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ON THE USE OF COD-LIVER OIL IN CHRONIC RHEUMATISM.

By Dr. BRADSHAW.

(Read before the Pathological Society at the Royal Berkshire Hospital, Reading, October 15, 1845.)

Mr. President :—The hastily taken notes I am about to offer to your notice, have been gathered from a host of others, on all subjects, thrown together as time and circumstances would permit, during many years of active practice, which left no moments for a revision of the pages. It will not be expected, therefore, that I am prepared to read an elaborate treatise on this occasion; but if it should be seen that I advance sufficient reason by way of inducement to the more extended use of a remedy, possessing undoubtedly some valuable properties, and thereby be useful, however inconsiderable be the effort, to relieve the pains and smooth the pillow of my fellow sufferers under the torments of a most distressing disease, my object will have been obtained, and the pleasure will be soothing to my heart.

In the retrospective address, which is a master-piece of unwearied industry, research, and talent, delivered at the twelfth anniversary meeting of the Provincial Medical and Surgical Association, held at Northampton, August 7th and 8th, 1844, by Dr. Charles Cowan, that gentleman takes occasion to mention that cod-liver oil has been extensively used by several observers in the treatment of phthisis, and then goes on to state that Dr. A. Burgarève has made an interesting and favourable report to the Belgian Academy on the therapeutic employment of this and other fatty substances. He confirms its value in phthisis, chronic rheumatism, rickets, and in all cases characterized by deficient action of the system, and asserts that no article of *materia medica* has stronger evidence in its favour. Its first effect is to augment the animal heat; and secondly, to increase the coloured globules of the blood. It acts, he thinks, by furnishing carbon to the system, and rendering respiration more active. Its peculiar advantages reside in its quicker digestion than other oils, and in its not exciting diarrhoea. Though very offensive at first, it appears afterwards to be less distressing than other analogous preparations. Mr. Chalk, of Margate, speaks decidedly as to its value in strumous and rheumatic cases, remarking that it increases the nutrition, and restores a healthy complexion.

It is to the treatment of chronic rheumatism by this remedy, as successfully employed by me, that I wish to direct the attention of the Society. My first notice of

the value of this oil was arrested in the year 1826, during the anchorage of the Russian squadron in the Bristol channel. In a conversation with the Surgeon on board one of the ships relative to the most prevalent diseases among the Russians, I was somewhat surprised to find that they knew nothing practically of rheumatism, and he gave it as his opinion that the quantity of fish-oil swallowed by them was the preventative. This suggestion determined me on bringing into use its operation at the first favourable opportunity; and shortly after this a case presented itself, where I had ample scope for giving it a fair trial on the person of an old soldier of the Indian army. The results were as follow :—

CASE I.

Nathaniel G—, aged 58, with plumbean countenance, attenuated form, the very portrait of misery, walking or rather hobbling with two staffs, had been sent home invalided. He was one of the unfortunate few who, at the battle of Seringapatam against Tippoo Saib, had been stationed for many hours above their middles in the moat surrounding the palace. From that day he had not recovered the perfect use of his limbs, and the racks of pain to which he had been subject were almost maddening. He was in the habit of swallowing small bits of crude opium to allay pain, without which life was indeed a galling load. Every measure had been employed with vigour that was likely to divert the lurking malady, but to no purpose. I suggested to him the use of train oil, to which he readily assented, declaring that anything was better to him, however obnoxious to the palate, than the constant pain he had endured. Knowing that some of the Russians made choice of the blubber portion of oil, I deemed it advisable to administer it in this form, and began with a tea-spoonful three times a day on a little water. The distress, however, occasioned to the stomach by constant vomiting caused me to desist and procure for him the clear oil, which may be drawn from the upper part of the cask. This I administered on a little gin, and augmented the dose daily until he was able to take the half of a wine-glassful morning and night. The improvement in this patient was daily remarkable; his countenance assumed gradually a cheerful aspect; he rapidly gained flesh; his bowels, which had heretofore been costive and troublesome, acted daily; his sleep was refreshing; he threw aside one staff and then the other; his physical energies by degrees returned to him, and I had the pleasure of seeing him six months afterwards with his gloves and mattock trimming the hedges of a neighbouring farmer with the full sweep of vigorous manhood.

CASE II.

William M—, a ship-merchant, aged 64, of strumous diathesis, distorted limbs, enlarged joints, wretched countenance, had been a martyr to rheumatism from his boyhood; he referred it to an hereditary predisposition, and having ample means, had spared no expense to obtain a cure. His nights were rendered miserable by the constant gnawings, to use his own words, in his bones. He had taken for years laudanum and camphor as palliatives and made frequent use of counter-irritants. At the time I saw him he was under the application of moxa. I advised the train oil, and commenced with a tea-spoonful on gin; this not suiting his taste we employed brandy as a vehicle, increasing the dose daily, until his stomach was capable of bearing one large-spoonful three times a day. This gentleman experienced signal benefit with comparative health from its use, and at the time I left him, at least twelve months after its first employment, he still continued to take it, declaring it to be necessary to his comfort, and the only remedy that had given him decided relief.

CASE III.

Betty S—, an old parish midwife, aged 71, very thin, and of spare habit, much distressed with costive bowels and ardor urinæ, was afflicted with chronic rheumatism for forty years, attributed to her having caught a succession of colds in her nightly vocations. At this age there was not much to be anticipated from the employment of any remedy, especially as the habit had been for years brought under the lulling effects of sedatives, without which she was unable to rest. The formidable nature of the case, however, urged me on, and with the patient's consent I gave the tea-spoonful of oil as in the former cases, three times a day, increasing the dose until she could bear a full wine-glass; but it is remarkable that the stomach revolted if the dose was given on any vehicle except that of strong whisky. The daily improvement here was equal to anything I had ever seen; she certainly appeared to grow younger; the constipation of the bowels subsided; the ardor urinæ was no longer troublesome, and this woman spent many years afterwards in the glories of longevity, attributing her happiness to the effects of the oil.

CASE IV.

William S—, a farmer, aged 39, short, fat, strumous, gouty, having joints filled with chalk-stones, from which he had had many abstracted, suffered grievously with rheumatic pains, in turn affecting most parts of the body. His habit was, when attacked by the enemy, to order a large fire to be made, enough to roast a lamb, cause a favourite attendant to heap on him blanket after blanket, and I have seen to the number of eighteen, until the surface of his body would be enveloped in steam, as the only means by which he could gain relief, at the same time swallowing large potions of hot brandy and water. This person commenced with the minimum dose, and at last took it twice a day as regularly as his food, his general consumption amounting to more than a pint a week, and he declared that he could not live without it, as it gave him such decided comfort; his favourite vehicle was gin and peppermint.

CASE V.

James T.—, a fine strong robust farmer, aged 36,

generally of good health, of regular habits, and quiet demeanour, was seized, after getting wet, with rheumatism in the shoulders, which deprived him of the power to lift, carry, or put on his clothes. It preyed upon his spirits, and was making inroads upon his health, as every means had skillfully been resorted to without the least hope of success. I at once gave him the oil, but with troublesome effects, it having produced vomiting, purging, and strangury to a distressing degree; but the relief he experienced from these combined effects, urged him with true courage to persevere in inducing the system to accommodate itself to the remedy, and this case yielded entirely to the treatment in a month, nor do I believe since that time he has complained of the slightest return of the old malady.

It might here very properly be suggested that the revolution under which the whole system was shaken, was sufficient to account for the relief obtained; but I believe, on inquiry, it will be seen that such does not obtain in cases of chronic rheumatism, and that this disease clings to the sufferer with peculiar tenacity even after the constitution shall have suffered an entire change by pestilential or other diseases.

CASE VI.

A medical friend of the old school, who had been, times and oft, saturated with those nocturnal drenchings, so inimical to, yet so constant as attendants upon, the country accoucheur, as if the very elements conspired to harass him, by such means, and by years of bumpings on wet saddles, had contracted the horrors of rheumatism in the thighs. I have seen this gentleman with his legs under the grate of his fire, with the thighs literally scorching to obtain relief, and this mode of operation generally gave him ease. During the celebrity of the acupuncture novelty, I performed that operation upon him, and although it gave him exquisite pain, nevertheless, as the first impression subsided, and the shock upon the nerves gave way, he was relieved; but then it was only temporary, and to perform an operation so acute as often as necessity required, upon an extremely sensitive man, will be admitted was not likely to be very welcome. In addition to the many ills of which this gentleman complained, he was a great sufferer from hæmorrhoids, the general attendants upon equestrians. I advised the oil in this case, which much disordered him, producing headache and nausea, so that he gave up the use of it, but returned to it when a little relaxed from his professional duties, and at length by repeated trials brought the stomach to bear it with advantage to the rheumatic affection. Eventually this gentleman lost the complaint, together with the piles, while his general health evidently improved, which he attributed solely to the use of the oil.

I have selected these cases from among many, to show that as a therapeutical agent in rheumatism, fish-oil may be prescribed with advantage, but certainly not without caution, as I believe where there is a morbid condition of the gastric juice, unpleasant symptoms may be the result of its administration. To the dyspeptic, therefore, the remedy would fail of its good effects, by inducing all that train of alimentary disturbance which is generally the result of fatty matter mixing with the contents of the canal in such

individuals. In these conditions I would advise the free use of the oil by friction over the part or parts affected, but especially at the inner parts of the thighs, after which bandaging with flannel will be found not only to assist the absorption of the oil, but by the warmth thus secured, to give much comfort to the patient.

I successfully treated a friend in this way who had suffered much with pains in the legs, and although the process is tedious, and probably irksome to the practitioner, still I think the result will be equal to the toil, and to a philanthropic heart full and satisfactory.

It has been my custom in all cases of chronic rheumatism to pay particular attention to the temperature of the part affected, and I have ever found it below the standard of the surrounding or neighbouring parts; the skin will be found to feel cold and flaccid, while there is a rigidity in the muscles; the absence of febrile symptoms is also to be noticed in these cases, and the joints, if attacked, appear stiff and benumbed, so that atony has attained to a very high degree. It is evident then that this disease is one of debility; nor do I think it ever attacks individuals whose constitutions are not peculiarly disposed to rheumatic action.

It becomes, therefore, interesting to know what is the *modus operandi* of this oil, in the treatment for rheumatism. Is it as Dr. Burgræve thinks, by furnishing carbon to the system, and rendering thereby respiration more active? That it augments animal heat is clearly demonstrated by the comfort obtained by the patient after its use, which is the result of heat artificially applied to rheumatic subjects in most cases. Again, if we insist on its diuretic effects as chiefly advantageous, the results of Case III. will furnish us with ample testimony, and it is well known to most practitioners that the class of highly stimulating diuretics is not only very useful with rheumatics, but mostly to be depended on, and cuts short many a worrying paroxysm.

It has been long known that the essential oils, of almost every kind, both for their stimulating and diuretic effects, have been advantageously administered in this disease, and doubtlessly by equalizing the circulating medium, and thereby generalizing the temperature. I think, however, as regards the oil, whatever arthritic virtues it may possess, its powers mainly depend on its stimulating effects, and consequently its exciting generally the excretory system, as well as rousing the whole body, for I am not yet prepared to think it has any specific effect upon particular organs.

As a local stimulant I am decidedly its advocate, having derived in my own case frequent relief from its application. It might be objected here that probably the friction would be productive of similar results without the oil, but I say no, having given both many fair and unbiassed trials, and experience forces me to award the palm to the oil.

The unpleasantness of the smell accompanying the use of it may be some objection to its more extended introduction and employment, but to the suffering rheumatic this would be, I imagine, a secondary consideration.

I believe Dr. Percival, of the Manchester Infirmary, tried the cod-fish-liver oil, *oleum jecoris aselli*, or common train oil, with signal success, but it was not known to me that this gentleman had ever employed

the remedy until years after my notes were taken, so that his success and mine are perfectly independent of each other. I am of opinion that if the oil be commenced with in minimum doses, and punctiliously persevered in, rheumatism will yield to it when other remedies shall have failed. Drs. Bardsley and Parr were its strenuous advocates some years past, but of the opinions of these gentlemen I knew nothing at the time I experimented with the oil, so that in justice to the Russian medical officer, I refer my success to his suggestion. Dr. Mason Good is no advocate for its use, as he asserts it cannot be depended on, and gives the preference to the terebinthinate oils, although he declares it may sometimes prove salutary; but I believe his objection mainly depends on the offensiveness of the material.

It now remains to inquire whether this remedy is worthy the notice of practitioners as a *dernier resort* in rheumatism, and if it may not be introduced into our public institutions to test, more perfectly than can possibly be attained to in private practice, its specific efficacy. That it affects the whole system by getting into the blood, may be satisfactorily detected by the elimination of its odour from the skin and whole surface, and consequently it must, without doubt, carry its stimulus generally through the system. I cannot see then, since it has had the test of experience, why other oils should be preferred to it, except, as I have before said, that its unpleasantness may be the barrier to its more extended introduction.

I will here take occasion to observe, that the Italians and French, who are great consumers of salad oil, do not suffer with those arthritic pains, so peculiar to this nation; and it has long been a practice with me to recommend the free use of this condiment to those labouring under habitually costive bowels, as well as to those suffering severely from hæmorrhoids, and certainly with advantage.

It is not enough to say that the tube is merely oiled by this means, and that the digesta slip through without the wonted lubricating supply and call upon muscular effort, as it will be seen by any observer, by persevering in the use of the oil, that the system generally becomes affected by it, and whether for good or evil, a decided change is produced in the habit. I have a gentleman at this time who occasionally consults me, an officer in the navy, who has derived marked advantage from the use of this oil, after having employed for many years castor oil and other purgatives to procure ever so small a dejection from the bowels. He is now free from constipation, as well as the many trains of attendants so miserably concomitant with this most troublesome of all maladies.

I believe also that the fish oil may be brought into use as a condiment for the rheumatic, and with advantage, having observed that those who by habit are able to bear it on the stomach obtain an increase of digestive power; and it may be known to the members of this society, that if an individual long accustomed to the use of an oleaginous condiment be suddenly deprived of it, his health will soon indicate the change, and there will be ushered in all the miseries attendant on dyspeptic symptoms. This fact has been well established by those who have had the professional care of Russian residents in this country.

I have now to state with reference to the objection

of a member, that train oil is not identical with cod-liver oil, that I have the high authority of Dr. Mason Good to bear me out, who says, (vol. 2, page 501,) in his treatise on rheumatism, "The subject ought not to be dropped without briefly adverting to the internal use of the *oleum jecoris aselli*, common train oil, or that obtained from the liver of the cod-fish." The name train oil is only applied strictly to the cod-liver oil, and the train oil of commerce has borrowed that name by looseness of application, as is very common in our maritime employments. At present the oil which is drawn from the fat of the whale is generally brought into the market under the denomination of train oil; but it should be understood that the oil of every kind of fish that it is possible to draw the matter from, enters largely into the composition of this ingredient, and therefore as regards the name we must be content to call it a misnomer. At all events I have employed the *oleum jecoris aselli* as being the genuine train oil, and with the success already stated.

I have also employed the fine-drawn blubber oil or that taken from the whale with equally good effects, and when it can be obtained pure I have as much confidence in it as in that of the cod's liver. I know by long observation and enquiry, that persons employed in the warehouses for the reception of blubber oil are equally strangers to rheumatism as those who saturate the system with it through the medium of the stomach; indeed it will be found that where there is much absorption into the habit of fatty matter, of whatsoever kind, such as with butchers, tallow-chandlers, lamp-trimmers, oil-merchants, and the like, rheumatism does not affect them to the same degree, if at all, in the manner it may be found to attack persons engaged in all other employments; and if you draw blood from the veins of such persons, it will be seen that it contains an abundance of carbon, which fact goes to support the opinion of Dr. Burgkræve, and certainly squares with his views on the point of carbonization.

In noticing the excretions of the rheumatic, it may be observed that during a painful paroxysm there is an evident want of healthy hepatic action, with either a scanty supply, or superabundance of the secretion from the organ, yet in every case which I have treated with the oil, the supply has not only been regulated by its use, but the condition materially improved in an unusually short space of time.

It will probably not be uninteresting to the Society to be informed that the Welsh people have an established notion that flannel, if worn without being washed, is capable of warding off attacks of rheumatism, and that after the garment shall have undergone the operation of ablution, the charm is lost, or rather, I should say, the virtue of the flannel, as a non-conductor, has been detracted. During my peripatinations among these ancient Britons, I had ample opportunities afforded me of inquiring into the merits of their new flannel, as either a mechanical or chemical agent in the prevention of this disease, and I fell upon the idea that in the dressing of the material care was taken, not only to preserve the animal oil natural to the wool, but that very much was used in the operation of manufacturing the flannel; here then doubtless may be traced the virtue of the article, not only as a non-conductor, but equally as an endermic adjuvant of no

mean pretensions. It will be seen by any one who will take the trouble to reduce it to practice, that the flannel no longer retains its anti-rheumatic properties after it has passed through the hands of the washer-woman.

In consequence of my being satisfied of this truth, it has been a custom with me to order for my patients a series of flannel garments, and for this reason:—It is known to most of you that during attacks of rheumatism, much offensive matter is eliminated from the skin, especially in persons of advanced age, thereby infecting and making offensive the garment employed, but thus provided, I order a clean or disinfected garment to be adjusted every third day, and the infected one to be hung in the open air, to undergo the same course of disinfection by the most powerful means that can be devised; and I have reason to be fully satisfied with the results, as I not only thereby contrive to retain the certainly valuable chemical properties of the flannel, but I have just reason to think that a wholesome change is produced upon the system, and that the sensible perspirations are materially altered for the better in a very short space of time.

It may not be inappropriate to observe, that woollen cloth has ever been the shield against rheumatism, and in the most northern regions, where woollen is the chief material employed as habiliments, the disease has scarcely a name. In a work on the antiquities of Scotland, it is stated that 150 years ago the Highlanders wore nothing but woollen-cloth shirts because linen was so expensive that it was very long before it came into general use, and it has been remarked by the most intelligent Highlanders, that previous to the introduction of linen, rheumatism was almost, if not wholly, unknown to them, but that since the general use of linen shirts they have become martyrs to the disease.

In making a retrospect of these observations, I am inclined to think and give full weight to the possibility of there being much intrinsic worth in the oleaginous property contained in woollen stuffs, and that it heightens their value in chronic rheumatism, as non-conductors of heat. By close observation it will be discovered that there is a marked decrease of temperature in the affected part after each paroxysm, which I again assert may be genially dealt with by a timely administration of our old friend, the *oleum jecoris aselli*. I would, however, impress upon the society the necessity for a steady perseverance in the use of the remedy, if they would hope to obtain the curative results so much insisted on. In no wise should the daily use of the oil be laid aside for a month, unless some casualty should intervene to determine otherwise, and in a disease so formidably obstinate in its chronic character, the mind must be prepared to contend with resistance; but the old adage will obtain here with vivid certainty,—"*industria et perseverantia postremo omnia vincent.*"

I have been in the habit of administering the remedy in various vehicles, as circumstances required or the condition of the patient demanded, such as cinnamon and peppermint waters, thin gruel, milk, and the alcoholic potions mentioned in the former parts of these notes, but I give the preference to a thin infusion of linseed, flavoured with lemon-peel, and sweetened to please the palate. My mode of giving the oil with this is in

form as follows :—I pour a small quantity of infusion into a glass, on which is added the oil, and again another small quantity of infusion upon it. In this manner the dose may be swallowed, and will slip down without offending the palate, and generally is well retained even by irritable stomachs. Another mode has been successful when many have failed, and will be found equally valuable: it is the yoke of an egg beat up with boiling water and sugar, with which may be mixed a dessert-spoonful of brandy, and on this the dose may be given without producing that nausea so frequently experienced when conveyed by other vehicles.

CASES AND OBSERVATIONS IN HOSPITAL PRACTICE.

By RICHARD CHAMBERS, M.D., Physician to the Essex and Colchester Hospital.

(Continued from page 698.)

CONGESTIVE DYSPEPSIA.

CASE 1.—Stephen Wheel, aged 57, a labourer, admitted July 3, 1845, complains of constant pain in the epigastrium, increased after taking food; suffers also from pain in the loins, and occasionally in the legs; the bowels are confined; the appetite is indifferent; the tongue is covered with a white coat on the dorsum, the sides and edges are florid, the papillæ are very prominent; pulse 68; prefers warm drinks; has an anxious melancholy countenance. Was in the Hospital a year ago for a similar attack.

Applic. Hirudines sex epigastrio alternis diebus.

R. Pil. Hydrarg., Fellis Bovini, utr., gr. iv.; Morphizæ Acet., gr. ʒ. M. Ft. pil. ij., omni nocte sumendæ.

R. Magnesizæ Carbonatis, gr. x.; Tinct. Hyoscyarni, m. xx.; Acid. Prussic., (Scheele,) m. ij.; Mist. Camphoræ, oz. j. M. Fiat haustus ter quotidie sumendus.

26th. Very much better, and is quite free from pain.

Applic. Hirudines tertiis diebus. Contin. alia.

August 1st. States that he is quite well. Omitt. omnia.

7th. Feels quite well, and was discharged.

CASE 2. James Webb, aged 50, a labourer, admitted July 31, 1845; ill four months; complains of pain in the stomach, increased after eating; is sick occasionally; bowels generally moved once a day; urine scanty; feet cold; prefers warm drink; pulse 66.

Applic. Hirudines sex epigastrio alternis diebus.

R. Pil. Hydrargyri, Fellis Bovini, utr., gr. iv.; Morphizæ, Acet., gr. ʒ. M. Fiat pil. ij., omni nocte sumendæ.

R. Magnesizæ Carbonatis, gr. x.; Sodæ Sesquicarb., gr. v.; Acid. Prussic., (Scheele,) M. ij.; Mist. Camphoræ, oz. j. M. Fiat haustus ter quotidie sumendus.

This treatment was continued, and the prussic acid gradually increased to four minims thrice a day. On the 14th of August he was discharged cured. I should not have dismissed him so soon, only that he was anxious to return to his work.

I offer the foregoing cases as examples of a disease of very frequent occurrence, particularly in hospital-

practice. The characteristic symptom is a constant pain in the epigastrium, aggravated after taking food. I have called it congestion, as I think that this closely expresses the pathology of the affection; and has not that tendency to mislead in the diagnosis or treatment that the word inflammatory may possibly have. The disease appears to me primarily to have a common origin with the ordinary forms of indigestion; and to be more immediately excited by the continued use of indigestible, or, more properly, food not adapted to the deranged state of the stomach. It is so gradual in its approach and progress, and is attended by so little excitement of the system, that it is generally looked upon as non-inflammatory, and is by most persons called gastrodynia, and viewed either as an original affection, or as an accompaniment of dyspepsia. The usual routine remedies are purgatives, sedatives, and tonics.

Purgatives are the remedies chiefly employed, and in some cases, where the attack has not been of long duration, and is kept up or aggravated by a loaded state of the large intestines, they prove of unquestionable advantage. But in cases of some duration, where the capillaries of the stomach have been habituated to a state of continued erethism, the relief to be had from purgatives proves of a very slow and uncertain character. There are two causes that contribute to render the purgative a favourite mode of treatment: one, its popularity; and the other, the invariably constipated state of the bowels that obtains in this disease. Since the days of Dr. Hamilton and Mr. Abernethy, there has been a popular prejudice in favour of purgatives; and it too frequently happens that they are made subservient to charlatanism and ignorance. Patients generally exhibit an anxiety to have their bowels kept in a state of action; and in fulfilling their wishes, practitioners have at least the appearance of doing something, although they may be perfectly ignorant of the true character of the disease. Constipation is an invariable attendant on stomach affections, and when the mind accustoms itself to habits of routine practice, it only sees in constipation another name for colocynth, scammony, and croton oil, totally overlooking the causes that may have induced the constipation.

We know that it is a law of the animal economy, that two actions differing in degree cannot exist in the system at the same time, as the greater supersedes the lesser. It is upon this law that the principles of derivation and counter-irritation are based. The intestinal canal is endowed with a certain amount of sensibility to enable it to propel its contents onwards for excretion; and should this sensibility become diminished, constipation will be the result, as diarrhœa will be of the converse state. When the stomach is in a state of inflammation or congestion, there must be a transfer of action from the intestines, calculated to reduce their sensibility below par; and the consequence is that they become insensible to the ordinary stimulus of their contents, and in common parlance constipation occurs. On this principle I think the obstinate constipation that attends uterine diseases can be accounted for. In the constipation of chlorosis another element appears to be in action tending to a like result. It is the deteriorated quality of the blood; this being insufficient to sustain vascular action in the intestines and secretory organs. A great error is committed in