

ciently dilated, it may be prudent to introduce the hand and rupture the membranes, rather than leave this evacuation to a spontaneous event: this being done, the arm of the foetus will generally, if not prevented, be forced down by the efforts of the uterus; the accoucheur should then immediately endeavour to obviate, if possible, by engaging the head and retaining the hand of the foetus above the brim of the pelvis: if this cannot be accomplished, and either the funis or arm of the foetus protrude, the operator's hand should then be conducted to the feet of the child, and delivery terminated by turning.

Notwithstanding all these efforts, the limits of our art are too often such as do not altogether furnish us with resources in this species of birth, sufficient to surmount every obstacle adequate for the preservation of the foetus; nevertheless, if these scattered fragments should be the means of saving a single life, I shall not consider the little time bestowed on the subject ill employed.

August 2, 1802.

An Address lately delivered to the Medical Society of Horn-castle, on Endemic Causes of Disease; by C. HARRISON, M. D. by whom it has been communicated to the Editors.

GENTLEMEN,

IRise to thank you for selecting me for your President.— To be chosen the first among equals, by the unanimous suffrages of independent Associates, is, in my estimation, the highest honour that can be conferred upon any individual. Impressed with this sentiment, I beg leave to acknowledge your partiality towards me in terms of the warmest gratitude, and to assure you that, on my part, no exertion shall be wanting to promote the many advantages which may be derived from our Society: these I will take some future opportunity to enumerate and explain; but at this time I must necessarily pass over several of them without notice.

The county of Lincoln is, as you know, of great extent, and contains a variety of soils which appear to have no small influence upon the health and the lives of its inhabitants. To distinguish these from each other, by chemical analysis, and ascertain the diseases which depend upon them and other local causes, are objects of great national importance, and may be accomplished, in a great measure, by the combined efforts of

all our fellow members. To complete an undertaking of this extensive and multifarious nature, requires the zealous co-operation of numerous individuals; and I make no doubt, as this county happily contains many patriotic and ingenious characters, if we desire assistance, materials for this purpose will be industriously collected, and liberally communicated.

The town of Horncastle is in a central part of the county, and upon the edge of the Wolds. On both accounts it is well situated for the inquiry; and as the Society consists of Members, who practise in various places, it will be less difficult to obtain the necessary information.

Dr. Mitchell, of New York, and other eminent Chemists and Philosophers, entertain an opinion, that countries abounding with calcareous matters are seldom visited by epidemic complaints. The extensive range of elevated grounds, which constitute a great part of Lindsey, are called the Wolds of Lincolnshire. These, and the Cliff Row, which is situated chiefly in Kesteven, are entirely calcareous. The division of Holland, with the marshes, fens, and other low lands, are likewise of great extent. They consist chiefly of sandy, loamy moor and clay lands, which are, more or less, completely drained, and are in different degrees of cultivation. These tracts either contain no calcareous ingredients, or the strata are buried so deep in the bowels of the earth as not to affect the surface of the ground, or the incumbent atmosphere. Since the county of Lincoln includes such a variety of soils, I conceive, that by making diligent and minute inquiries every where among the aged and intelligent inhabitants; by collecting and comparing the parochial registers in all the market-towns and villages for the last fifty years; and by soliciting information from medical practitioners and literary men, we may obtain such a knowledge of the epidemic and prevalent diseases of the county as will enable us, in our respective stations, to be of greater service to our patients, to our relations, and the community at large.

I have resided at Horncastle upwards of fourteen years; and although I have been actively engaged, during that time, in the exercise of medicine, I do not recollect any disorders except the influenza, small-pox, measles, and hooping-cough, to have been epidemic in this place before last year, when a typhus fever was brought into it by some strangers.

This fever has, I believe, been very general in other parts of the county, as well as at Horncastle; but whether it has prevailed more in calcareous or other districts, are circumstances upon which I can give you no information.

According to Dr. Mitchell and his followers, azote, or, as they

they term it, septon, is the cause of most epidemic, and of many sporadic disorders. It exists naturally in the atmosphere, under the appellation of azotic gas. All putrefying animals, and many corrupting vegetables, supply it copiously; but so great is its affinity to caloric, oxygen, and many other things, that it has never been obtained separate and isolated. He supposes septon to favour the growth of vegetables, and to be of great service in agriculture. In a concentrated state, he thinks it destroys vegetation by too powerful a stimulus, and produces many very formidable and virulent distempers. Septon, united to caloric and oxygen, forms a great variety of compounds, which are greedily attracted by calcareous substances, &c. Neutralized by this means, it exerts no deleterious effects upon the human constitution. In calcareous countries, the excess of septon in the air is prevented by its attaching itself to the quicklime of the soil, as fast as it is extricated. In other places, it is waisted about in the atmosphere, and forms various compounds, by which its virulence is restrained or modified.

According to this opinion, it follows, that calcareous regions are less exposed to epidemic maladies, and to several diseases, which afflict the inhabitants of other places. I have reason to believe, that the prevalent complaints upon the wolds and in the fens differ considerably from each other. The consumptions upon the wolds, I have been accustomed to impute to an oxygenated atmosphere, and the calculous affections to the presence of calcareous impregnations in the wells and rivers. In the fens, idiopathic consumptions and stone are seldom observed; but in spring and autumn, the inhabitants are exposed to obstinate agues and remitting disorders. Of late years the fens have been much more healthy; and when, by the works that are now constructing, a complete drainage shall be obtained, I think that they will become not only among the most valuable agricultural tracts in the island, but among the most salubrious to the inhabitants. By the destruction of organic bodies, and in many other ways, this principle is extricated in all countries. In burying grounds and in slaughter houses, &c. it is abundantly produced, and has been supposed by many physicians to render the air unwholesome to the inhabitants. Before the time of Dr. M. several destructive and wide spreading epidemics had been traced to putrefying substances; and it becomes a matter of serious inquiry, how far the custom of interring dead bodies in churches and in towns ought to be permitted, or ought to be interdicted, by the authority of government.

For my own part, I can see no advantage that will accrue to individuals from persisting in the practice, and therefore I shall be happy to see it discontinued.

During

During the destruction of animal matters, volatile substances certainly ascend from the ground and mix with the atmosphere. The more fixed principles are dissolved in the rain water that descends into burying grounds, and, passing with it through the bowels of the earth, are received into wells, from which the inhabitants of towns are supplied with water for culinary purposes. Should it turn out that the air and the water of such places are not pestilential, I do not suppose that the gallantry of Britons is so truly romantic, as to receive any gratification from inhaling or drinking the exuviae of their deceased lovers or ancestors. By burying a long time in church-yards, the soil becomes raised above the floor of the church; this makes the ground damp, and the moisture, with its various impregnations, ascends into the upper parts, and contaminates the whole air of the church. Many diseases are occasioned by moisture acting upon the human constitution; and as its influence is greatly favoured by rest, invalids are exposed to danger by remaining long in such situations.

Without imputing too much to the effects of aqueous and atmospherical impregnations, I should recommend that burials in towns, where practicable, be discontinued, and the floors of all churches raised above the surface of the adjacent grounds. Till this be done, and free ventilation encouraged, the devout inhabitants will be in danger of suffering from the damp and stagnant air in which they are enveloped, during the period of this necessary and important part of their duty.

Evils of this kind may be easily removed, or I should have had great reluctance in disturbing your minds, although in a matter of such importance to your health and comfort.

But the diseases to which I am at present desirous to call your particular attention, are, pulmonary consumptions; calculous affections; and intermittent disorders. They are each of them subjects of great importance, and from their frequent recurrence among us, are deserving of your most attentive consideration.

I had not resided long in this division of Lincolnshire, before I was strongly impressed with an idea that the inhabitants upon the wolds were a great deal exposed to idiopathic consumptions, and peculiarly liable to calculous complaints. In the division of Holland, and the extensive marshes of our county, these disorders are probably less known than in most *other situations* in England. Multiplied experience and numerous inquiries have tended to confirm these opinions; and since the establishment of our Dispensary, I have been collecting facts to elucidate them. The interruptions to which medical practitioners are continually exposed must plead an apology for laying
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my ideas before you in a crude and imperfect form. Should my sentiments be fortunate enough to meet your approbation, I shall return to the inquiry with fresh ardor, from a conviction thereby afforded that my observations will be useful to society.

Phtisical complaints are the great scourge of this island. Pulmonary consumptions alone are reported annually to destroy upwards of twenty thousand persons.

How many of our countrymen are carried off by the other forms of heetical disorders, I am unable to calculate; but their numbers are certainly very great. I would not be understood to assert that phtisical complaints of all kinds are more prevalent upon the Wolds. My observations have been chiefly directed to affections, which originate in scrofula, and these I am inclined to believe are much less frequent in the division of Holland, than that of Lindsey. When it is considered that the victims to scrofulous affections are chiefly the fair and the delicate, who have arrived at an age to be useful to their friends, and promised by superior mental endowments to be a blessing to the community, we cannot too much deplore and lament these premature deaths.

The situation of this town has afforded me numerous opportunities to investigate more particularly pulmonary complaints, and I can truly assert that they are much less frequent in the fens and marshes than in other parts of my circuit. The difference with respect to idiopathic consumption is very great indeed: In some parts where I practise, it is a very common complaint, and in others it is scarcely known to the faculty. Pulmonary consumptions are certainly to be met with every where; but when I have been consulted upon such cases in our marshes, or the division of Holland, I could either trace them to other situations, to neglected colds, or some irregularity in the suffering person.

Consumptions from these causes are occasioned by accidents to which all persons are exposed in their commerce with the world. It is not to them that I refer; it is to the florid and tubercular consumptions alone that my observations are directed. These are so much the effects of predisposition, and are so insidious in their attacks, that it is very difficult, if not impossible, to prevail upon invalids to adopt precautionary regulations sufficiently early to prevent their destructive and fatal consequences. Arguments are insufficient to alarm the phtisical, and make him alive to his dangerous situation. The mind is too confident to be moved by admonition. Nay, when the complaint is fully established, and has made considerable progress, the patient still continues free from apprehensions, and cannot be

made to perceive the unavoidable mortality which awaits him. In these melancholy cases, there is no safety but in flight. The sufferer must either be removed into another air, or little good can be expected. Happily, the approach of the disease may commonly be distinguished while the constitution is so little injured that a cure may be reasonably anticipated. This in my opinion will never be accomplished by enclosing patients in rooms filled with medicated air, or a reduced atmosphere. The effects of such discipline are too transient to produce any permanent change upon diseased lungs. When immersion is finished, and the patient returns again to a common atmosphere, I should even be disposed to apprehend bad consequences from the sudden transition. If we can fortunately discover any district, where idiopathic consumptions are entirely unknown, we may expect that such patients will derive great benefit from removing to it, and residing there, till their sufferings be removed, and good health completely restored.

When I first took up the opinion, that pulmonary consumptions were seldom produced in the division of Holland, I applied for information, among others, to Mr. Wayet, an old and experienced practitioner at Boston, who informed me that pulmonary complaints of all kinds were very uncommon in his neighbourhood, and that such as did occur were milder than in other places. In an extensive practice of more than forty years, he had seldom attended in cases of peripneumony, or spasmodic asthma; and measles, he observes, were seldom dangerous in that part of the country.

This opinion of Mr. Wayet is agreeable to my own experience, and that of several medical practitioners with whom I have conversed upon this interesting subject. I accidentally mentioned it, a few years since, in the company of Mr. Bouche-rett, Member of Parliament for Great Grimsby, a gentleman of unbounded candor, and a most benevolent disposition. He was so much struck with the remark, that he took an opportunity to make inquiries concerning it among his Dutch friends, and was informed that consumptive disorders seldom occurred among them. From the great resemblance of the soil and air in the Batavian republic and the Lincolnshire fens, I am disposed to believe, that the exemption from phtisical complaints, in both countries, depend upon the same causes. In the lower parts of this county the air is moist and soft, when compared with the atmosphere upon the Wolds; the lungs are therefore less irritated in it, and in consequence, as I conceive, tubercles, which lay the foundation of idiopathic consumptions in other places, are seldom met with in these situations.

Sheep, it is well known, are liable to be affected with tubercles

cles in the lungs, and to die hectic. By what morbid action tubercles are formed in these animals, and whether they remain indolent for some time, or are roused into immediate action, are subjects upon which I can give no satisfactory information. In human lungs, the suppurative process is often very slow. Unless the lungs be hurried into suppuration by mismanagement or irregularities, they remain stationary for several years, and, under favorable circumstances, appear to be gradually absorbed. In every case where the existence of tubercles is suspected, I should recommend the patient to remove into a soft moist atmosphere, where the lungs will be less stimulated; and to remain in it till he has reason to believe that the tubercles are entirely removed. Whether more eligible places are to be found in other parts of the kingdom, I am unable to determine; but till we have obtained better information upon the subject, I am disposed to recommend a residence in the Lincolnshire fens to such patients, in preference to every situation with which I am acquainted.

By making experiments upon sheep in different districts, situations and circumstances, I am disposed to believe that some comparative knowledge would be obtained, which might assist our inquiries into the prevention and cure of tubercular consumptions in the human body. If, for example, a flock of sheep were to be bred, and wholly maintained upon the Wolds till they were fit for the butcher, and another were to be kept in the fens, an opportunity would be given to examine the lungs in each, and to determine how far the different flocks were affected by their respective pasturage. Such an inquiry would probably enable us to treat the diseases of sheep with more success, and thus a double benefit be conferred upon society by the investigation.

In January, 1793, a young lady, aged about twenty, who had been my patient several months, with very strong symptoms of florid consumption, went upon a visit into the neighbourhood of Wisbeach, in the Isle of Ely. While under my care she had continual pains in the chest, with a short dry cough, the sputum being generally streaked with blood. Motion soon fatigued her, and increased the dyspnoea and cough; she evidently lost flesh and strength, and in an afternoon and evening she had a slight hectic fit. Her being of a consumptive family, I considered as affording a *prognostic* unfavourable to her recovery. After an absence of three months, she returned again so much improved in health, that she thought herself quite well. She took up her residence at an elevated village in this neighbourhood. I frequently saw her, and had the mortification to observe an insidious attack of all her old symp-

toms. Before the end of the summer, I thought her as bad as ever she had been, and urged her to return to her friends near Wisbeach. With this advice she neglected to comply for two years, during which time her symptoms rather increased than abated. After a second visit of near four months, in the winter and spring 1795, she returned again to her relations, where she continued several years without suffering much from phtisical complaints, though her constitution remained infirm, and her complexion was pale and fallow. About two years ago she married, and now resides in a distant county, where she enjoys better health, and is become a mother. I have been told by a medical acquaintance, that an apothecary's wife was several times snatched from impending consumption, by removing from Lynn Regis to Wisbeach. Her relief was so striking and immediate, that before she had travelled three miles, she always found herself better, and in a few days her pectoral disorder entirely left her. Sensible of the great benefit she received from *this particular change* of air, she had recourse to it, whenever assailed by her phtisical symptoms.

Should my opinion be confirmed, that idiopathic consumption is a very uncommon disease in our fens and marshes, it will be a matter of great consequence to investigate the cause of this exemption, and determine how far it ought to be imputed to the atmosphere alone, or to it in conjunction with other powers. It is a subject of vast importance, and will, I hope, receive the attention that it deserves. For my own part, I shall be thankful for every communication, which has any tendency to confirm or overturn the theory that I have proposed, as it is my intention, at some future period, to enter more fully upon the inquiry.

Permit me, before I conclude this Address, to congratulate you upon the repeal of the Income Tax, a tax which however necessary, certainly pressed more upon medical men than many other classes of the community. Inconsiderate people may imagine, that in contributing for our professional receipts, we paid for no more than our profits and gains. A little reflexion will satisfy the candid and unprejudiced, that of late years, especially horses and servants, independent of the taxes upon them, could not be maintained for a trifling sum; and yet it is impossible to conduct a very moderate business in many situations without them. These, with other miscellaneous expences, when added together, amount annually to no small sum, and are so unavoidably connected with medical practice, that without incurring them, the emoluments could not have been at all obtained. Their previous subtraction was therefore absolutely necessary

to bring the receipts themselves under the denomination of profits and gains.

Income, in its usual acceptation, is a loose and vague term; it applies equally to gross receipts and to net produce: But when the Legislature had limited it to be synonymous with profits and gains, it became as clear and precise as any other word in the English language. By such a definition, it was restricted in the act, as I conceive, to mean only net produce, or the sum that remains to professional men, after their necessary and unavoidable expences had been previously subtracted.

In addition to these I might state, that the Faculty are exposed to so many casualties which do not affect other employments, that no receipts are more precarious than ours, or require to be estimated with more delicacy. A fit of sickness, to which, in the exercise of our profession, we are peculiarly exposed; any accident that produces confinement, or the unexpected termination of some particular case, are each of them sufficient to curtail the emoluments of the most able and popular practitioner.

Any observations upon a repealed act of parliament may be esteemed superfluous and irrevelant; but as there is reason to believe that a tax upon income will at some time be among the resources for a new war, I thought a few remarks upon the late bill might not be inapplicable to the present occasion, or foreign to the business of this day.

I have thus delivered to you my sentiments without any reserve. I had likewise intended at this meeting to offer some remarks about calculous and intermittent disorders. These, however, I am obliged to defer till another opportunity; and in the mean time I shall be happy to receive any communications about them, or the other subjects concerning which I have presumed to address you.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

WHEN I had the pleasure to transmit to you the Report of Mrs. Haslewood's case, I could not suspect that any part of my Paper would excite displeasure in the mind of any party concerned; but Mr. Congreve deemed himself injured by a passage that he thought admitted of an invidious interpretation; it is as follows: "About a week after, on the annual change of parish officers