the security of a strong national organization for protection in national legislative fights.

The membership campaign to increase solidification of the A. O. A. must not be allowed to lag. Delinquencies must be prevented and the temporary loss in numbers, as indicated in the 1939 directory, must be caught up. And these things can be accomplished with but little concentrated effort.

Let's give President Allen and Chairman MacCracken the opportunity of turning over to their successors at Dallas, Texas,—a bigger and a better A. O. A. than was given them.

It's your job and my job!

George J. Conley, D. O.