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THE IMPORTANCE OF THE NERVE CELL IN OSTEOPATHIC THEORY.

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(Paper read before the A. S. O. Alumni Ass'n. Meeting at Kirksville, Mo., June 25.)

If any one of the mutually dependent parts of the body may be called the most prominent in the reasoning of the osteopath, that part is the nervous system. Deprived of this system, our theory would be helpless as would our body. With it at our disposal, it is hard to find a question of the relation of cause and effect for which we cannot give, at least, a plausible answer.

This nervous system is said by the histologists to be made up of two essential elements, nerve fibres and nerve cells. While the nerve fibre is nothing more or less than a process of the nerve cell, and, hence is often classed with it, the distribution and function of the two are so diverse that we may continue to use the convenient distinction between them.

In regard to their distribution, the so called gray matter of the cortex of the brain and the central portion of the spinal cord is composed largely of masses of cells; while the white tracts of the brain and cord and the anatomical nerves consist of bundles of fibres.

In regard to their function, the cells are to be regarded as the place of origin of all nervous energy, while the fibres exist, simply, to transmit this energy to other tissues of the body.

In addition to this, the nucleus of the nerve cell is described as the nutritive center for the cell substance and the substance of the fibre; that is, the nerve cell will usually survive if the fibre is destroyed but, deprived of the cell, the fibres soon become as lifeless as an amputated human arm and for exactly the same reason.

Without committing ourselves to the theory that nerve energy and electricity are identical, we may still make use of the following helpful comparison: The nerve cell is to the nerve fibre what the battery cell is to the electric wire, the place of origin of its energy, the place where the energy producing material is consumed and, consequently, the place where the renewal of the supply of these materials must take place. In proof of this assertion may be mentioned the following facts: The gray matter of the nervous sys-

tem has a much more abundant blood supply than the white. A map of a cross section of the cord with shaded areas to represent the regions where the blood vessels are most numerous could hardly be distinguished from a map where the gray matter is represented by similarly shaded areas. The development of acid waste products is much more marked in those parts of the nervous system where nerve cells are most numerous. When the metabolism of a ganglion cell is kept up by constant stimulation for several hours a shrinkage of almost fifty per cent in the actual size of the nucleus occurs. On the other hand, there is no evidence that such fatigue changes take place in nerve fibres.

Now in osteopathic discussion and literature, the nerve fibre is a much more prominent feature than the nerve cell. To be sure, we speak often of "centers along the spine" and to the physiologist a "center" is a collection of nerve cells. But as we use the term, it has a much less specific meaning.

Probably, to the majority of osteopaths the picture first suggested by the word "lesion" is as follows: A spinal nerve fibre at the point where it emerges from the spinal canal is compressed or "impinged upon" by either the bony wall or adjoining muscles or ligaments. And the result of the treatment for such a condition would be simply the removal of this compression from the nerve fibre.

That the foregoing is a true picture in some cases, there can be no doubt. Yet to it as a universal explanation, there arise some very reasonable objections. The nerves on which this pressure is supposed to come are not isolated fibres with separate functions, or even bundles of fibres with one function common to all the bundle. As far as any physiologist has been able to tell us, the splanchnic nerves or the spinal nerve roots from which they come contain fibres whose impulses both constrict and dilate the vessels of the abdominal cavity. We must grant that we have experimental evidence that in some cases one class of nerve fibres in a nerve trunk may be more easily stimulated than another. But, granting that, by mysterious chance the pressure might be just sufficient to affect the vaso constrictors and not the vaso dilators, there still remain objections to be considered.

The nerve fibre is an extremely delicate affair, and it is hard to imagine its being compressed for months or years to a degree sufficient to impair its activity without producing marked destructive changes in its substance. Mechanical compression, it must be remembered, is one of the methods used in experimental physiology to produce degeneration of nerve fibres.

This much has been said to show that we cannot regard the popular explanation of "a nerve fibre caught somewhere" as universally satisfactory. And yet we stand committed to the doctrine that mechanical displacements and pressures are the great causes of disease. If it is not pressure applied to the nerve fibres, do we mean then that it is pressure applied to the nerve cells? Not necessarily. There is another set of causes which could produce the same effect.

It will be remembered that in our anatomical introduction we said that the nerve fibre exists simply to transmit the impulses set up by metabolism in the nerve cells. And that upon the normal or abnormal supply of metabolizable material furnished to the cell depends the character of its impulses. This material must be brought by the blood, and, therefore, in the quality and quantity of the blood supplied to the nerve centers we have an important factor in determining whether the body shall experience health or disease.

The science of physiology presents numerous instances of changes in the activity of the nervous system produced by change in the quality or composition of the blood supplied to the centers. If, for any reason, the blood is rendered more venous, or, in the popular phrase "impure" by breathing bad air, or by not breathing at all, the respiratory nerve centers in the medulla oblongata immediately feel it, and we see the violent efforts at breathing quite independent of afferent nerve impulses or of the will. Again, in vigorous exercise, the accumulation of the products of muscular metabolism in the blood excites the centers controlling the heart to more vigorous action.

So much for the effects of change of quality of the blood upon the activity of nerve centers. Of equal importance to the body and of greater importance to our present subject, are the effects of changes in the quantity of the blood. When the abdominal aorta of a rabbit is compressed for about an hour below the origin of the renal arteries, the gray matter of the corresponding portion of the cord is so seriously injured that it and the fibres that arise from it degenerate.

In this case we were dealing with the results of a complete loss of blood supply. A glance at the anatomical relation of the spinal cord and the neighboring structures immediately suggests another method of cutting off this blood supply which is probably not so complete but which is much more liable to occur. The nerve cells whose processes form the anterior root fibres of the spinal nerves lie in the anterior portion of the gray matter of the cord. The cells whose processes form the posterior root fibres lie, not in the cord, but in the spinal ganglia which are placed, as a rule, immediately in the foramina through which the nerves emerge. Through these foramina and through the muscular and ligamentous tissues which overlie them pass, not only the trunk containing the afferent and efferent nerve fibres, but also the arteries and veins which constitute the blood supply to the cord and the ganglia.

When, therefore, there exists what we call a spinal lesion, does not this suggest the true manner in which this lesion causes the symptoms that arise? May not the slightly slipped vertebra or the contracted muscle or the over developed ligament act as well upon the blood vessels which enter and leave these narrow openings as upon the nerve trunks? And, thus, may not the nutrition of the nerve cells of the central gray matter and of the spinal ganglia be the true agent by which the lesion does its work? It is certainly easier to imagine a constricted blood vessel continuing to transmit its attenuated stream for a considerable length of time than to imagine a protoplasmic nerve fibre constricted to the point of obstruction, or irritated to the point of exaggerated

action, and yet retaining enough vitality to make possible a cure during the same continued interval.

In conclusion, let us consider a few typical symptoms, and ask how they could be caused in accordance with this supposition. Take the so-called regions of hyperæsthesia or sensitive points found along the spine. By the term "irritability," we mean the power of responding to stimuli. The sensory nerve cell shows its power of responding to stimuli by transmitting to the brain an impulse which we recognize as a sensation. Now the irritability of a nerve cell is not always the same, and when the degree of irritability is high a very slight stimulus may be sufficient to produce an acute sensation, while if the cell had only its normal degree of irritability this stimulus would be scarcely recognized.

When therefore, the arteries and veins to a given portion of the gray matter of the cord are partially closed by one of the possible forms of lesion, the cells of that region are bathed for the time being, in blood relatively poor in nutriment and oxygen and rich in carbon dioxide and other products of metabolism. Under these conditions, these cells, as did the cells of the respiratory center in asphyxia, attain at first a high degree of irritability, and the stimulus of a finger laid upon the skin may produce a sensation such as could be produced through a normal cell only by the pressure of many pounds.

Again, take contracted muscles. The similarity between the condition of these muscles and muscle in tetanus suggests that the cause of the two conditions is the same, namely, a stream of impulses coming to the muscle over its nerve fibre. In the case of the contracted muscle along the spine, these impulses must come from the motor cells which are placed, as we said, in the gray matter of the cord. Would not these impulses be the result of the over-activity of these motor cells, the result in turn of an increased irritability due to the abnormal quality or quantity of the blood?

These two phenomena, the one involving sensory and the other motor activity, may be taken as types of a great number of symptoms which may be similarly explained. It is not the purpose of this paper to present, in detail, these explanations. It is, simply, our desire to suggest the possibility that in greater attention to the nerve cell and its nutrition we have a key to large stores of rational explanation in osteopathic theory.

PROLAPSUS OF THE OVARY.

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(Paper read before the A. S. O. Alumni Ass'n. Meeting at Kirksville, Mo., June 25.)

How common a thing it is for a lady patient to come into your office complaining of soreness or an ache in the side! When asked where the pain is, she points to the upper part of the iliac fossa, usually the left, to a spot, about on a level with, and two inches internal to, the anterior superior spine of the ilium. A majority of patients suffering with pelvic disease describe such an

ache or pain. In fact, it has become such a common symptom that I determined upon a closer investigation of the "why" and cause of the condition, and the conclusion was drawn that the ovary was the affected organ, it being congested, or otherwise diseased and that this congestion came from a prolapsed or displaced condition of the ovary.

The ovary, as you well know, is situated in the posterior layer of the broad ligament, at a distance of one to one and a half inches of either side of the uterus. This layer is so thin and so closely conforms to the surface of the ovary that it has been called the germinal epithelium and the Graafian follicles rupture through it, discharging their contents into the peritoneal cavity. The ovary is held in position by the broad, ovarian and infundibulo-pelvic ligaments which attach it to the uterus and the innominate bones. The blood vessels and nerves also help support the ovary on account of the great number of each going to it. The causes of prolapsus of the ovary really depend upon two conditions, viz: the increased weight of the organ, or weakening of its supports.

One of the common causes of weakening of the supports is a sub-involute condition of the above mentioned ligaments, following parturition. These ligaments, with the ovary, increase during pregnancy to about twice their former size. Improper care, such as getting up too soon, retention of the secundines, mastitis and bony lesions produce this condition of sub-involution and thereby predispose to prolapsus of the ovary by weakening its supports.

Chronic pelvic congestion, such as that resulting from metritis or parametritis, weaken these ligaments. This weakness is manifest most in the round and broad ligaments, thus allowing the uterus, hence the ovaries, to be displaced backward or prolapsed. The most common, as well as the most important cause of prolapsus of the ovary is displacement of the uterus. In retro-displacements, the ovaries must of necessity be drawn downward, while in anti-displacements, the ovaries are misplaced, to a slight extent, this displacement being forward and downward. The ovaries are directly and quite securely attached to the uterus, hence the prolapsus following a displaced uterus. In prolapsus uteri, the ovary is dragged down into the pouch of Douglas, thus constituting the typical form of prolapsus of the ovary. About seventy-five per cent. of female complaints can be attributed to uterine displacement, at least a displacement exists, either as a cause or result, it usually being the cause. The uterus itself is not so sensitive nor so important an organ as the ovary. The ovary controls the function and development of the other pelvic organs. From this, a conclusion can be drawn in regard to the relation between the uterus, ovaries and female diseases.

A force suddenly applied, such as a strain or lift whereby the intra-pelvic pressure is suddenly increased, will often displace an ovary independently of the uterus. Growths on the ovary or in the broad ligaments usually force the

ovary down, also fibroid tumors of the uterus produce a backward and downward displacement of the ovary.

Increased weight of the ovary results from growths, obstructions to the venous return, or dilatation of the vessels of the ovaries. Obstruction to the return flow of blood results from constipation, enteroptosis, kidney disease, especially of the left kidney, or twisting of the broad ligaments from a slipped innominate or displaced uterus. Dilatation of the vessels results from lesions in the lower dorsal vertebrae and corresponding ribs or from the influence of the higher centers. Congestion will follow excitement of the higher centers controlling the sexual organs, this being exemplified by the "side ache." If this is often repeated, the weight of the ovary is increased, it sinks to a lower level and puts traction on the vessels and nerves supplying it, this resulting in the pain in the side, the patient complaining of ovarian trouble.

A disturbance of function follows prolapsus of the ovary. The organ becomes congested, the Graafian follicles rupture with difficulty, the ovary is poorly nourished, a lower form of life is supported by the venous blood and chronic ovaritis follows. With it, come disturbed menstruation, backache and reflex phenomena. The neighboring organs will be affected such as the rectum, tubes and uterus. The nerves and the veins, in relation, especially the pampiniform plexus, would be disturbed, this resulting in various pains and disturbances.

The symptoms of prolapsus of the ovary are painful defecation, soreness over and above ovary, pain in limbs, it being the most marked on the affected side, backache, reflex phenomena, such as hysteria, dysmenorrhea, the pain preceding the flow, and a constant weight or uneasy feeling in the pelvis. The patient often has nausea, or even attacks of vomiting, is pale and suffers from general weakness. On local examination an oblong movable body is felt posterior to the uterus, usually in the pouch of Douglas. Pressure on this body produces pain in the side, the spot the patient described in giving you the history, and nausea or a sickening feeling, also the pain may be reflected to the limbs and back. Since the ovary is slightly below, posterior and internal to the anterior superior spine even in the true pelvis, the question naturally arises, why is the pain in ovarian troubles above or on a level with the anterior superior spine of the ilium? The explanation is that the ovary, according to Quain, gets its sensory innervation from the tenth dorsal nerve, and since this nerve is distributed to the above mentioned place the pain is referred to that point. The impulse is carried from the ovary by way of the ovarian plexus to the renal plexus, thence lesser splanchnic, thence over the rami to the intercostal nerves. The converse is also true, that is, a lesion of the ribs especially the lower three will produce ovarian disease by affecting the intercostal, the white rami, lesser splanchnic, and finally the renal and ovarian plexus.

The diagnosis of prolapsed ovary depends upon palpation. By palpation the ovary can be outlined, its mobility tested and the degree of soreness ascer-

tained. Pressure exerted against this body produces the pain in the side and a nauseating sensation. This in conjunction with the retro-deviation of the uterus, painful defecation and history of ovarian trouble makes the diagnosis absolute. No other enlargement produces such a peculiar sensation on pressure and in nearly all cases the ovary can be felt unless in incipient stage.

The prognosis in such cases, like any other kind of case, depends on the degree of the disease and length of standing of the case. If the supports are very badly weakened, the prognosis is unfavorable. In ordinary cases, the prognosis is favorable.

In the treatment of prolapsus of the ovary, palliative and curative measures are used. To relieve the pain, and the pain is quite severe in many cases, place the patient either in the Sims or genu-pectoral position and with one or two fingers in the posterior fornix exert a steady pressure against the ovary, and with the free hand retract the intestines by working toward the umbilicus along the iliac fossa corresponding to the affected ovary. In addition to this, it is sometimes well to admit air into the vagina, in other words, "balloon" the vagina. If treatment is successful, you can feel the ovary move out of reach of the examining finger and the patient will almost immediately experience relief. In a great many cases I have been able to relieve an ache that had existed for months in the above mentioned way. I was recently called to treat a patient suffering with a pain in the side, about on a level with the anterior superior spine. There was soreness on pressure lower down, pain in limbs and a history of ovarian disease. On local examination a small, movable, sensitive body was felt in the posterior fornix. Pressure on it caused pain in the side, or as the patient expressed it, "in the old sore spot." A retroversion of the uterus was also found. By lifting the patient into a semi-genu-pectoral position and keeping her there by placing my left knee under the hip, I soon was able to replace the ovary by careful pressure. At first it did not yield readily, but in few moments I felt it slip out of reach and the patient became easy in a few minutes. In addition to this treatment I also replaced the uterus.

Curative measures consist of means whereby the ovaries are replaced and kept in place. To do this, the uterine displacement must be corrected, the support strengthened, and the congestion of the ovary relieved. Correcting bony lesions of the lower dorsal vertebra and ribs and lifting up the intestines are sufficient to accomplish this in most cases.

The particular points that I want to emphasize and present for discussion are: (1) the frequency of the condition, (2) the location of the pain, it being on a level with and internal to the anterior superior spine of the ilium, (3) the methods of diagnosing and relieving the condition.

SCIENTIFIC UNCERTAINTIES—ENCOURAGING OR DIS- COURAGING?

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It is notorious that what in one generation, is accepted as scientific is proven by the next to have been founded on false assumption, illogical deduc-

tion, or incomplete or inaccurate observation. From remotest times when the flatness of the earth's surface was taken for granted because of its appearance in local areas, to the modern idea of spherical shape, solid crust and fluid interior, the conceptions of the nature of our planet are representative of the changing tendency of man's mechanism of intellection. Development of biological science is no exception, and indeed is one of the most striking instances of that peculiar characteristic. If we but trace the evolution of a single biological problem of today back to the earliest record of its existence as such, the insecure foundations of each successive view becomes quite apparent. At the same time, each generation clings tenaciously to its favorite conception, even in spite of most convincing rebuttal evidence. It required demonstration after demonstration on the part of Harvey and his disciples to establish in scientific circles the fact of blood circulation, or even to protect it from the thrusts of ridicule and even of calumny from his contemporaries, though indeed much before Harvey's time and even by the immortal Galen himself, the fact had been hinted at and certain elements of it maintained. It took just fourteen centuries to develop that simple fact from the hazy conception of Galen to the unrefuted demonstration of Harvey.

If it is true that the development of science—systematized truth—be so slow, why is it true? The question requires more for an answer than is permitted in this brief space. Suffice it to note that in such development the elimination of error occupies first place in point of bulk and an equal place in point of importance. Untrained minds predominate in the origination and establishment of error, with only the incorporation of a minimum amount of truth. And as the number of individuals possessing such untrained minds is greatly in excess of that of the opposite class we can partly understand why we are confronted so constantly with such an appalling array of unsubstantiated propositions, and obviously false statements, both of which classes are so easily ingrafted into popular thought.

But on the other hand trained minds are not by any means exempt from the general charge of promulgating error, and indeed if we do not properly distinguish between minds trained and those falsely so-called, we fear the latter class will be required to answer for the greatest bulk of propagated untruth. It is just this inability to sift, before the harm is done, the production of untrained from that of trained, that the greatest difficulty lies, and which largely accounts for many of the uncertainties that masquerade as part of science. It is emphasized by a modern logician that a definite assertion without evidence to substantiate it is nothing less than a crime against science. Taking into consideration the above several inferences, so-called scientists will certainly some time be arraigned before the bar of the criminal courts.

In the light of all this, is there reason to despair for the normal development of the osteopathic division of biological science? To the beginner in the study of fundamental osteopathic principles there is much to discourage, we admit. Even in the brief life of the new system we may already see evidences

of the beginnings of retractions and subtractions. What has at one time been accepted as essential or at least subsidiary is now being questioned as to its legitimate occupancy of either the one or the other of the implied classes. What was not originally in the osteopathic conception has occasionally unjustly obtruded itself to the extent of becoming incorporated as part of the system. And between the two sources of original mistaken conception and extraneous material ingrafted, the trained osteopathic thinker and practitioner will be well occupied in sifting and arranging. A few of the questions of this nature to be decided in this connection may not be out of place here: the relative position of structure and function; the relative importance in time and effect of the different forms of osteopathic lesions; the essential or non-essential nature of positive stimulation and inhibition in the therapeutics of osteopathy; the legitimacy of artificial interference with function in any but an indirect way; the inclusion or exclusion of certain methods of non-medicinal methods of treatment as part of osteopathic practice; and all other aspects of the life-problem which may be included as indicating the boundaries of the science; in all of which questions there are infinite possibilities of not only statement and re-statement, arrangement and re-arrangement of *truth*, but of equal if not greater probability of manipulation of error.

But since osteopathy is directly related to anatomy and physiology, we might assume that the possibility of error would be reduced to a minimum from the fact that these sciences would serve as correctors of osteopathic statement and practice. And to a very helpful extent the assumption is correct, but knowing anatomy, and knowing physiology, is *not* knowing osteopathy; it is in the application of these two branches to the maintenance and restoration of normal function that osteopathy consists; and the application is neither easy nor simple in all cases. Even though it were true that the application were a simple matter, we are again facing the fact that the science of anatomy and to a still greater extent, that of physiology are equally with other branches of science still in the mazes of uncertainty. What does anatomy know of the finer structural relations of the cells in the cerebral cortex? Nothing. True of countless other minute structures. And as to physiology—unsubstantiated theory and manifest error meet us at every turn. We are entirely ignorant of all except the most gross of functions. We know that the stomach secretes certain digestive substances which in part prepare the food for nourishment of the body cells. We know that the kidneys excrete certain waste materials broken off from the animal substance. What goes on between these processes is almost a blank. And as to hypotheses explaining nerve action, we may cite a typical condition: heretofore physiologists have assumed that certain "centers" in the reflex arc exercised a particular control over certain responses taking place as a result of impulses going to that center from the periphery. Recently, experiments being performed especially by Loeb of the department of Physiology, at Chicago University, and by others of equal attainments in the scientific world, tend to divest the "center" of much of its supposed power,

merely giving to it the simple function of serving as a connecting link between two parts of the periphery, the direction, co-ordination and other characteristics of the reflex being determined by other factors. True, on the surface of it, it would seem that the determination of which view were correct, is not a matter to immediately affect osteopathic procedure. But there is more than the surface of any question, and to the thinking practitioner the proper understanding of such conditions becomes of increasing more importance.

Admitting the above, will it tend to discourage, as before indicated? On the contrary the facts as they stand are decidedly encouraging, and from two considerations. In the first place, what has actually been accomplished from the standpoint of practical therapeutics under such conditions of extreme difficulty is only a portent of what may be done, when in the course of time those difficulties will be overcome or materially lessened. But in the second place the very difficulty of the situation is but a normal stimulus to the American, and ought, if he be truly scientific as well as American, to be the lever by which he will be able to move things. Some one has said that happiness is only attained by the successful manifestation of energy. This is no doubt true to a marked extent, and he who helps to solve but the minutest problem of osteopathic or any other part of biological science has title to a sure portion in the allotment of happiness.

Be a scientist, uphold scientific investigation, recognize truth from whatever source, but discriminate carefully in your own investigation and in that of all others, between the seeming and the real. If such course be followed one or both of two results must obtain: error will be eliminated or truth will be propagated, the one of which is as essential as the other in the production of a complete and unadulterated science.

UTERINE DISPLACEMENTS AND THEIR SEQUELÆ.

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In presenting this subject it is not our purpose to discuss in detail the various uterine displacements and their numerous sequelæ nor to classify the long train of symptoms incident thereto. The want of space forbids anything more than a synopsis, and a general application of osteopathic principles.

A displaced uterus is not only an almost constant element in uterine diseases, but, as a primary condition, exists in some degree in fully eighty per cent. of adult women. Nearly every structural defect in a region calculated to affect the nerve-and-blood-supply of the uterus will almost invariably first produce a loss of tonicity in the muscular walls of the organ and weakness in its ligaments and other supports, thereby predisposing a misplacement. Sometimes a displacement results directly from a sudden jolt, fall, strain, etc., but in the great majority of instances it is first predisposed by a defective spine interfering with the spinal origin or connection of the nerves supplying the uterus and its supports. With such a liability existing a uterus is easily dis-

placed by the pressure of tight clothing, forcing the abdominal organs downward; by being on the feet too much during the menstrual period when the uterus is unusually heavy from congestion; running up and down stairs; jumping from a bicycle; a sudden slip, etc.

Quite frequently a displacement follows childbirth on account of carelessness on the part of the attending physician. After parturition the uterus undergoes structural changes and assumes a different position from that occupied during pregnancy. Lying on the back continually during the convalescing period causes the uterus to gravitate and assume a backward position. A displacement at such a period, however, is easily avoided if proper care is taken to see that the organ assumes a normal position. In fact, it affords an excellent opportunity for correcting a former displacement.

A misplaced uterus necessarily produces a bending, twisting or stretching of the broad ligaments. And, since the uterine arteries, veins and nerves pass between the two layers of these ligaments, it is apparent that the result would be a blood stasis—an impeded circulation of the blood-and-nerve-supply—causing congestion, the forerunner of leucorrhœa, profuse menstruation, inflammation, tumor, adhesion, etc. The displacement, furthermore, so irritates the nerves involved that the rhythm of the pelvic plexus is disturbed; the nerve impulses can no longer freely travel their usual course, and as they must find an outlet, naturally pass along the lines offering the least resistance—to where there is weakness. Hence the reflex effects—an important class of sequelæ—such as distressing stomach trouble, kidney disturbance, hysteria, nervousness even to prostration, headache, backache, cramping and aching in the lower extremities, etc.

Various sequelæ or secondary conditions are more or less common to all displacements. They differ in intensity in different individuals, and are not dependent upon the degree of the displacement. A prolapsus has been known to cause but little pain, while a retroversion caused intense suffering and nervousness.

An anteversion is perhaps attended by fewer disturbances and less serious consequences than any other form of displacement, which is doubtless due to the fact that the normal uterus is slightly anteverted. Too frequent urination is characteristic of forward displacements on account of the uterus pressing on the bladder.

In anteflexion, the uterus being bent on itself, the uterine canal is narrowed, which retards the menstrual flow and causes it to clot. This necessitates strong uterine contractions, giving rise to very painful menstruation. Anteflexion is more common in women who have not borne children, and may be a cause of sterility in the married.

Retroversion is the most common form of displacement, and more likely than any of the others to occur suddenly. It is the first stage of a prolapsus, and usually precedes a retroflexion. While menorrhagia or profuse menstruation is more or less common to all displacements, it is more often a sequel of

retroversion. It is due to the congested and relaxed condition of the uterus, there not being sufficient tonicity or contractile power in the muscular fibers of the organ to compress the blood-vessels. Constipation usually attends backward displacements, especially retroversion. It is due to occlusion of the lumen of the bowel by pressure of the uterus against the rectum. Such displacements frequently obstruct the hemorrhoidal veins, also, and cause hemorrhoids.

Retroflexion, or a bending backward of the uterus on itself, is more common in women who have borne children, and perhaps more generally characterized by backache than is any other displacement. There is painful menstruation, more marked in women who have not borne children. There may be painful defecation and pain in the lower extremities. Hysteria, dyspepsia and other reflex disturbances more often attend this displacement.

A prolapsus or "falling of the womb" is the most distressing of uterine misplacements. It is usually attended by a dragging sensation in the lower abdomen and back. Pain between the shoulders and aching and cramping in the lower extremities are common to this condition. While headache is more or less a sequel of all displacements, it is perhaps more characteristic of this form. Prolapsus is largely confined to women who have borne children, though it may occur in young women who have inherited a weakness of the pelvic organs.

Dysmenorrhea or painful menstruation is a constant sequel of uterine flexions, usually more marked in anteflexion. Flexions obstruct the uterine canal, and to promote the menstrual flow requires hard uterine contractions, causing pain in the lower abdomen and back similar to labor pains. This sequel may attend uterine versions if inflammation exists, also inflammation of the ovaries, which is frequently the result of uterine displacement.

Ovaritis (inflammation of the ovaries) is a common sequel. The ovaries being contained in the broad ligaments their blood-supply is disturbed by the contraction of these ligaments in uterine displacements. If the blood-and nerve-supply of the ovaries is sufficiently shut off, scanty, irregular or suppressed menstruation will become a sequel.

Endometritis or inflammation of the lining membrane of the uterus is perhaps the most serious sequel of uterine displacements. There is usually painful and profuse menstruation, nervousness, and frequently nausea and vomiting, especially in acute cases. The disturbances depend largely upon the degree of inflammation. The constant determination of the blood to the inflamed area frequently results in a deposit of material from which a tumor develops. If the inflammation permeates the uterine walls local peritonitis and adhesion usually occur. Endometritis follows the congestion incident to displacements. With an existing chronic congestion, of which leucorrhoea is a distinguishing characteristic, exposure to cold, or getting wet, during the menstrual period will usually result in inflammation. The most prolific exciting cause is the maltreatment of displacements by so-called modern surgical methods, such as

stem pessaries, dilators, sounds, uterine "packing", etc., whereby the uterine cavity is invaded and the congested and sensitive membrane intensely irritated, and perhaps septic matter introduced from without.

The pessary is one of the most baneful devices that can be used in the treatment of uterine displacements. While it may for a time conceal the real condition, it does not remove the cause. It keeps the vagina distended, which depletes its contractile power, thus destroying one of the principal natural supports of the uterus. It irritates the parts and affects the nervous system reflexly.

The abdominal supporter, also is a useless and harmful appliance. It prevents exercise of the abdominal muscles, causing them to become relaxed and flabby. It restrains abdominal breathing, thus interfering with nature's method of lifting the organs and preventing them from settling down into the pelvic cavity.

Inflaming and mutilating delicate and sensitive organs by instrumental appliances, cauterizing them with acids, "scraping out" the uterus—known as curetting—and finally the unsexing of women "with the enthusiasm of an art," are such harsh, experimental, and extreme measures that it is no wonder women shrink in terror at the thought, and delay treatment until their conditions reach an unbearable stage.

We recognize that there are rare instances where operations are indicated, but they are usually made so by malpractice. If the cause of the trouble is understood, and its removal made the object of the treatment, severe and extreme measures are seldom if ever necessary. Very distressing conditions frequently result not only from harsh methods, but from applying the treatment to a secondary condition instead of a primary one; or to an effect rather than the cause. For instance: Often the lining of the uterus has been "scraped out" when its condition was a natural sequel of a displacement, only to have another diseased membrane return, since the cause was not removed. Often a displaced uterus has been raised up with a sound and propped with a pessary only to fall the flatter when the artificial support was taken away, since the cause—such as a slipped vertebra—was neither discerned nor corrected.

Vitality and tonicity of the parts being dependent upon a normal nerve and blood supply, implies that interference with these factors will primarily cause uterine displacement, and, since the nerve-and-blood-supply are determined from the spine, the correction of an abnormal spinal condition removes the primary cause and provides an opportunity to easily and naturally restore a displaced uterus to its normal position and relieve the various sequelae.

Osteopathic methods are not experimental, destructive, torturous nor revolting. No substitutes nor artificial means are employed; hence the cures are natural and therefore permanent. It has been well said that if osteopathy had done nothing more for humanity than what it has done for an overburdened and suffering womanhood, it would deserve everlasting praise.

CASE ILLUSTRATIONS.

Mrs. F., age twenty-five. Retroflexion, following childbirth; since which time had backache and pain in lower extremities; periods irregular and very painful; extreme nervousness. Treatment was applied to correcting slipped innominates, both of which were up and back. Placed the uterus in normal position about every ten days. Menstruation normal, uterus remaining in position, and no backache at end of three months treatment.

Miss A., age twenty-one. Troubled with very painful periods—confined to bed first day or two—usually delayed seven to ten days. Case of ante-flexion. Entire lumbar region was posterior, second lumbar vertebra turned to the right, fifth very sensitive. First period after beginning treatment delayed seven days, but attended with but little pain—did not go to bed. Second period in twenty-eight days, free and without pain—as was also the third. Treatment—two months—consisted in correcting the spinal irregularities, and in placing the uterus in normal position once per week.

Miss M., age twenty. Leucorrhœa, profuse menstruations, constipation, backache and some pain in lower extremities. Sacrum was tilted backward. There was retroversion of the uterus with slight adhesion posteriorly. Adjusted the sacrum, broke up the adhesion gradually, and at end of second month's treatment the uterus could easily be placed. At the end of three month's treatment the uterus had stayed in normal position for two weeks, and all the sequelæ had disappeared.

Mrs. H., age forty-two. Mother of three children. Painful, irregular and very profuse menstruation for past five years. Periods three to seven weeks apart and ten days to two weeks duration. Almost constant headache and pain between shoulders and in lower abdomen. More or less aching and cramping in lower extremities. There was prolapsus of the uterus in the second degree, endometritis, erosion of the cervix, constipation, nausea and insomnia. Had worn pessary, uterus had been curetted, and cervix cauterized, but continually grew worse. An operation had been advised, but she tried osteopathy instead. The entire spine was very sore to touch, muscles badly contracted, lumbar region very rigid, left innominate back. After second month's treatment periods were twenty-six to thirty days apart, lasting four to five days. Three month's treatment corrected the spinal lesions, and at the end of the fourth month the uterus was staying well in place, erosion of the cervix had disappeared, and the patulous os had closed. At the end of the fifth month, when treatment was stopped, the distressing sequelæ were almost nil.

REMARKS ON FUNCTIONAL NERVE DERANGEMENTS.

HERMAN F. GOETZ, B. S., D. O., 318 CENTURY BUILDING, ST. LOUIS, MO.

(Paper read before the A. S. O. Alumni Association Meeting at Kirksville, Mo., June 25.)

By functional nerve derangements, I mean those, which so far as pathology is concerned are doubtful, in which after investigations no organic lesions

have been found, and whose symptomatology is vague, and usually begin with the patient's iteration of nervousness, then follow the paresthesias, hyperesthesia, alteration of voice, functional heart disturbances, dyspepsia, nervous dyspepsia, constipation, uric acid manifestations, symptoms of fatigue, auto-intoxications from fermentative dyspepsia, headache, vertigo, disturbances of circulation, flushing, intolerance of noises, sensitiveness, deficient thirst, insomnia, fullness of the head, brain fag and pressure symptoms, fears of solitude and society, irritableness, symptoms of cerebral delusions almost too numerous to mention, at least, they are at this time. This will give you some idea of the object of this paper.

We may as well confess in the beginning, that insofar as the pathology of functional nerve derangements is concerned, that whatever theories we see fit to advance, that they, in our present state of knowledge, must of necessity enter largely into the domain of speculation, but not entirely so. In these practical times perhaps little pardonable defense can be set up to justify theorizing. "To be cured," is the only concern of the patient, but personally we may consistently have other interest in the matter, even though both reasoning as to cause and as to treatment be somewhat empirical.

The importance of getting at the true cause of functional nerve derangement (f. n. d.) cannot be overestimated, for naturally on this discovery depends largely intelligent treatment, but it does not require even a shrewd deduction to conclude, that did we know the exact pathology, in the majority of instances, we would, after all, be face to face with organic changes in the finer structures of the central and sympathetic nervous system; almost as profound as those of cerebral and spinal degenerations. We are especially led to this conclusion when persistence of symptoms such as the so-called functional tremors, paresthesias, can be explained by no other course of reasoning.

That a confusing collection of theories are now advanced which serve more to confuse than to simplify this subject, is evident after study of the conditions, but judging from clinical study and from clinical evidence that follow osteopathic investigation and treatment, I believe that we will concur in the opinion that f. n. d.'s are broadly speaking caused by malnutrition of the nerve elements concerned. Back of this malnutrition are other factors, which must be weighed, but the salient feature is malnutrition of nerve cells.

Nerve cells consist of two substances, the framework continuous with the fibrillæ of the nerve fibre enclosing in its meshes small masses of granules, the protoplasm. This granular mass is physiologically very sensitive to stimuli, and when stimulated undergoes certain changes. In the normal cell this change is believed to be a chemical one. Nerve energy is constantly being stored up, and liberated as the demands placed upon the cell are fulfilled.

Physiologically this conservation and potential liberation of nerve energy is a nutritive process derived, of course, from the food we eat. In the process of food elaboration all functions are more or less concerned, but the nerve impulse emanating from the cell, and the circulation of the blood in the net-

work of capillaries surrounding each cell, are directly the ultimate means which aid the transformation of the plasma into nerve energy.

The discharge of nerve impulse alters the chemical properties of the granular protoplasm, modifies the osmotic powers of the cell wall, (which is also due to the coefficient of blood alkalinity), then by endosmosis and exosmosis the cell assimilates from the plasma that exudes from the capillary walls the nutritive properties necessary to its normal functioning.

This being the physiological process, we can deduce or infer theories as to the cause of nerve derangements, which are most consistent in view of our present state of physiological information.

Later investigations, especially those of Loeb and Matthews, alter a detail of the above theory somewhat. Loeb claims that cell energy is not derived from the mechanical heat of this nutritive process but from ions, contained in the plasma, being electrically charged. Heretofore, the changes taking place in the cell have been chemical. If now later investigation proves it to be electrical, it has so far failed to clear up any especially mooted points of functional nerve pathology.

The question as to whether chemical affinity is electrical has not been finally determined, but that these theories of Loeb and Matthews are of great importance if proven correct, none of us are disposed to deny. We defer judgment and hold ourselves ready to change our present views.

It may be through failure to grasp the underlying principle of the Loeb investigations (which is, perhaps, pardonable in view of their contributions), but if a pathological nerve impulse is caused by a poison bearing ion, we fail to see wherein this differs from the views of Bouchard, that pathological nerve impulses are caused by autointoxication, by toxins derived from the products of faulty metabolism in the blood.

A rather disquieting question presents itself at this point, namely, "as to whether the nervous system is always the seat, the cause of f. n. d's." I believe not. While it is true that nerve tonicity is decreased in every instance, yet we have all seen cases, for example, of a diseased ovary causing marked nerve disorders, which disappeared as if by magic when this cause was removed. Evidently in such cases the nervous system was not the primary source of the nervous symptoms.

The prolific cause of f. n. d's. is however the malnutrition of nerve cells, which in turn is caused by fatigue or overwork, food, toxins, age.

Fatigue:— Under this heading we may conveniently consider all those causes of f. n. d's. following an over strenuous life, overtaxing the nervous system, either physically or mentally, in short, exhausting nerve energy more rapidly than it is conserved. When we examine microscopically the fatigued cell as compared with a normal cell, we find that here at least physiology has made substantial investigations; these changes are not a matter of mere conjecture.

The normal cell reveals that the balance between quality and quantity of

the plasma, and the power of the cell to assimilate, has been sustained. The granular mass of protoplasm has the characteristic appearance of that in a resting cell, the surrounding capillaries, the fibrillæ normal, the cell nucleus and nucleolus round and dark. But submit a like cell to stimulation and we find that not only has the protoplasm become less dense, the capillaries of changed appearance, but the nucleus and nucleolus are smaller, shrunken, crenated.

Thus, experiment has shown that stimulation continued for one hour causes a shrinkage in the volume of the nuclei corresponding to 22 per cent of their original volume, and in ten hours a change of 44 per cent is noted. Allowing for inaccuracies of observation, difficulties of measurement, the fact still remains that the power of the nerve cell to preserve a proper balance between supply and demand has been decidedly interfered with, and when such cell is a motor cell, myotatic irritability must follow its exhaustion.

In this connection it may be said that though a cell be stimulated repeatedly beyond physiological limits, it still shows marvelous recuperating powers during rest, giving us at once, a valuable point to follow in the treatment. We may now conclude that functional nerve derangements are caused by the cells being constantly exhausted beyond normal limits, being unable to recuperate by nutritive process the elements necessary for continued discharge of nerve impulses. Thus we have the causes, over-stimulation of nerve cells, failure of cells to assimilate, malnutrition.

The toxic origin of functional nerve derangements admits of a rational explanation, when we call to mind the osmotic change taking place between the plasma and the cell contents. That food toxins may cause neurasthenia, melancholia, migraine, hysteria and numerous other symptoms that have been unnecessarily burdened with a name, is now generally conceded. Primarily, toxins which destroys the neural equilibrium, are derived from faulty metabolism of food products; it is unnecessary to consider all these, as they are, no doubt, as well known as are the effects of alcohol, excessive coffee drinking, tobacco and sexual excesses.

Too much importance cannot be attached to careful dieting of these patients where you fear toxic origin. I know I am considered a diet crank, also as attaching too much importance to the knowledge which can be gained by careful analysis of the urine, but I also know that the osteopath is, as a rule, not too careful in this regard.

If I were asked the question "when should a patient be advised to eat what he chooses?" I should say "never." You can no oftener cure a diseased stomach without careful dieting than you can successfully treat a broken bone without a splint, and in functional n. d's. of toxic origin, you will always fail to cure when giving the advice, "eat everything."

The digestive apparatus is the central lesion; the toxins are manufactured here. What they are or what it is, we do not know, but I consider an increase or decrease in the amount of indoxyl in the urine as significant. Do not conclude that I think indican is the toxin, for having already said that we do not

know what it is, such conclusion would be erroneous. Indican is an end product of albuminous putrefaction in the presence of organic ferments, supposed to take place in the *large intestine*; and it is granted by many observers that its excretion is regulated by the acidity of the gastric juice. That constipation is almost always a concomitant of f. n. d. is significant, when we consider that absorption is always going on from all parts of the small and large intestine.

It is also known that when peristaltic movement of the intestines is impeded, an increased excretion of indican takes place. "Diseases of the larger intestine alone are never associated with an increase in the amount of indican. In simple uncomplicated constipation increased indicanuria is not seen, and should an examination in such cases reveal the presence of more indican than normal, it will be safe to assume the existence of disease elsewhere, especially of the stomach."

In reference to indican, let me add, that it is as important to examine the urine for indican as it is for sugar or albumin, and I suggest an earnest review of the subject.

The effect of a toxin laden plasma on ganglionic cells has been the subject of interesting verification, by studying the effect of alcohol on the nervous system. The changes which have taken place in nerve cells following alcoholic excesses are similar to those that had already been noted in sunstroke, tetanus and hydrophobia. In milder cases, a most important change was found, namely, "a complete disappearance of the reserve nutriment or chromophilic bodies, the distribution of the lesions showed that there was a general circulating poison." This change was more pronounced in the ganglion cells of the cerebral cortex than in the spinal cells. As for visceral derangements, those engaged in autopsies declare that visceral lesions of alcohol are far more prominent than those in tuberculosis or syphilis.

In this connection it would be unwise to omit mention of the deleterious effects of coffee on the nervous system. In general it may be said that it causes nerve derangements similar to those of alcohol. The symptom-complex is usually a coated, tremulous tongue, tremors, dilated pupils reacting quickly, rapid pulse of low tension, exaggerated reflexes, tachycardia or bradycardia may be present. The same theories prevail for certain articles of food. Uric acid as a cause of nerve derangements is extensively believed to be an exciting element according to the teachings of Hæg, although many of his conclusions are mere jumps.

Age has a decided influence of course towards devitalizing nerve cells, but f. n. d's. following pre-senility can be assigned again to overtaxing the nervous system beyond physiological limits. A nerve cell grows prematurely old. If we take the nerve cell of a child and compare it with one at the age of 92, and let the volume of the child's cell equal 100 per cent, then that of old age has been found to equal 64 per cent. The volume of the nuclei in the child was found to be 53 per cent while in the man 3 per cent. Deep pigmentation in the child nil, man 5 per cent.

From this we can deduce that the physiological powers of the cell in age has markedly decreased both in its energy producing power and in its power of absorption.

In old age these changes are permanent, but in pre-senility the recuperative powers are so slow as to make them a source of functional symptoms. But the other factor of degeneration enters so strongly this theory as a cause of nerve disorders, that I question the advisability of treating them as functional. I have included pre-senility because you will find evidence of it in men before the age of 50. Mental impairment, changes in the circulation probably due to arterio-sclerosis, constant vertigo, blood stasis, permanent baldness, insomnia, although the patient tires easily and may sleep easily the early part of the evening, cardiac irregularities, all show evidences of early breakdown of nerve cells.

Before proceeding to the treatment of f. n. d's. I wish to call attention to a number of cases presenting a symptom-complex which has, I find, been considered by some writers as a disease entity, although my knowledge of this trouble has been confined to the last year and a half. I find that it has been named and partially defined by the term acroparaesthesia, from *acros*, Greek for extremity, and *paresthesia*, perverted sensations, or *acroparæsthesia* perverted sensations in the extremities. These peculiar sensations are described as a tingling, pricking, benumbing, as if the legs or arms were asleep, transient in some, permanent in others. In the transient cases the tingling usually followed fatigue, or lying on the back, and was always accompanied by gastric or intestinal derangements or both. Constipation was *always* present. The patients were always poorly nourished.

Inspection of the spinal column *always* revealed the same osseous malformations. The posterior dorsal curve exaggerated, the vertebræ prominent and irregularly built up, the sacrum small and slightly anterior, the gluteal muscles just below the crest of ilium excessively sensitive to pressure, muscles of back and legs flaccid and lacking in tonicity. Abdominal muscles were *always* tense and contracted. Circulation poor, knee reflexes *always* exaggerated, also, foot clonus.

Vaso-motor disturbances noted. These are the symptoms found in 14 cases of what I shall also call acroparæsthesia. As to age, sex, cause, treatment, etc., and other details, these I will submit in a subsequent article. I only wish to call attention now, to a f. n. d., a symptom-complex that presents itself it seems to me with increasing frequency.

In view of the fact that these cases are always worse while or after resting on the back, we can conclude that stasis of the circulation in the vessels of the spinal cord is a cause, to account for which the spinal column lesions must not be overlooked.

Now that we have considered a number of apparent causes of f. n. d's., let us refer briefly to a cause which we know to be real, namely, nerve pressure of spinal origin. The osteopathic theory as a whole has been re-

ferred to as a "harp of one string." If this accusation be true, I would have passed at once to the consideration of this one cause, but a desire to show that we acknowledge other theories as possible causes, has led me to give precedence to those already enumerated.

The pure osteopathic lesion in these cases has to do with disalignment and irregularities of the spinal column. Will any one deny that simply flexion of the spine is not sufficient to cause nerve pressure or that nerve pressure cannot cause f. n. d's. I think not. When these flexions are permanent, no matter how caused, we have discovered a *true* cause of f. n. d's., which can be overlooked in the treatment, only by the prejudiced.

It is not necessary to re-write our osteopathic knowledge at this time. Let us stand by our theory, correct spinal lesions, observe carefully, eliminate, and we will take the lead in the treatment, and in getting positive results by osteopathic intervention.

The treatment of f. n. d's. must proceed along general lines at first, and then be made specific. When the pathology of a disease is doubtful we can only grant that the treatment must in a measure be empirical, but this is less true of osteopathic intervention than any other means. If we accept the theory of f. n. d's. being caused largely by malnutrition of spinal or cerebral nerve cells we at once reach the rationale of treatment, namely.

- a. Correct lesions, (anatomical).
- b. Stimulate the cells of the spinal cord.
- c. Increase nutrition, by the aid of proper diet, by exercise and such other aids as are of known value.

Medicine plays no role in therapeutic procedure; this is conceded even by that school.

Regarding lesions that may be referred to as purely osteopathic, these must be corrected as quickly as possible. No nerve center can be properly nourished while its blood supply is perverted, and perverted blood supply follows spinal lesions as is evidenced by the symptoms.

It is not impossible to localize nervous symptoms at times; thus the tingling confined to the legs, the tremor to the hand, the excessive sensitiveness of the muscles of back of neck. When this can be done it is advisable to direct our treatment in such way as to excite these nerve centers, fibres, as well as the peripheral nerves; for if these symptoms persist, it is only a question of time until actual structural changes take place. Then when you are sure that degenerations have not already taken place, you are safe in the prognosis that nerve centers can be restored to their normal state.

As regards method of treatment, a set form of operations cannot be given. This would not be osteopathy; the idea is to meet the individual case as a problem, solve it as you see fit. Each operator may have his own way of getting results. General rules as you have been taught must be observed, and the object you desire to attain, keep clearly in mind. You will never find two cases alike, hence no two cases that are adapted to the same treatment.

Manipulations destined to excite peripheral nerve endings, and nerve centers, are entirely consonant with correct treatment. But we must differentiate. Keep the functions of the nervous system ever before you. In those conditions, as chorea, for example, where veritable explosions of nerve energy must produce the train of symptoms, it is manifestly incorrect to stimulate centers already in a state of abnormal excitation. *Inhibition* is here indicated and can be followed in such way as to produce a noticeable nutritive change in the spinal condition. Quite lately we have been prone to lay aside as impracticable the exact distinction between stimulation and inhibition of nerve centers, when applying osteopathic treatment. To do this is to not only discard one of the soundest theories upon which the science is based, but also an extremely useful application of our art.

Since we all concede—so far as I know—that inhibition and stimulation are possible by osteopathic intervention, why neglect the application of these known principles? Why neglect to take advantage of their possibilities in the treatment of nervous diseases?

Nerve centers that discharge their energy so forcibly as to cause contraction of muscles, are, in my opinion, the seat of structural changes, and should be treated as such, but since they are in some instances still classified as functional, we can only say that they must be treated by methods that tend to inhibit the action of those cells deprived of their governing influence, and not by stimulation, which will but increase the force and activity of this symptom.

Herein lies the necessity of making an accurate diagnosis, more especially so, if you are a decided exponent of specific treatment, which I confess I am not, at least, until a decided improvement in nervous symptoms is shown.

In the philosophy of osteopathy, we dwell strongly, and wisely, too, on the therapeutics of stimulation, as opposed to those of inhibition; let us not, then, neglect these precise applications of practice.

The causes of f. n. d's. must be the guide of our treatment. The state of the symptoms dictates the length of time to be devoted to treatment, the degree of stimulation. This you will say is symptomatic treatment, true, but when pathology is doubtful you have no other recourse. Excessive stimulation, "hard" treatments may cause permanent injury, to muscle tissue, to the heart, to the digestive tract, to the kidneys, due to over exertion or excessive strain of the tissues treated. Hard treatments also cause a loss of vitality. In a case having a cyclic albuminuria excessive stimulation was followed by an increase in temperature, also an increase in the amount of albumen excreted, and this, too, in a man of remarkably strong physique.

A single hard treatment under other circumstances would not have this effect, but the tendency is toward the abnormal, and a continuation of faulty technique would undoubtedly produce nervous debility, slight anemia or albumen loss.

Our aim must be to increase oxidation, that is, to increase the tissue changes, to improve faulty nutrition, to employ manipulations which will re-

lieve congested nerve centers, and those which will increase the activity of the muscles, thereby establishing a normal balance between nerve centers and muscles. This equilibrium must exist, or we have all those tinglings, prickings, and vague sensations, so difficult to account for or cure.

Adapt your treatment to the patient, not the patient to your treatment; look out for osteopathic idiosyncrasies, measure your osteopathic doses carefully as the most ardent worshipper of the high potency of drug therapy does his.

Osteopathy relieves the symptoms of f. n. d's. by increasing the oxidation and elimination of blood impurities; by restoring activity of, and nutritional changes in the muscles; by regulating the heart's action and usually by increasing the depth and frequency of respiration, thus accelerating the velocity and oxygenation of the blood, and in general by the intelligent application of the laws of correct living. Do not give your treatments too lightly or of insufficient length; so doing we lose valuable time.

As to the time required for each treatment it should be of just sufficient length to give the patient the feeling of added strength; *fatiguing the patient must be absolutely avoided.*

Let your treatment strengthen, otherwise it will not, cannot, avail. Until vital energies have been in part regenerated (and this is the first indication) then and then only will the treatment be followed by healthful reaction. Let me add that your work here is to establish normal function, just as much so as if the pathology was a known structural change of nerve elements.

Do not try to do this in one treatment. Tell your nervous patients frankly that quick cures are an exception and never the rule.

Osteopathic treatment by directly exciting vaso-motor nerves exerts a beneficial influence over the cerebro-spinal axis and trains it to perform its functions efficiently; promotes healthy metabolism probably through the sympathetic nervous system. Through the vaso-motors we regulate both direct and collateral circulation to the cord, this relieves congested capillaries, stasis, which are in part responsible for the acroparaesthesias.

Increasing vaso-motor tone, increased circulation, this in itself without entering into the "why" at this time, causes the rapid elimination of toxins from the blood. Muscular growth follows the excitation of trophic nerves.

Mechanical irritation (stimulation) of sensory nerves is followed by reflex and muscular contractions, which accelerate venous flow. Stimulation is also followed by improvement in the digestion and increase in the secretory and excretory action of the viscera. Our physiological action here, is not alone on sensory nerves but also on all ramifications of peripheral nerves and through their connective neurons on central ganglia; thus controlling vaso-motor action of cutaneous vessels.

Quite important is the fact, *slight stimulation of the peripheral nerves lowers the irritability of the cortex of the brain.* This statement is so important that I ask you to keep it especially in mind for here we have the entire justi-

fication of osteopathic treatment in all f. n. d's. in which cortical cells are at fault.

In general, osteopathy alleviates and cures nervous diseases, and f. n. d's. in particular, by restoring impaired innervation of muscles, by increasing the tonicity of arteries, by relieving congestion, by exciting absorption and excretion, thus restoring the physiological constituents of the body, by stimulating the spinal cord, by increasing nutrition. To accomplish this, the operator must be educated in the exact technique of the science and apply it in accordance with the demands made by the possible or inferred pathological conditions. This the diagnosis will make clear to him. Apply the treatment with the highest degree of accuracy, with physiological functions well in mind, thus adapting the means to an end. And we find that our methods as evidenced by clinical results, are methods for which valuable therapeutic claims can conservatively be made.

THE ILLINOIS STATE MEETING.

The Illinois Osteopathic association met in Peoria, Illinois, on July 4th and 5th. In addition to a large number of practitioners of Illinois, Drs. Hildreth, Hazzard and Clark of the A. S. O. and Dr. S. S. Still of the S. C. O., were present. They were elected honorary members of the Illinois Osteopathic association. Resolutions of sympathy on deaths of Drs. Riggs of Elkhart, Indiana, and Dr. Henry E. Patterson, of Washington, D. C., were adopted by the association.

The following interesting program was carried out:

PROGRAMME.

FRIDAY, JULY 4, 1902.

"Address of Welcome".....L. H. Taylor, D. O.
Peoria, Ill.
Paper.....A. S. Melvin, D. O.
Chicago, Ill.
Paper.....J. H. Sullivan, D. O.
Chicago, Ill.

ELECTION OF OFFICERS AND OTHER BUSINESS.

—
EVENING.

Banquet National Hotel.

—
SATURDAY, JULY 5.

—
MORNING.

Meet at Hall 9:30 a. m. Ride around the city.

AFTERNOON.

Invocation.....Dr. Little
Paper.....A. G. Hildreth, D. O.
Member of Faculty in The American School
of Osteopathy, Kirksville, Mo.
Music.....Grier Quartette
—
Paper.....S. S. Still, D. O.
President of S. S. Still College of Osteopathy,
Des Moines, Iowa.
Paper.....M. E. Clark, D. O.
Prof. of Gynecology and Obstetrics in The
American School of Osteopathy, Kirksville, Mo.
Paper.....J. Martin Littlejohn, D. O.
President of American College of Osteopathic
Medicine and Surgery, Chicago, Ill.
Paper.....Charles Hazzard, D. O.
Prof. of Practice of Osteopathy in the Amer-
ican School of Osteopathy, Kirksville, Mo.

—
The next annual meeting will be held on the first Saturday of June, 1903, in Bloomington, Ill.

The Illinois osteopaths will meet in Chicago on August 5th and go by boat to Milwaukee for the National Convention.

Officers for ensuing year:
President—Dr. A. S. Melvin, Chicago.
Vice-President—Dr. A. B. Jaquith Pitts, Bloomington.
Treas. and Sec.—Dr. Mary E. Kelley, Chicago.

The Journal of Osteopathy.

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CONTENTS—August, 1902.

IMPORTANCE OF THE NERVE CELL IN OSTEOPATHIC THEORY, Fred J. Fassett, D. O.....	251
PROLAPSUS OF THE OVARY, M. E. Clark, D. O.....	254
SCIENTIFIC UNCERTAINTIES—ENCOURAGING OR DISCOURAGING, G. D. Hulett, D. O.....	257
UTERINE DISPLACEMENTS AND THEIR SEQUELÆ, S. T. Lyne, D. O.....	260
REMARKS ON FUNCTIONAL NERVE DERANGEMENT, Herman F. Goetz, D. O.....	264
THE ILLINOIS STATE MEETING.....	273
EDITORIALS, PERSONALS, ETC.....	274

We'll see you in Milwaukee.

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ALL roads lead to Milwaukee the first week in August for the osteopaths of the country.

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If you are not a member of the American Osteopathic association, it is time to get into line. Meet us in Milwaukee, Aug. 6-8.

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THE first requirement of an osteopath is a thorough knowledge of the human engine, all its powers, parts and principles. Thus armed, you are prepared to decide whether the trouble is in the boiler, steam-chest, wheels, valves, shaft or any other part of the machinery. Without this knowledge you cannot give a correct diagnosis, prognosis or treatment.—A. T. Still.

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THE osteopath who has not confidence enough in the science to implicitly rely upon it under all circumstances, is not entitled to the respect and patronage of the people and should blush with shame when he accepts

money from his patrons. In the hands of the qualified and experienced practitioner it can be depended upon in all diseases incident to any climate. Osteopathy will never be found united with saloons nor combined with drugs.—A. T. Still.

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MEN go to schools to learn that which they do not know. They run a great risk of losing their time and money in any school that is not responsible, financially, for its contracts with its students. Suppose you pay me \$300 or \$500 for two years schooling. You have filled my demand. Now what have I done for your safety in the contract? I have your money and if I do you justice, I will give you bonds to do as I agree, or you are left at the mercy of my honor. I would advise all persons to see to it that the school that they enter for osteopathic instruction is responsible for all contracts, and has shown its honest intentions by depositing bonds in some bank for the faithful performance of its contract with you.—A. T. Still.

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OF the many exchanges that reach the JOURNAL tables, none is more welcome than Osteopathic Health, published in Chicago by the Osteopathic Physician Publishing Company, Dr. H. Stanhope Bunting, editor. The little magazine is attractive in appearance from a mechanical standpoint and its pages each month are full of timely, well written contributions and newsy matter of value to the practitioner and of interest to the lay reader. The magazine deserves a liberal support from the profession. The Osteopathic Physician, a monthly newspaper, is published from the same office and, is a good addition to osteopathic literature. We cannot have too many good publications representing the science of osteopathy. Of the poorly compiled so-called osteopathic periodicals, there are a plenty, but there is no danger of our being surfeited with publications of the standards maintained by Osteopathic Health and Osteopathic Physician.

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THE annual convention of the American Osteopathic association and of the Associated Colleges of Osteopathy will be held

in Milwaukee Aug. 6 to 8. The city of Milwaukee is famous for its hospitality and the several hundred osteopaths who will attend the conventions of our national organizations this year will find the Wisconsin metropolis has rightly earned its fame as one of the best convention cities in the country. It has a magnificent location on the west shore of Lake Michigan, and cool breezes from off that fine body of water are not the exception even in the hottest of hot summer days. The convention of the two osteopathic associations will be held in the hotel Pfister, the pride of Milwaukee in the line of its hotels. The Pfister is located on the East Side, nearly opposite the new Federal building and within hailing distance of the lake. Milwaukee, ideas to the contrary notwithstanding, will offer the delegates something besides beer and breweries for side lines. Its beautiful drives, attractive parks, public buildings, amusement resorts, play houses, etc., have been themes which have called forth the best powers of Milwaukee's most flowery orators, not the least among whom is Mayor David S. Rose. Not one of them has ever over-painted the beauties of beautiful Milwaukee. And don't forget to visit the Milwaukee Press club quarters. The palatial home of the club with its brown (stone) front and side-door elevator features, is located at the corner of Mason and Broadway. Here is always extended to Milwaukee's visitors, hospitality such as is only and peculiarly at the command of the Milwaukee Press club members. We assure the delegates a welcome from them.

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"Too much patent headache powders," caused the death of Joseph Hane of Marion, Ind. The verdict given by the coroner at the inquest, was: "I find that Joseph Hane came to his death as the result of taking too much patent headache powders, which acted as a heart depressant." David Gunion of the same city, had been in the habit of going to one of the hospitals for treatments. By direction of the doctor he was given a drink of whiskey whenever he arrived at the hospital. July the 12th one of the nurses had given him a drink and then left the room. Gunion then took a sec-

ond drink from what he supposed was the bottle of whiskey on the shelf near by. He died fifteen minutes later. He had taken a drink of nux vomica from a bottle beside the one containing the whiskey. Another man died a few hours after the administration of some medicine. The coroner considerably found that death was caused by some organic lesion and that no "blame was attached to any person or persons." The columns of the daily press are full of similar "news" items. People with a blind faith in drugs and their remedial powers will continue to take them, never dreaming of the harm they do nor the danger that lurks in them, until fatalities such as these occur. Only a passing notice is given the subject even then. The majority of the people, still held in the bonds of superstition associated with drug medication, will go on doping, but gradually, day by day, the number is being decreased, as the people are being aroused to a realization of the truth of the claims of osteopathy.

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The technical training of the osteopath skills him to detect mechanical faults in all parts of the body. He recognizes disease by the symptoms manifested by it, but interprets these symptoms by tracing them to their real causes in the mechanical disturbances which produce them.

Here lies one radical difference between osteopathy and medicine. The diagnosis of of the disease does not stop with naming the symptoms of a certain disease; it goes further to diagnose the actual physical disturbances causing the disease.

Another radical difference is found in the method of treatment. The osteopath rights what is mechanically wrong, and leaves nature free to act. It is clear that he thus reaches the specific cause. His remedy is applied, not to overcoming the symptoms, but to eradicating the cause. The human system is a perfect mechanism, and it must be in perfect mechanical order that it may perform its various functions aright.

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The practice of osteopathy rests upon the assumption that disturbed function is largely dependent upon disturbed structure, and will only be permanently corrected by the

adjustment of that disturbed structure. When that is accomplished the inherent recuperative powers of the organism manifest themselves in a rapid mechanic, chemic and physiologic regeneration sufficient to restore to every organ its normal function. It is assumed that so long as every organ receives its normal amount of blood, lymph, nerve force, or other vital fluid, and so long as it is properly drained of the waste products of metabolism, health must follow as a logical necessity, and that whenever an organ fails in the performance of its function, that fact is prima facie evidence of some obstruction to the incoming or outgoing forces. In the case of an organ whose arterial channels are obstructed, that organ must of necessity suffer from the effects of a local anemia; if an obstruction to its venous drainage be present, the ill effects of a passive congestion are inevitable; if its channels for the propagation of nerve impulses are impinged upon, disturbance of the power of the organ must manifest itself. Hence disease is looked upon as a condition of an organ or of the organism in which function or activity cannot properly obtain because of some interference with one or more of these various pathways. The structures which produce the obstruction may be any of the tissues of body, but are found to be principally luxated bones, contracted muscles and strained or overgrown ligamentous or connective tissue material. With this proposition in view the osteopathic diagnostician is not content with a diagnosis of the location and condition of the organ, which he recognizes as important enough—but by methods peculiar to his system attempts to locate the disordered structural condition which is at fault in the production of the perverted function. Having by these methods determined the abnormal structural condition present, he limits his field of operations, to a large extent, to the reduction of such structural condition as far as may be done, or attempts by his special manipulative measures to render the organism such aid as will enable it to overcome or adapt itself to the changed structure. In his manipulation he does not depend alone upon his ability to force a mechanically abnormal part back into its place, but also upon the fundamental

principle that as soon as structural parts are dislodged from their false positions and relations, the normal tension of immediately adjacent and related parts will tend to restore the condition of mechanical integrity. Hence is formulated the foundation principle that nature constantly tends toward a normal condition both of structure and function, and the province of the physician is not in seeking a healing power from without, but in assisting the organism to maintain its structural integrity, which animated by the vital principle is sufficient of itself to generate and distribute every element necessary to normal functioning.

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Disease is the result of physiological discord. With this fact established in the mind of the doctor of osteopathy as a truth, he is warranted then in hunting the facts that would prove the position, that disease is the result of physiological discord in the functioning of the organs or parts of the physiological laboratory of life. Thus, as an explorer or seeker of the cause of disease he would naturally reason that the variations from the physiological perfection would naturally be found in disordered nerve connections to the degree of breaking or shutting off the normal circuit of nerve force from the brain to any part of the body that should be sustained by that force when normally conducted to any organ as the power necessary to its process of vital functioning. If this be true, there is nothing left in his procedure but to find the break or obstruction to the natural passage of blood or any other fluid that is necessary to a normal condition, which is health itself. Thus, the physician of any school of the healing art must know and act upon the philosophy that disease is the result of physiological discord. The cause of disease can be traced to bony variations from the base of the skull to the bottom of the feet, in the joints of the cervical, dorsal and lumbar vertebrae, the articulations with the sacrum, also the arms and lower limbs. Strains by lifting, jolts, jars, falls or anything that would cause any organ of the chest or abdomen to be moved from its normal to an abnormal position is cause sufficient to confound the harmony of

natural functioning of the whole viscera, both above and below the diaphragm and be the cause of an unhealthy supply of nerve fluid and force of the limbs and the organs of the body both internal and external with the brain included. Thus, we have given about what we consider a short philosophical definition of what we mean by the word osteopathy. We use the bones as fulcrums and levers to adjust from the abnormal to the normal that the harmonious functioning of the viscera of the whole body may show forth perfection, that condition which is known as good health. A. T. STILL.

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Growth of Favorable Public Opinion of Osteopathy

Probably no system of treating and curing the sick has ever grown in popularity as rapidly and as generally as osteopathy, and as an evidence of this may be cited the frequency with which it receives favorable mention in the daily and weekly press of the country.

Thus in the daily North American of Philadelphia, of Saturday, May 24, 1902, the editor of its department on health, in answer to an inquiry from one of its subscribers as to what would help "dreadful cramps" in his feet, in which he states he has "bathed them with every oil and mixture that has been recommended to me but still suffer torments," gives the following advice:

"Osteopathy would probably relieve you at once. I am not a believer in the idea that osteopathy will cure every form of disease, but this system certainly is very successful in complaints which are caused by pressure."

These are certainly very high words of praise, coming as they do from the oldest paper in Philadelphia, established over one hundred years ago and having probably the largest circulation of any paper in that city.

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THERE was a time when twenty grains of calomel, or quinine was administered even unto prattling babes without an allopathic suspicion of creating a demand for coffins. Then came the homeopath with his sugar coated two hundredth-thousands part of a microscopic suspicion and each was denounced by the other as a quack and fraud. Now the two old huzzies are ploughing with the same heifer, eating with the same pitch-

fork, drinking from the same trough, and while fighting like hades among themselves they are a unit in defaming any and every other method of cure. Two hearts that beat as one, that's to beat the sucker. Both quacks a few years ago, both scientific now. Observe the adhesiveness of the two sciences of humbuggery.—Medical Liberty.

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A Supreme Court Decision.

Every osteopath, and especially those interested in the practice in Alabama, should be thankful for the good fortune that has come to the profession through a late decision of the Supreme court of that state, written by Judge Tyson in the case of Dr. E. E. Bragg vs. the state of Alabama.

We regret that we have not space to publish the opinion of Judge Tyson in full. The appellant, Bragg, a graduate of this school, and located in Alabama, was arrested for violating the law of that state requiring all persons practicing medicine in that state, to undergo an examination before a state medical board and obtain a license from such board before entering upon the practice of their profession. The appellant, Bragg, had never made application to the state board for examination and license, but had entered upon the practice of osteopathy without a license. He was arrested and tried before one of the lower courts, and convicted of violating the state law. He appealed to the Supreme court of the state, where the judgment of the lower court was affirmed. The vital question raised by the record, for the court to decide, was whether the practice of osteopathy—in the absence of any special law regulating it—is the practice of "medicine," giving to the word or term, medicine its proper "art" or scientific definition. The opinion is lengthy and exhaustive, and shows great pains in its preparation. The word "medicine" or the practice of it, is not confined to the too generally accepted idea, that it means only the prescription and administration of drugs, the court gives to the word its highest and broadest scientific definition "a healing agent" and that any healing agent is medicine. In other words, the term or word "medicine" covers all healing agencies, while a drug is but one of a great variety of medical agents. A part of

the language of the court upon this subject, is as follows:

"Thus it is made entirely clear both by definitions and history that the word medicine has a technical meaning, is a technical art or science, and as a science the practitioners of it are *not* simply those who prescribe drugs or other medical substances as remedial agents, but that it is broad enough to include, and does include all persons who diagnose diseases and prescribe or apply any therapeutic agent for its cure."

All can see that this places the osteopath on an equal footing before the law, and the courts, with the practitioner of another school. The osteopath wants no more than this and this he claims and is entitled to. But what a blow it is to the little drug bigot, who is hopping around all spraddled out in the path of medical science, trying to strangle the young giant osteopathy and block its progress. It has not been the object of the drug doctors, to have osteopathy recognized before the law or any where else, but their efforts and object have been to kill it and keep it out of the field of healing art, because it interferes with their monopoly of treating the sick and taking the pay,—and this decision is only another illustration of the irony of fate. The drug doctors in their attempt to persecute osteopathy by a law, framed by themselves and almost solely in their own interest, have unconsciously established the equality of the osteopath, with themselves before the law.

In regard to examination before the medical board of Alabama the court uses the following language: "Thus has been the growth and development of the law in this state regulating the practice of medicine in any of its branches or departments as a profession. From this growth and development, can it be seriously doubted that it was *not* the intention or purpose of the legislative mind to *restrict* the examination of those desiring to practice medicine to that class of the profession who may prescribe drugs as therapeutic agents in the healing of diseases? We think not. On the contrary, the very first enactment on the subject (1893) prohibiting any person from prescribing for the cure of diseases for fee or reward without obtaining a license is a

clear, unequivocal and unmistakable declaration of the legislative purpose to deal with medicine and the practice of it in its broad and comprehensive sense—as a science or art of healing and curing diseases. And this purpose has been rather emphasized than otherwise, in subsequent legislation on the subject."

In passing upon a question not in the case or in the record of the case, but which seems to have been raised in argument by counsel for appellant, the court uses the following language:

"The remaining insistence relied upon, rather as an excuse or palliation for a violation by defendant of the law, is no justification or excuse at all. It is, that the board of examiners as presently constituted discriminate in favor of those physicians who practice the regular system of medicine against all who practice systems or belong to other schools. If it be conceded that this fact is shown by the record, it furnishes to defendant no right to violate the criminal law of the state. His remedy is by proper procedure in the civil courts, in the event his application for a license is rejected. It strikes us that this defense is an after thought. The record does not even hint at any attempt on the part of defendant to procure a license."

This decision makes the way perfectly clear for the osteopath in Alabama. Go before the board and ask for a license, and submit to the examination upon all branches taught in your school. If then the board refuses to examine you, or refuses you a license because you do not know how to administer drugs, you have your civil remedy. The court says, "The board of medical examiners is only an agent to execute the medical law and are under the superintendence of the court, and cannot act otherwise than within the spirit of the law they are constituted to help administer. The courts are perfectly able to prevent them from abusing their trust."

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State Board Examinations.

The state board of Illinois held examinations for applicants for osteopathic licenses in that state early in July and gave one of the best sets of examination questions ever

given by the board. That is, the examinations were not simply a lot of catch questions, but were a fair test of the knowledge and training of the applicant. Of the twenty-five applicants for licenses, nineteen were graduates and students of the American School of Osteopathy, as follows: Adam Moffat, E. R. Proctor, Florence Proctor, E. J. Mosier, Fred Stewart, C. E. Stewart, J. B. Morris, H. D. Norris, Charles Ballance, Jr., W. C. Swartz, J. E. Gable, John C. McGinnis, Mrs. Dana H. Pleak and the Misses Lorna Oliphant, Mary A. King, C. G. Hemstreet, Florence I. Shove, Jessie H. Willard and Katherine Woltman.

The Wisconsin state board conducted examinations in the city of Milwaukee early in July. The osteopathic list of questions were more along the line of testing "feats of memory" than bringing out the practical knowledge of the applicant. A number of A. S. O. graduates took the examinations in that state.

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Will Organize Health Colony.

Dr. F. D. Parker of St. Paul, Minn., graduate of the A. S. O., has become interested in the treatment of consumption to the extent that he will organize a "Health Colony" to be located in some favorable place in New Mexico. The climate of New Mexico will permit those suffering from pulmonary troubles to take advantage of the open air treatment. In addition to giving osteopathic treatment, Dr. Parker will require his patients to live an out of door life.

Physicians having charge of government sanatoria in New Mexico have reported that consumption can be cured at any stage.

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Our September Class.

The next term of school at the American School of Osteopathy opens Monday, September, 1, 1902. The favorable conditions indicate a large enrollment of new students. Our new catalogue is now ready for distribution and anyone interested in the study of osteopathy will be supplied upon application.

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The Bulletin.

Among the several osteopathic publications, the Bulletin, published by the Atlas

and Axis clubs of the A. S. O., deserves a place among the best. It is a neat magazine, full of osteopathic news and other matters of interest to both student and practitioner. Mr. E. J. Breitzman of the Junior class is its editor and under his management the Bulletin has greatly improved.

Did He Mean to Kill Her?

A patient told me a few days ago that one of my brother practitioners—an allopath of the most ancient pattern—made the statement that osteopathy was the greatest humbug ever known, but, nevertheless, it had been known and practiced by his school years ago, and that even he, himself, used it in his practice—indeed, had given his own wife treatments.—Iowa Osteopath.

Dr. C. W. Proctor, who has for a little more than five years been a member of the faculty of the American School of Osteopathy, will on Sept. 1st locate at Buffalo, N. Y., to practice osteopathy.

Dr. Proctor came to this school from the State Normal School where he held the chair of natural science. He received his collegiate course at Allegheny College and afterward studied in Berlin, Germany. From the former institution he received the degrees of A. M. and Ph. D., for work in chemistry and physics.

Upon entering this school he was given the chair of chemistry and physiology, but the new classes were so large it was found necessary to elect a regular professor of physiology and he took the classes in chemistry. He prepared text books in chemistry which have since been used continually in this and other schools of osteopathy.

In addition to his work in chemistry he lectured one term on Principles of Osteopathy, and four terms on Nervous Diseases.

For two and a half years he has been one of the clinical staff and for five years had the advantage of the lectures and work of the clinic department of the American School of Osteopathy. The direct personal instruction of Dr. A. T. Still, which has been enjoyed in common with other members of the faculty and the practical experience in the school, give him a splendid equipment for the practice of his profession.

The best wishes of the students and authorities of the school go with him. His wife, who is a graduate of the school in the class of '97, and who is a specialist in diseases of women and children, will practice with him.

Mrs. A. L. Conger, of Akron, Ohio, recently visited Dr. C. E. Still and wife and other friends in this city. Since the death of her husband, Col. A. L. Conger, Mrs. Conger has spent some time in the Philippines, where her son is a lieutenant in the regular army. She has had a very wide experience with osteopathy and has never had anything but the highest of praise for its virtues.

Col. Conger in his life time was a very warm supporter and patron of the science. Mrs. Conger was formerly a student of osteopathy and while in the Philippines she made good use of her knowledge in the treatment of the soldiers. Many of our soldiers have died of chronic dysentery in the past few years. It is a disease that does not respond readily to drug treatment, yet Mrs. Conger relieved hundreds of cases of this character by means of osteopathy. Although she did an immense amount of good and had the love of the soldiers, still the regular army doctors threatened her with prosecution if she did not cease treating the afflicted soldiers. She kept on working however and her home was always besieged with soldiers wanting treatment.

Meeting of the American Osteopathic Association at Milwaukee.

The sixth annual meeting of the American Osteopathic Association to be held at Milwaukee, Aug. 6, 7, and 8, will be attended by a large number of representative osteopaths from all parts of the United States. Below we publish the programme of the three days' session.

PROGRAMME.

FIRST DAY, WEDNESDAY, AUGUST 6.

Calling meeting to order.
Invocation.
Address of welcome and responses.
Communications from members not present.
Report of Credentials Committee.
Resolutions.

Annual Address—President E. R. Booth, Cincinnati.

Clinics—Conducted by W. D. McNary, M. D., D. O., of Milwaukee.

Open Parliament.

"How Bony Lesions Cause Pelvic Disease"—M. E. Clark, Kirksville.

Report of Board of Trustees.

Report of Publication Committee.

"The Physiological Basis of the Therapeutic Law"—J. Martin Littlejohn, Chicago.

SECOND DAY, THURSDAY, AUGUST 7.

Report of Legislative Committee.

Clinics.

"Pathology of Certain Cervical and Dorsal Lesions"—J. W. Hofsess, Des Moines.

"Fever"—Guy Wendell Burns, New York.

Open Parliament.

"Osteopathic Obstetrics"—E. H. Boyes, Marietta, Ohio.

"Pelvic Tumors"—C. E. Still, Kirksville.

"Prognosis"—Mrs. Nettie H. Bolles, Denver.

"Duty to the Association"—W. B. Davis, Milwaukee.

Report of Education Committee.

Fixing time and place of next meeting.

Tally-ho coach ride.

THIRD DAY, FRIDAY, AUGUST 8.

Clinics.

Symposium on Practice—H. E. Bernard, Detroit; O. J. Snyder, Philadelphia; W. W. Steele, Buffalo; C. W. Young, St. Paul.

"Appendicitis"—Mrs. Ella Ray Gilmour, Sheldon, Iowa.

Open Parliament.

Report of Special Committees.

Election of officers.

Unfinished business.

Approval of minutes.

Adjourn.

Boat ride on Lake Michigan.

Washington Osteopaths.

The osteopaths of Washington, at their annual state meeting held at Tacoma, May 3, adopted some very good by-laws, governing the members of the state association in regard to professional conduct and prices for treatment.

Below we publish articles nine and ten of the by-laws:

RULES OF CONDUCT.

No member shall use any language or act injurious or disrespectful to another member.

No member shall treat a patient who is indebted to another member for professional services, provided he has been notified of such delinquency before treatment begins.

No member shall promise to cure any disease whatever, nor promise to cure in a given time, nor in a given number of treatments, nor accept a case for treatment on promise of payment after cure.

No member who is not a licensed M. D. shall give or prescribe to a patient any drug for internal use, except in case of poisoning.

No member shall violate any confidences reposed in him by his patients.

No member shall advertise in any way excepting as follows: a. A sign on the building giving his or her name, osteopath, osteopathist, D. O., or osteopathic physician, and business hours. b. A simple business card of not more than five lines in the papers. c. Booklets, chiefly intended to be instructive exponents of the science of osteopathy, in which appear no attack on any other system of healing, nor testimonials. Names for reference may be printed, having first obtained the consent of the person referred to. d. Business cards; letter heads and envelopes.

No booklets, cards or other advertising matter shall be distributed in any other manner than through the mails and by personal hand to hand gift from the member to a prospective patient.

PRICES FOR TREATMENT.

The following scale of prices must be adhered to:

First month, not less than \$25.00.
Second month, not less than \$20.00.
Subsequent months, not less than \$15.00.
Single office treatment, not less than \$2.00.
Single house treatment, not less than \$2.50.
Single night call, not less than \$3.00.
Examination at house, not less than \$2.50.
Consultation at house, not less than \$2.50.

A reduction of \$5.00, for the first month only, may be allowed to ministers and school teachers.

When more than one member of the family is treated at the same time a reduction

of not more than one-half may be allowed to second and subsequent members.

Deserving poor, when recommended by business firms, may be treated free.

Above scale prices does not apply to accidents and emergencies, where there is no time to make a contract between member and patient.

Prices for treatment of obstetrical cases, fractures, dislocations and services not enumerated in the foregoing list shall be made according to their nature, extent and importance, and shall conform to the charges for like service usually made by other systems of healing, but no less than \$2.00 shall be charged for any single treatment.

PERSONAL MENTION.

Dr. C. H. Hammond of the June class, 1902, has located at Baltimore, Md.

We have received the announcement of Dr. C. O. Goodpasture of the June, 1902 class. He has located in Evansville, Ind.

Dr. H. H. Smith, formerly of Olds, Ia., has located at Burlington, Ia.

The JOURNAL is in receipt of the announcements of Dr. George A. Martin and Miss M. Proctor, D. O., who have located at Mason City, Ia., and of Dr. Grace Deegan, who is in Omaha.

Dr. J. W. Dixon, formerly of Freemont, O., has moved to London, O. Dr. B. R. Mansfield succeeds Dr. Dixon at Freemont.

Dr. H. P. Ellis has sold his practice at Canton, Ill., to Dr. C. M. Graham of Rushville, and will practice in the future at Peoria. Dr. Graham will practice at both Canton and Rushville.

Dr. A. D. Mahaffay has located at Cheyenne, Wyoming. His offices are in the Opera House block. He is one of the pioneer osteopaths of that state.

Dr. William Smith, formerly professor of anatomy in the American School of Osteopathy, is now located in St. Louis, Mo. He has offices in the Missouri Trust building.

Dr. M. D. Cole of Dubuque, Ia., has moved his offices from the Bank & Insurance building to the second floor in the Security building, corner 8th and Main streets.

Dr. R. B. Wood of Glasgow, Mo., and Dr. W. H. Nuckles of Marshall, Mo., brought patients to the A. S. O. Infirmary recently for examination.

Dr. Gambetta Staff of Meadville, Pa., is in Kirksville visiting at the home of his father-in-law, Capt. W. D. Sigler. The doctor has made the JOURNAL office several pleasant calls since he has been in the city.

Dr. Warren E. Dressel of Carrollton, Ill., came to Kirksville last week with a patient for examination.

At the Missouri state meeting recently held in Kirksville, Dr. Minnie Potter of Memphis, was elected state editor of the association for the ensuing year.

The following graduates of the A. S. O. were recent callers at the JOURNAL office: Drs. C. H. Stearns of Washington, D. C.; A. I. Doneghy of Wheeling, W. Va.; Levi W. Lyda of Nevada, Ia.; John Zimmerman of Newark, O.; Charles C. Reid of Worcester, Mass.

Married.

Dr. Edgar Q. Thawley and Miss Lenore Joss were married Thursday evening, July 24, in the Methodist Episcopal church, Kirksville. Dr. Thawley will practice osteopathy in Menominee, Mich.

Dr. Samuel H. Runyon of Creston, Ia., and Dr. Margaret B. McCulley were married in Omaha, Nebr., July 14. Both are graduates of the A. S. O.

The marriage of Dr. J. Luther Glasgow and Dr. Cora Higgins took place in Kirksville, June 30. They will practice in Bowling Green, Ky.

Dr. Mildred Arnold's marriage to Mr. Samuel Wiley, of Colfax, Ill., took place June 19.

Book Notices.

Diseases of the Skin, by Dr. H. W. Stelwagon, Clinical Professor of Dermatology in the Jefferson Medical College, Philadelphia. The book was planned especially for the medical student, and presents the practical part of Dermatology in a full and complete manner, without, however, neglecting Etiology and Pathology. The clinical and pathologic aspects have been greatly eluci-

dated by a large number of illustrations, selected mainly from the author's own collection, besides a number of half-tone and colored lithographic plates of exceptional merit. Published by W. B. Saunders & Co., Philadelphia.

Genealogy of the Decendants of John Walker, by Emma Siggins White of Kansas City, Mo. This work covers the history of a period over two hundred years and is a complete record of the decendants of John Walker together with several allied families. Dr. A. T. Still's mother was a descendant of John Walker and for that reason this book is of considerable interest to him and his family. It has taken a great amount of work to complete this book as it contains the history of several thousand persons.

The Treatment and Cure of Narcotic Addictions by Immediate Withdrawal and De-narcotization, is the title of a pamphlet published by the Subers-Russell Medical Co. of Cleveland, Ohio. We know nothing about this method but it is at least worthy of investigation.

Hydrotherapy, Heat, Light, Etc., is the title of volume IX of Cchen's System of Physiologic Therapeutics. A Practical Exposition of the methods other than drug-giving, useful in the prevention of disease and in the treatment of the sick is presented in this volume. It contains much valuable information and every student should be informed on these subjects. It is published by P. Blakiston's Son & Co., Philadelphia.

The editor of this Journal acknowledges receipt of the following books, presented to him by the publishers, Wm. Wood & Co., 51 Fifth St., New York: Physical Diagnosis of Diseases of the Chest, by Richard C. Cabot, M. D., Harvard Medical school. The Pocket Gray or Anatomist's Vade-Mecum by Edward Cotterell, F. R. C. S. Students Histology by Maurice N. Miller, M. D., revised by Herbert U. Williams, M. D. Handbook of Pathological Anatomy and Histology by Delafield & Prudden, Columbia University, New York. Manual of Surgery by Rose & Carliss. Text-Book of Nervous Diseases by Dana.

There are no better text or reference books published than the ones above referred to. These works would make a valuable addition to any student's library. We especially recommend Dana's Text-Book on Nervous Diseases to all osteopaths.

REPORTED BY JULIA STORM, D. O., MARSHALL, MISSOURI.

Paralysis:—

A lady, eighty-two years old, given up to die with the "third stroke of paralysis." The physician in charge left directions, medicines and the comforting assurance that the patient could not last long;—age, number of attacks, etc., being against her. I found her almost unable to use her tongue, her left arm useless, left side so painful that she was unable to sleep upon it, and unable to sleep upon the opposite side because of tension to the painful side. Exremities were very cold; mouth dry. I found the dorsal region extremely posterior; left shoulder thrown up with ribs on the left side thrown up and curved over and accentuating into a deformity the "stoop of old age." Her neck was stiff and lateral. Conditions caused by a fall and aggravated by years of the occupation of weaving. First treatment relieved the conditions of the tongue and arm, obliterated the pain in the left side, brought warmth to the extremities, and gave the patient the best night's rest in months. The next few treatments made her "feel like another person." Was not again called until another severe attack, which I was able to relieve. Unable to take the case myself I insisted that she continue osteopathic treatment from another practitioner. This warning was heeded to some extent and now after three months the old lady visits all over the neighborhood and walks six blocks to and from church.

REPORTED BY W. J. DEEMING, D. O., BROOKFIELD, MO.

Gall Stones:—

On the 22nd of last December I was called in the case of Mrs. B. M. Kilburn of Loredo, Mo. Her physicians had informed her that she could not live long. They anticipated a fatal termination in two or three weeks. The physicians admitted their helplessness in her case. The patient was suffering intensely from the passage of large gall stones, one after another passing painfully in succession through the bile duct into the duodenum. The patient's strength was almost exhausted, and the only relief to her seemed the apparently near approach of death.

She had, however, once visited Kirksville and some years previously had been treated

for other troubles, with marked success by Dr. A. T. Still. Her sister advised osteopathic treatment and she was brought to Brookfield for treatment. I was, I confess somewhat in doubt about undertaking a case in which the learned M. D.'s had so confidently predicted death in two weeks. Dare I disregard professional ethics and try to save the patient?

I worked carefully, gradually relaxing all contractions, vertebral and abdominal. I found the ninth, tenth, eleventh and twelfth ribs on left side much depressed. I raised them carefully thus relieving the spleen and the patient exclaimed, "It is so good to get a good breath again". I found the sixth, seventh, tenth and twelfth dorsal vertebrae lateral. I carefully manipulated the gall duct, intestines and stimulated the liver.

Result of first treatment: Not a gall stone formed after the treatment. Treatment was continued for two months during which time I had adjusted the subluxated vertebrae and ribs and functional harmony was restored. She then returned to her home and has since written me that she has had no return of the trouble.

* * *

Appendicitis:—

Mr. C—, an engineer on the Q. R. R. Said he had not put in full time for five years. Constant pain in back and great distress in or near the vermiform appendix. The doctors diagnosed his case as one of appendicitis and informed him that an operation was imperative. I found right ilium was up and back. The twelfth dorsal and fourth and fifth lumbar slipped laterally. These displacements were properly adjusted and Mr. C. has put in full time since March 1st, and to use his own expression "feels twenty years younger."

Mrs. H—, twenty-five years old, had constant pain in back, stomach very weak, severe and frequent headache. After three months of careful treatment and adjustment of vertebrae and ribs the patient says she scarcely knows herself, feeling so strong and free from pain. Now does her own housework and assists others. At beginning could not do her own housework.

Mr. S—, railroad employe, had been laid off from his engine for five months. Complained of pain in legs. I found incoordination of movements, etc., incident to locomotor ataxia. Lower dorsals, fourth and fifth lumbar were twisted. He came to me with crutch and cane. After two months adjustment he regained the normal movements and says he is cured.

Another case of an engineer, was on the sick list half the time. No energy. Legs felt like sticks of wood. I found fourth and fifth lumbar slipped. I readjusted them, stimulated liver and kidneys and he now says he feels like a new man and works all the time.

Another, Mrs. S—, came to me complaining of severe cramping pains in stomach, radiating to left side. Found eighth dorsal twisted involving the sensory nerves to stomach. I straightened it in first treatment. Patient returned to her home twenty miles away. One week later she returned, reported no return of pains, but two weeks after first treatment she returned complaining. The moment I touched the eighth dorsal I told her that she had again strained that vertebra out of line. She then admitted that in wringing a sheet she had felt something slip or give way in her back, telling her husband of it at the time. At 4 p. m. that day the old pains returned, continuing more or less until I treated her again. I again straightened the vertebra. The pain soon ceased. This last adjustment is three months past with no recurrence of the old trouble.

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REPORTED BY H. M. MAYER, D. O., EMPORIA, KANSAS.

Epilepsy :—

Mrs. H—, age 35. Has had epileptic attacks more or less frequently since her child was born five years ago. Patient was unable to sleep at night. Severe pains in left lumbar region and hypogastric region. Upon examination I found the ovary displaced, also the twelfth rib. Patient continued treatment for two months and during that time

had only one attack. She is able to sleep and pain in side is nearly gone. Case still under treatment.

Dislocated Hip :—

Miss F— began treatment Oct. 21, 1901. Had been crippled and using crutches for twenty-eight months; for twenty-three months she was under care of different M. D.'s here. Her knee was badly swollen and stiff and painful. After they had doctored her knee for twenty-three months they advised an operation claiming that the ligamentum patella was ruptured. Upon examination I found that the head of the femur was displaced up and onto the dorsum of the ilium, shortening the limb and turning the toes inward. The muscles over the hip were badly contracted. After two month's treatment the patient was able to walk with a cane. She continued treatment for three months and is now able to attend to her school work and is able to walk without limping at all and without the use of crutch or cane.

Consumption :—

Mrs. J. P., age 29, had two sisters die of consumption. She was anemic, frail and nervous and had had several attacks of bronchitis; had not menstruated for five months. There was dullness on percussion at apex of right lung in front and consolidation of the lower lobe to the front and side. Also dullness on percussion in upper and lower lobes of left lung. She coughed and expectorated considerably. One year ago had sputum examined by State Board of Health and tubercle bacilli were found. She had never had hemorrhages but had had night sweats and fever. The upper dorsal spine was curved to the right from the 2nd to 9th. The ribs were down narrowing the thoracic cavity. My first consideration in the case was the removal of the lesion. I gave her a thorough spinal treatment for the upbuilding of the vaso-motor activities. I relaxed all the spinal muscles and deep tissues. Case was treated daily and in three weeks had gained seven pounds. After two months treatment she had gained twenty pounds and had no symptoms of the disease.

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