Presidential Address ON OSTEOPATHY, CHIROPRACTIC, AND MEDICINE.

DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON

BY

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WHEN I was elected president of this society your secretary informed me that it was the custom for the incoming president to address you on some general subject in connexion with our profession. In discussing with him what might be a suitable subject, it was suggested that I should address you on "Osteopathy, Chiropractic and other Cults, and Medicine." This subject appealed to me to a certain extent, since during the past three or four years I have had so many inquiries from medical friends as to what was the exact nature of osteopathy and chiropractic, what advantages and results were to be gained from its employment, and what were its disadvantages and dangers.

In order to make myself as clear as possible I think it will be best for me to give you as a commencement definitions of both osteopathy and chiropractic, and a statement of the principles, or so-called principles, on which they are founded.

OSTEOPATHY.

Osteopathy is a system of treating disease without drugs, and is based on the belief that all disease is caused by some part of the human mechanism being out of proper adjustment or alignment, as in the case of a misplaced bone, cartilage, or ligament; or in the case of adhesions or contractions of muscle resulting in unnatural pressure on, or obstruction to, a nerve, or a blood or lymph vessel. This definition is the one given in one of the latest American dictionaries, and with slight variation that adopted by many of the osteopathic schools and practitioners. On investigation, however, one finds that the different practitioners of osteopathy have varying ideas as to what is exactly comprised within the meaning of the term and what limitations there are in the treatment. A later definition would appear to be more comprehensive and to include a use of the term "inhibition." According to the osteopaths, "inhibition" is the relief of pain, or spasm of the muscles, by the application of steady pressure.

The cult of osteopathy was founded by a Dr. Andrew Taylor Still, a practitioner in the State of Missouri, in 1873. The first College of Osteopathy was opened in Kirksville, Missouri, in 1890, by Dr. Still and a Dr. William Smith, who was a medical graduate of Edinburgh.

According to Dr. Still, all disease is due to, or dependent upon, a disturbance of the nerves or blood vessels of the different parts of the body, especially in connexion with the nerves coming out from the spinal column. A further and extended version of the theory of Dr. Still was the assertion that the human body normally contains all materials which are necessary for healthy function, and if the circulation within the body is normal these elements will maintain health. The impairment of the circulation, which prevents the so-called elements or vital materials being properly supplied to the different parts and organs, is the cause of disease. The defective circulation, he says, is produced by the action of the vasomotor nerves. These nerves, he assumes, are affected by the pressure from ligaments, bones, or muscles in the region of the spine, or by reflex irritation from a disturbance in the viscera or other parts of the body.

In short, then, osteopathy may be said to be a "therapeutic measure" or agent which is used for the treatment of all disease. The nature of this therapeutic measure is apparently a mechanical one, and consists really in making an alteration in position and relations by digital pressure or manual manipulation of the supposed diseased parts. In a narrower terminology osteopathy assumes that all diseases are due to an "osteopathic lesion," these lesions

being in connexion with the ligaments or joints of the spinal column.

The term "subluxation" has been used very extensively by practitioners of osteopathy to express a slight irregularity in position in the spinal column, its bones, ligaments, or muscles.

According to the osteopaths the abnormalities of the spinal column, which in their view give rise to disease, and which are called "osteopathic lesions," may or may not be shown by palpation, inspection, or x-ray investigation. Often, however, they are said to be characterized by localized areas of tenderness and muscular spasm. The osteopaths say that osteopathic lesions ought to be found in connexion with the spinal column, its ligaments, muscles, and joints, in all diseases. The site of the lesion varies according to the locality of the disease, the nature of the affection apparently not having any influence on the exact site or locality of the supposed "lesion." According to *Osteopathic Pathology*, if the stomach is the site of an ulcer or tumour, or is displaced into some abnormal position, the site of the osteopathic lesion in the spinal column would be the same; hence the osteopathic treatment or removal of the osteopathic lesion would be the same. Similarly, according to osteopathic pathology, cancer of the kidney, nephritis, calculus of the kidney, or tuberculosis of the organ would all show a similar osteopathic lesion in a definite portion of the spine, different from that effected in diseases and affections of the stomach.

The treatment adopted by the osteopath is by manipulation to correct the so-called deformity, or osteopathic lesion, to bring into proper apposition displaced bony surfaces, to relax muscular spasms, and to eradicate tender points.

As regards acute infectious diseases, the osteopath claims that circulation of the blood along the courses of the nerves and the blood vessels is interfered with, and therefore portions of the human body are unable to withstand the onslaught of micro-organisms. This, he asserts, can be cured by osteopathic treatment—namely, "replacement of subluxated vertebrae," and that this is all that is necessary to enable the human organs to withstand any of these diseases.

CHIROPRACTIC.

Chiropractic has been defined as the philosophical science and art of things natural, and a system of adjusting the subluxated vertebrae of the spinal column by hand for the restoration of health. This cult was "discovered" by a layman, D. D. Palmer, in 1895, who founded the Palmer School of Chiropractic in 1895 at Devonport, Iowa, U.S.A. This has been continued by him and his son since then.

The theory of chiropractic says that all disease is the result of pressure upon nerves as they emerge from the spinal canal. This pressure is assumed to be caused by an abnormal position of the vertebrae. According to Palmer, diagnosis is not necessary for the treatment of disease. All that is requisite is to relieve pressure on nerve roots. This having been done, whatever the nature of the disease health will follow. A more recent definition of chiropractic (Gr. *χείρ*, hand, and *πράττειν*, to do) is "A system of adjustment consisting of palpation of the spinal column to ascertain vertebral subluxation, followed by the adjustment of them by hand, in order to relieve pressure upon the nerves at the intervertebral foramina so that nerve force may flow freely from the brain to the rest of the body."

The osteopath and chiropractor each states that he can cure practically all diseases, injuries, or malformations by manipulating the spinal column and putting displaced vertebrae in correct positions after what he calls "subluxations" have occurred. Diseased conditions of the eye and the ear which give rise to either blindness or deafness are treated by them in a similar manner, although the nerves of these organs are not given off from the spinal cord, and do not pass through the spinal canal and its foramina.

In the United States of America "investigators" have been treated in osteopathic and chiropractic schools, and they have had their spinal columns examined by x rays both before and after osteopathic or chiropractic treatment. No change has been apparent to trained x-ray

experts, although the osteopath or the chiropractor has claimed that he has first diagnosed and then reduced subluxations of the vertebrae.

From osteopathy and chiropractic many other cults have sprung, and it is not necessary for me to say much concerning them. About one, however, I might say a few words, and that is *naprapathy*. The practitioner of this cult states that the basal centres of life are all located in the medulla oblongata, or basal portion of the brain. The nearest portion of the surface of the body to the medulla oblongata is the nape of the neck. Therefore, in order to apply manipulations for the cure of disease, these are given to the nape of the neck.

I was interested to read a prospectus of one of the chiropractic schools, in which it was stated that chiropractic "is a science of adjusting the cause of disease by relieving by hand misplacements of the twenty-four movable vertebrae of the spinal column or disalignment of the sacro-iliac joints, and so releasing pressure on the nerves which radiate from the spine to the various parts of the body." In order to do this no medicines are prescribed, no surgical instruments are necessary—only thumb pressure and free rubbing with the heel or the fist. Everyone who can read and write can soon be taught to become proficient in the science of chiropractic. In order to be successful, however, it is necessary for the practitioners to decry and abuse regular medical practitioners, drugs, and other forms of therapeutical treatment. In order to be successful it is necessary that free advertisement should be practised, since a considerable proportion of the populace are much more prone to believe extravagant assertions contained in displayed advertisements than the wise counsels given to them by their regular medical practitioner.

It will thus be seen that both osteopathy and chiropractic first of all assume as basal facts conditions which are absolutely untenable scientifically. The osteopath thinks that all disease is caused by interference with the blood and nerve supply, and that relief of this condition by manipulation will cure all disease. Chiropractic assumes that all disease is dependent upon pressure on one or other of the spinal nerves, and that relief of this pressure will cure disease. *Naprapathy* assumes that all disease is due to pressure in connexion with the medulla oblongata, and that manipulation of the nape of the neck for the reduction of this pressure will cure disease.

From these definitions it will be seen that all these cults base their theory and practice on a primary dogma which is untrue. It is interesting to note in some of the prosecutions in the United States that the chiropractor constantly asserts that there is no necessity for him to have any preparatory qualifications beyond those of his so-called chiropractic college. He ridicules and repudiates the diagnosis of disease, and states that a knowledge of bacteriology, pathology, and chemistry is not necessary. All that is necessary for the osteopath or chiropractor in the treatment of his patients is to apply his cardinal principle in all cases without examination and without diagnosis.

In the United States of America, which is the primary home of osteopathy, chiropractic, and all the derivative cults, there has sprung up within the last twenty years a considerable number of irregular medical schools, or self-called colleges, teaching the principles and practice of their cult, and labelling the students attending them with their so-called "degrees." In the main it would appear that these schools have taken the place of those low-grade medical schools which had to close their doors owing to the action of the American Medical Association in grading the medical schools and colleges, and the general enforcement of certain standards of curriculum and equipment. These schools apparently in all instances are proprietary, and are run much more as regards private gain for the proprietor than for the provision of well qualified practitioners of the healing art for the community.

COURSES OF INSTRUCTION.

Apparently the only essential elementary education which is insisted upon by most of the osteopathic and chiropractic schools is ability to read and write. No examina-

tion in preliminary education and no attendance at a high school is required. The duration of the course in most of these colleges appears to be three years. These three years, however, are stated to be of six months each, and it is the usual practice for them to be continuous. Thus a student of an osteopathic or chiropractic school or college may attend and complete the whole of his course in eighteen months. A study of the prospectuses of many of these schools shows that very little instruction is given in the basal sciences, such as chemistry, physics, biology, and physiology, and what is given is of didactic character. Laboratory instruction in the modern acceptation of the term does not seem to exist. In most of the schools diagnosis of disease is not considered necessary, and clinical teaching as practised in an ordinary medical education does not exist, no hospital clinical facilities being available.

After the "three years" (course of instruction) graduation takes place and degrees are conferred. The osteopathic colleges confer the degree of D.O. (Doctor of Osteopathy); and the Chiropractic College D.C. (Doctor of Chiropractic) and Ph.C. (Philosopher of Chiropractic).

It would appear that the examinations are purely formal, and all candidates who have paid the fees and may have attended the courses of instruction are given the degrees. At one of the largest colleges, which professes to have over 3,000 students in attendance, there is apparently one examiner for the graduation of students. Concerning the examinations, one "candidate" who was an "investigator" of these cults deliberately answered all the questions wrongly. This did not matter—he passed and was granted his degree.

At one of the largest schools of chiropractic in the United States in the course of instruction "philosophy" is given the first and most prominent place. Anatomy is taught by a lecturer who apparently has never gone through a regular course of dissection of the human body, and has no recognized medical diploma or degree. The teaching is entirely didactic, and no dissection of the human body is practised, but on occasions dogs are used for dissection. Obstetrics and gynaecology are taught without in-patients in a hospital. One of the most prominent courses of instruction in the curriculum is what is called "salesmanship." In this course personality, personal magnetism, and psychology, various forms of advertising, selling the patient, and selling the services of the practitioner, are given; much more time and prominence being given to these subjects than to study of diseased conditions. As regards infectious and contagious diseases, these he treats in the same way as all others. He states that there is no necessity to isolate. Consequently he is prone to carry scarlet fever, diphtheria, etc., broadcast.

As an explanation of the effects of osteopathy and its use as a therapeutic agent, the osteopath states that "osteopathy is something which cannot be learnt from books but only by personal instruction from a previously qualified osteopath."

The osteopath or chiropractor during the student curriculum is taught the best method of advertising and selling his services, so that when fully fledged, and having received his degree, he may at once be in a good position to attract practice.

Recruits, or students, for the colleges apparently are obtained to a great extent by alluring advertisements, in which a would-be osteopath or chiropractor is offered inducements which suggest earning large incomes and becoming a member of a respectable and valued profession. A considerable number of the students appear to be drawn from the poorly educated classes, and to have had little general education. As an experiment a friend of mine in one of the United States requested his secretary to write to a large chiropractic school, saying that her occupation was that of a chauffeur. In reply she received an invitation to join the school without delay, and all the inducements just mentioned were offered to her.

The methods of *practice* by osteopaths and chiropractors would appear in the main to be similar. Both assume the existence of subluxations and displacements of the spinal column located in various levels according to the supposed site of the disease. The chiropractor generally takes with

him, if he visits a patient, what is known as a "chiropractor's table." This is a long table padded at each end and with an interruption in the middle. The upper portion of the chest of the patient when undergoing treatment rests on the upper padded part, and the pelvis and limbs on the lower. The treatment in the main consists of application of pressure and manipulations at the supposed site of the osteopathic or chiropractic lesion. The treatment appears to be the same for all diseases, and consists of applying what is described as the chiropractic thrust or thump. This is done by first of all localizing the exact spot, or supposed site, of the lesion, such as the apex of the spine of a vertebra, then the pisiform bone of the right hand of the osteopath or chiropractor is placed on this spot, the wrist of the right hand is then grasped with the left hand, and a firm sudden pressure applied. The force and the method of applying this particular thrust varies with the different practitioners. In some cases I have been informed that the operator immediately after he has given a thrust or thump simultaneously makes a clicking noise with his tongue and explains to the patient that the displacement has been reduced. It is usual for the osteopath and chiropractor to recommend that a regular course of treatment should be taken by the patient.

DANGERS OF THE PRACTICE OF OSTEOPATHY AND CHIROPRACTIC.

Since most of the practitioners of osteopathy and chiropractic have no general knowledge of the nature and diagnosis of disease, patients who are suffering from serious affections are very liable to be severely damaged by an osteopath or chiropractor. As illustrations I might mention:

1. *Appendicitis with Abscess.*—Many cases are on record where an osteopath or chiropractor has been called in to treat a patient for abdominal pain, the cause of which pain was appendicitis with abscess. "Treatment" has been applied, the abscess has been ruptured, and the patient has died from acute peritonitis. In connexion with the treatment of appendicitis by chiropractic methods one chiropractor in Brooklyn states that when a chiropractor is led to suspect appendicitis—"which disease, he asserts, is due to displacement to the left of the second lumbar vertebra, this displacement of the second lumbar vertebra in between the first above and the second below resulting in a pinching or nipping of the nerves on the right side between the vertebrae—"replacement" of the subluxated second lumbar vertebra by correct manipulation by the hands relieves the nipped or pinched nerves, and in most cases causes a resolution of the inflamed and diseased appendix and recovery." This is a typical example of the so-called pathology which is given by the osteopath and chiropractor in his explanation of disease.

2. *Malignant Disease.*—Many cases are on record where the manipulations of an osteopath or chiropractor have caused acute dissemination of carcinomata and sarcomata. Some years ago I had an example of a similar kind. The patient was referred to me at St. Bartholomew's Hospital. He stated that he had a displaced cartilage of the knee. For this he had consulted and had been treated by one of the well known osteopaths or bonesetters in this country. Manipulations were carried out on numerous occasions over a period of nearly a year. The patient's funds having gone, and being unable to pay for further "treatment" and manipulations, he consulted a private doctor, and was sent to me at the hospital. On examination he was found to have a large sarcomatous growth in the upper end of the tibia, which necessitated amputation of the limb. A section of the amputated limb showing the growth is in the museum of St. Bartholomew's Hospital.

3. *Tuberculous Disease of the Joints.*—I have seen several cases of tuberculous disease of the joints which have been treated by osteopaths, in which serious damage has been done by forcible manipulation and movements. Many other surgeons to my knowledge have had similar experiences.

4. *Acute Infectious Diseases.*—In the United States many cases of acute infectious diseases, such as diphtheria, smallpox, scarlatina, and so on, have been treated by chiropractors, and epidemics of disease established owing to the chiropractor carrying the infection broadcast.

THERAPEUTIC VALUE OF OSTEOPATHY AND CHIROPRACTIC.

As regards the therapeutic value of the work of the osteopath and chiropractor (manipulations of the spinal column and so-called replacement of subluxated vertebrae), it can be stated that these manipulations in some diseases and abnormal conditions do no harm; but in the majority of diseased and abnormal conditions considerable harm will be done, and in some cases irreparable injury.

Concerning the advantages of osteopathy and chiropractic as a therapeutic measure, it appears to have given considerable relief to a number of patients suffering from obscure and painful affections of the dorsal region of the trunk. Some of these cures have probably been due to suggestion, others to the direct results of manipulations, and breaking down or separation of adhesions between muscles or nerves and adjacent tissues by fibrous tissue.

It is a curious fact that the ordinary medical man has a wholesome horror of using considerable force for the breaking down of adhesions, owing to the fear of doing serious injury; the osteopath, chiropractor, or bonesetter has no such fear, and uses considerable force, and effects in many instances what the medical man was afraid to do. During the latter period of the war when I had the inspection of the surgical military hospitals in London, I found this was a marked feature in military surgery, consequently my time was considerably occupied in dealing with cases of adhesions of one kind and another.

In connexion with chiropractic, Dr. F. H. Albee says that in all his experience, and in all his examinations of the spinal column, and in all the operations which he has performed, he has never discovered any foundation for the chiropractic theory. The spinal foramina through which the nerves pass are too large to permit any pressure except in cases of dislocation of the vertebrae, and then paresis or paralysis results. He states that in his opinion chiropractic is a menace to the public at large. In the first place it entirely ignores bacteriology and leaves doors wide open to the spread of contagion. He states that propaganda leads people to throw their money away on false promises of health and tends in some cases to delay proper treatment until it is too late.

POSITION OF OSTEOPATHS AND CHIROPRACTORS IN THIS COUNTRY.

Unless possessing a medical qualification from some recognized medical licensing body osteopaths and chiropractors cannot be registered by the General Medical Council, and can only carry on their practices here as unregistered and unqualified practitioners. They cannot sign death certificates; they cannot sue for fees for services rendered; they cannot obtain an authorization for dangerous drugs; and they are liable to prosecution for malpraxis.

It would appear that the object of osteopaths and chiropractors is to obtain legalization and registration by Act of Parliament. It would seem that they desire to be recognized as drugless healers with limitations as regards practice. On the face of it recognition might appear to be easy, but it has been found by experience in some of the States in America where such licensing has been established that limited registration for medical practitioners for the treatment of disease is very unsatisfactory. There is always the question as regards diagnosis and to what extent manipulative methods may be employed. I have often been asked what is the position of the General Medical Council and the qualifying bodies in connexion with the practice of osteopathy and chiropractic. My reply has been that our medical practice laws ought to be amended so as to place all practitioners of the healing art on the same educational level.

There is no doubt that the so-called success in practice of the osteopath and the chiropractor is largely due to the following facts.

1. *That patients look upon medical matters and their diseases as being allied to mystery.* This is a survival, in all probability, of the days when the practices of the priest and the doctor were combined.

2. *The public is always dissatisfied with a doubtful diagnosis given by a physician or surgeon, and of his inability to explain the nature of a disease in a few words, and also cure it with a definite remedy.* It is desirous of having given to

it a simple statement of why the patient becomes diseased and how he may be cured. It does not matter how improbable or how untrue an explanation of this kind is, provided there is a small amount of plausibility. Consequently large numbers of educated and intelligent people are imposed upon by the superficial so-called "explanation" of the osteopath and chiropractor. Thus it is very easy for the chiropractor to assert that every physical process of the human frame is due to something passing along the nerves, and that the important nerves lie in the spinal column, from whence they go to their destination. Subluxations or dislocations of the spine cause pressure by the bone on these nerves, interference with the passage along the nerves of the vital force to the different parts of the body, and so cause every variety of disease or deformity. To the public very often such an explanation as this is thought to be sufficient even as regards diseases of the eye and ear, although the nerves of these organs do not pass through the spinal column. As regards diseases due to micro-organisms, he explains that infection only proceeds when displacements of the spinal column have occurred, and the vital force is prevented from going to the distant parts of the body, and hence the germs are then liable to cause the various diseases, owing to a diminished supply of "vital force" in these parts.

3. *Ability to advertise.* Individuals who are seriously ill, or suffering from an incurable disease, very often grow desperate in searching for a cure, their mental condition becomes affected, and their judgement weakened; so much so that they readily fall into the clutches of the osteopath, chiropractor, the charlatan, the quack, and pretended healer after reading some misleading or lying advertisement. The plausible osteopath or chiropractor says that physical interference with the circulation and passage of vital force along the nerves is the cause of disease, and when the interference is sufficiently severe is the disease itself. These interferences, he explains to the patient, take place in the spinal column, and he asserts that the removal of these pressures is the removal of the cause of disease; that this is essentially the work of the chiropractor; that his highly cultivated sense of touch enables him to appreciate these interferences by palpation; that he readjusts the bones and relieves pressure, and so restores harmony between the brain and the tissues and organs of the body. He also promises the patient a cure if he will go through a course of treatment. A favourite device which is made use of by many osteopaths and chiropractors when explaining the cause of disease to patients, prospective or otherwise, is to take two dorsal or lumbar vertebrae, articulate them together, place in one intervertebral foramen a piece of rubber tubing sufficiently large to fill the aperture, and then to make a slight displacement of the bodies of the two vertebrae. This displacement, of course, at once diminishes the calibre of the tube, and according to the osteopath or chiropractor diminishes the flow of blood or vital force along the nerve emerging from the foramen, and so interferes with the nutrition of the parts or organs supplied by the nerve, thus causing disease or a tendency to disease. The osteopath or chiropractor giving such an explanation omits to mention that the nerve does not fill more than one-half of the aperture, that it is surrounded by a large quantity of fatty and fibrous tissue, and that to produce the amount of displacement necessary to press on the nerve in the manner mentioned would require a traction force of more than half a ton. Such, however, is the ignorance and gullibility of the average member of the community on matters medical that he is readily imposed upon by the plausibility of the osteopath or chiropractor, and believes in his statements.

According to recent information it would appear that considerable numbers of so-called graduates of the osteopathic and chiropractic colleges have been turned out in the United States. The majority of these would appear to be individuals who have had very little preliminary education, no basal scientific training, and no practical knowledge of anatomy, physiology, or applied chemistry, and no experience in diagnosis of disease in living patients. Many of these have received their so-called diplomas after a course of study by correspondence; others, again, after a short course in one of the schools above mentioned. Many of

these come to this country and establish practice, and by blatant advertisement establish their cult.

THE DUTY OF THE STATE.

The increase in the number of osteopaths, chiropractors, and other cultists in this country is considerable. As they claim to be licensed to practise the art of healing, it appears to me absolutely essential that there should be further regulation by the State of all those who take into their hands the responsibilities of the lives of others, and that everyone who is licensed to practise as a medical practitioner in any form should be placed under the same requirements of knowledge and experience. Such regulation and licensing by the State is due, not only to the members of the medical profession, but also to the members of the population as a whole. The progress of the community depends to a great extent on the health of the people. The State, therefore, ought to take a strong stand in protecting the health and preserving the life of its various citizens.

According to all the known facts of pathology and the causes of disease, it is essential before making attempts to treat a patient that the practitioner of medicine should be able first of all to make a diagnosis, and recognize whether the patient is suffering from a disease or not, and, if not, he cannot be in a position to treat intelligently and look after a patient by any method. In addition, it is necessary that he must have a knowledge of the different therapeutic measures and materials which are used in the treatment of disease, so that each individual patient may be treated in the proper manner.

Concerning the practice of medicine, it is maintained by some that an individual's disease is his own concern, and that he has a perfect right to employ anyone, trained or otherwise, to treat him. There is no doubt that it is a dangerous fraud for an individual to represent himself as qualified to treat disease and care for the sick by claiming the possession of knowledge and experience in treating disease which he does not possess. This means that no individual has a right to commit a fraud. It ought to be the duty of the State to prevent the perpetration of dangerous frauds, especially when they concern, not merely the individual who is defrauded, but other members of the community.

It appears to me that it is essential for the good of the community that all individuals licensed to treat the sick members of the community should have received the same basal education, and should have passed through practical courses qualifying them to obtain diplomas or degrees. At the present time the minimum curriculum in this country is a five years' course of study after having passed a preliminary examination in general knowledge, and a pre-registration examination in elementary chemistry and elementary physics.

It has been urged by the osteopaths and chiropractors that they ought to be treated in the same manner as dentists under the new Dentists Act and receive a partial licence to practise as osteopaths and chiropractors. The practice of osteopathy and chiropractic cannot be compared with that of dentistry. The dentist first diagnoses and then treats diseased teeth only; he does not treat other diseases, and does not assume that all diseases in the human frame are dependent on the diseased condition of the teeth. If the methods of the osteopath and chiropractor were followed by the dentist, then the dentist ought to make a claim of this kind, saying "that every diseased and deformed condition of a patient is due to the poisonous chemical substances produced in decaying teeth being absorbed into the body and conveyed by the blood vessels to different parts of the body and there causing disease." Such a claim by the dentist would have much more right to recognition as a pathological fact than the claim by the osteopaths or chiropractors that all diseases are due to misplacements and subluxation of the spinal column involving either the spinal nerves or the blood vessels in connexion with them. It seems to me, therefore, that this contention of the osteopath or chiropractor ought not to be seriously considered and certainly not allowed by our Legislature. The only satisfactory method of protecting the community from fraud in connexion with disease is to ensure that every individual who treats disease shall be licensed only after having passed

through a satisfactory educational career. In these circumstances I maintain that every osteopath, chiropractor, or other cultist who wishes to practise in this country ought to go through similar courses of instruction before being licensed to practise the healing art.

In this connexion it appears to me that instead of the Legislature making possible the licensing of osteopaths in a very limited form of practice, the Medical Acts ought to be so strengthened that it would not be possible for the community to be treated by them or any other unqualified charlatan or quack. From a practical point of view it appears to me that the members of the community ought to be educated as to the real position and the nature of the practice of osteopaths, chiropractors, and other cultists. This might be effected by making instruction in general and personal hygiene compulsory in our schools. A small textbook on the subject should be available, and it ought not to be impossible to arrange that a course of instruction on this subject should be given in all our elementary schools. The Legislature, through its Education Acts and by its medical officers, makes periodical examinations of school children as regards their general health, teeth, mentality, and so on. If this is possible, surely it would be an easy matter to arrange that a course of instruction such as outlined above should be given by its medical officers.

In a similar manner a course of instruction should be given in our secondary and public schools, and an appropriate textbook provided. By means of instruction of this kind at an early stage of an individual's career he might be taught to have a definite and correct opinion as regards disease and the proper methods of its treatment. Some people have advocated that the medical profession should undertake a scheme of propaganda by film, lecture, and otherwise for the education of the public and their protection from unqualified medical practitioners. This might be very desirable, but it does not appear to me that it ought to be carried out necessarily by some organization or other of the medical profession, since this profession would lay itself open to the criticism that it is a trust which is trying to protect itself. It should be done, if considered advisable, either by the General Medical Council in a manner similar to that carried out for the education of the community in dentistry by the Dental Board, or by the Ministry of Health. Perhaps the latter body is the more correct one for this purpose, since the General Medical Council is primarily concerned with education and registration; and unless provision is made for the purpose does not possess the necessary funds.

A Lecture

ON

SOME INTESTINAL DISORDERS OF INFANCY.*

BY

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No infant, whether fed at the breast or with artificial food, escapes having indigestion in one form or another. We do not have to go far to explain this. During infancy the stomach and intestines are worked at a very high pressure to digest the food required for the infant's maintenance and growth. Any overtaxing of its powers is likely to be followed by disturbed function. The commonest causes of indigestion in infancy are practically those of adults—for example, more food is taken than can be digested, or an improper food is given, which cannot be digested without the child getting colic and flatulence. There is no fact more clearly established than the great importance to the health and life of infants that they should be breast-fed for at least six months. If the infant is so fed for this length of time, even in the poorest surroundings and poverty, it will stand a very good chance

of living. The baby will escape the many pitfalls and dangers which lurk behind food out of a bottle.

It is the duty of every medical man and woman to persuade mothers to breast-feed their infants, and often a little perseverance on the part of the mother will enable her to do this, even in cases where it appears at first almost impossible. Directly a baby is weaned, especially in the first few months, difficulties are liable to arise, such as what to feed it on, how to prepare the food, the quantity to give, and so on. Even one or two breast-feeds a day, with the rest of the feeds of cow's milk, are a great help.

When the time for weaning comes, about the eighth to ninth month, it should be done by gradually replacing the feeds from the breast with the artificial food chosen. It is always a good thing to give one feed a day of artificial food from a bottle at about the fourth or fifth month, so that the infant becomes accustomed to the bottle and weaning can take place easily when it becomes necessary. This also gives the mother greater freedom. It is often a struggle to wean a baby all at once, and the one bottle early on enables weaning to be done at any time. It is seldom that breast-feeding is inadvisable. A mother with phthisis should not suckle her baby, for the reason that the mother will very readily infect her child, and it is injurious to her own health. Again, the mother may have wasted so much during pregnancy that her health will not stand the strain. There are practically no other reasons for the mother not trying to feed her infant.

Milk.

There is perhaps no single factor in connexion with infant mortality so important and so full of pitfalls as the supply of milk. The general public know little about milk, and they are quite content as long as the milk is delivered regularly and is not sour. The quality of milk supplied to most large towns is not good, and until this is improved we cannot reduce infant mortality to what it should be. The infant does not know the possible results of the food it is getting and can only express disapproval by its cries, vomiting, and diarrhoea. It is common for one food after another to be tried with bad results, and our methods of feeding infants in the past have been too inexact. Cow's milk, when pure, is an ideal food, but it is of all foods the most difficult to preserve and to handle successfully. To ensure artificial feeding being a success the mother must be taught how to modify it so that the infant can take it and digest it well. Cow's milk can be modified in so many different ways that practically every infant can take it and thrive. Cow's milk has an advantage over all patent foods in that it can be made to resemble human milk closely.

Many proprietary foods have the disadvantage of an excess of starch, and infants fed on them may apparently thrive and become fat, but they are often by no means healthy. It is not the large, fat babies which are the healthiest and the ones to stand best the strain of a severe illness. In the majority of cases where cow's milk has been tried and found to fail it has not been given in the proper quantity and strength. Foreign countries are more strict than we are in the use of proprietary foods for infants. Such foods need careful preparation, and it is a common fault to prepare them too weak.

In some cases the wasting or failure to gain in weight is the fault of the infant, and not of the food which it is having. Certain infants, although fed well, and even breast-fed, do not thrive, and this is sometimes seen in a family when each successive infant dies at the age of 3 or 4 months or sooner.

As a result of faulty feeding, an infant suffers from malnutrition, which is a comprehensive term covering a low condition of health and a lack of resistance to disease. Insufficiency of food is probably of less importance than unsuitability. Irregularity of feeding is often the cause of wasting, as it produces indigestion. It is common to find a wasting infant fed whenever it cries. Irregularity is a common cause of indigestion in adults, but the digestion of infants is even more easily upset. Feeds too large for the age are a common mistake and not recognized at first,

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