think any school of doctors ever proclaimed it; if they did, they would be allopaths.

But a notorious person named Hahnemann, taking advantage of the fact that doctors, who proceed according to common sense, do not save everybody from dying, rose against common sense, and said like cures like—*similia similibus curantur*. Then was seen how unhappy it is that this idea of like is left at school in such undiscipline; for a whole crowd, ready for something new, go after him, not knowing how to deal with so manifold a thing as likeness, and not caring what it means. But if you examine the proposition "likes cures like", you see its puerility, so far as it has any apprehensible meaning. We have seen that likeness is identity so far as the word has any force. It is practical identity of quantity, if quantity is being considered; of colour, if colour is being considered; and so on. Thus Hahnemann's proposition, so far as it has any accurate or apprehensible meaning, is that identical things have opposite results; nothing being said about the fulcrum which alone could make the arrangement rationally possible.

But it may be said that the cure and the disease are not really alike, but only appear alike. Then the proposition has to be changed to—apparently similar things cure each other. That assumes that things are made to have likenesses the opposite of their real natures; and a proposition of that kind is in every way too empty to be further noticed. Hence we may dismiss homœopathy from consideration, especially as the practice of its professors really no longer differs from that of doctors who do not adopt its absurdities. Indeed, the system is well known to have degenerated into a means of attracting the notice of the public by means of globule-boxes and tinctures.

It is worth while to thus consider these coarse examples of deductive systems of therapeutics, not on account of their worth, but because you will find that all deductive systems of medical therapeutics, even when far less pretentious and vain than homœopathy, are really irrational, if less flagrantly so. And I could, if I had time, show you that it is by the forcing of puerile and crude deductions that all rational schools arise in medicine. Such schools are nothing more respectable than boyish notions of quantity and likeness, etc., brought by weak men into complex realities to which they are wholly inapplicable; so that at best such systems are as though children should be taught to play about with poisons at the tables where confiding guests are accustomed to seek refreshment.

What you want in the practice of medicine, is a close and well-trained observation of the descriptive nature of the kinds of diseases, and of the effects of drugs on them. You must know these well, or you ought not to have an easy conscience. You must be able to recognise the several kinds of disease, and to use the remedies that are best for each kind. Mistrust plans of treatment, in proportion as the reasonings they are founded on are deduced from abstract considerations. Beware of the reasonings in medical therapeutics. I shall have to show you that there is scarcely an exception in medicine to this rule, that all deduced general plans of treatment have been pernicious; that deductive reasoning has been the curse of medicine—I mean of patients. Those who have well observed the results that actually follow, when remedies are used under well-recognised conditions, are the real benefactors of the sick. A steady process of induction is what we want; induction, often in its humblest degree, which shall often give a scarcely communicable experience to guide the watchful physician. Such inductions as that quinine cures ague, iodide of potassium cures tertiary syphilis, tarry preparations cure scaly eruptions, are the best stock of even nineteenth century medicine; and, however mean in the scale of mental performances, are of priceless value in the shivers of intermittent fever, the tortures of cranial syphilis, and the itch of psoriasis, with which you have to do. Such inductions are commonly in harmony with the teachings of physiology; but I advise you to hold them a good deal distinct from those teachings, and do not be too ready to allow them to rest, even in appearance, on those teachings.

In what I have to say on the several drugs, I shall follow the order of the therapeutic divisions in Dr. Garrod's work, which I recommend to you. We shall have an opportunity of noticing, in succession, the sorts of actions on the human body which the various drugs possess. My object will be to introduce to your notice each medicine in the position it has in such a therapeutical scale. Very often you will find that a medicine has several uses, and in giving the notice of the history of each, I shall take all its important powers into consideration; but I shall try to bring the several medicines into that part of the scale of which they are most typical and proper representatives.

MAD DOGS.—Lord Leigh has drawn the attention of the magistracy of Oxford to the prevalence and extension of canine madness, and has called upon the justices to take prompt steps for arresting the progress of the malady.

CLINICAL LECTURES ON MENTAL AND CEREBRAL DISEASES.

By J. CRICHTON BROWNE, M.D., F.R.S.E.,
Medical Director, West Riding Asylum; and Lecturer on Mental Diseases to the
Leeds School of Medicine.

V.—SENILE DEMENTIA. (Concluded.)

IN contrast with the cases just described, I should like to quote one of recurrent mania, occurring in an aged person. I have already told you that mania affecting an aged person is in all respects distinct from senile dementia with excitement; and morbid anatomy bears out that statement. Bridget W., aged 81, was an inmate of this Asylum for eighteen months, and died on August 22nd, 1872. Up to the time of her death, she was intelligent and acute, and gained a kind of notoriety in the ward which she inhabited by her sallies of Irish humour. She suffered from occasional attacks of maniacal excitement, in which she was restless, talkative, very abusive, and violent if thwarted in any way. But throughout these attacks she talked coherently, if foolishly, and rationally, if not reasonably; while in the intervals between them her memory was clear and tenacious and her judgment sound. She became affected by caries of the bones of the right foot, and sank exhausted during a cyclone of excitement. At the *post mortem* examination, the skull was found to be of average thickness and fairly symmetrical, but all the bones entering into its constitution were of a reddish colour. The dura mater was strongly attached to the frontal bone, and the grooves for the middle meningeal arteries were unusually deep. The whole brain weighed forty ounces, and there was no excess of serum. There was no thickening nor opacity of the arachnoid membrane, but a certain amount of fine injection of the pia mater was visible. There was no wasting of the convolutions, and the grey matter was of average thickness. The fornix was somewhat softened, but that was probably a *post mortem* change. The cerebral ganglia were plump, and, like the cerebral substance generally, of firm consistence.

Now, in the brain last described, there was an absence of those appearances that correspond with senile dementia, and that are indeed characteristic of atrophy; for cerebral agenesis or wasting, whether due to simple impairment of the nutrient activity of the tissues, or to diminished supplies of nutrient material dependent upon vascular degeneration, is the true anatomical basis of the fatuity of old age.

The coarse changes in the brain discernible with the naked eye correspond with more intimate alterations in its structure. The microscope reveals these, and shows degeneration and softening. The cells of the grey matter are comparatively few in number and small in size, as if shrunken; or, on the other hand, they contain molecular fat and pigment. In prepared specimens, the cells are pale and but faintly stained with carmine, while the nuclei are distinct and deeply coloured, or they are swollen and deformed, their nuclei being displaced and their branches wanting. In an advanced stage of the disease, aggregations of granules remain as the *debris* of distinct cells. The vessels traversing the grey matter are studded with fatty granules and large compound corpuscles, and the neuroglia pervading it also shares in the fatty change. The fibres of the medullary substance also undergo some degree of fatty metamorphosis. Nerve-tissue, whenever its function is abolished, tends to undergo fatty degeneration. The extremity of a nerve severed from its trunk, and from communication with its centre, is rapidly converted into a conglomeration of oil-globules; and the brain that is cut off from its accustomed activity tends to undergo a like change.

It is particularly in connection with this form of mental disease that questions as to the validity of wills arise; and some of you may find yourselves called upon hereafter to pronounce upon the competency of an aged and infirm patient to dispose of his property, or to give evidence as to his mental state at a time when he signed a testamentary document. A large proportion of wills are made by aged people, and the reasons for that are obvious. The fruits of industry and frugality are reaped towards the close of life; and property has a natural affinity for grey hairs, and perhaps lends them some of their venerableness. Slightly altering Goldsmith, we might say that "wealth accumulates when men decay". Then, many persons have an almost insurmountable objection to make a will of any kind until death is actually staring them in the face. The act is, in however remote a degree, a confession of mortality and a preparation for the tomb, against which their whole soul revolts. You, being young men, can scarcely perhaps realise how strong this prejudice is. I have in my recollection a lady, now seventy years of age, and very intelligent, who cannot be persuaded by her

friends or men of business to give any written instructions as to the disposition of the large means which she possesses, and which, in the event of her death, would pass to the heir-at-law, against whom she entertains the bitterest enmity, away from some near relatives to whom she is tenderly attached. She knows all this; and, when spoken to on the subject, simply excuses herself by saying that she could never feel happy with a will in her wardrobe, or even in her lawyer's safe. She promises faithfully, however, to make a will in her last illness. Now, if that last illness should be delayed until this old lady reaches a state of dotage, it is not improbable that any will then executed will be disputed. Thus it is, at any rate in many cases, that, by a foolish postponement of a duty from the days of strength to those of weakness, intentions are frustrated and lawsuits encouraged.

When you are required to give evidence, at the trial of a probate issue, as to the mental condition of a testator whose will is disputed, you have only to describe what you observed in clear language, as free as possible from technical terms. The decision as to the capacity of the testator to make a will rests with the jury. But when you are required to examine a patient, and to say whether he is in a fit state to make a will, the decision as to his capacity in a manner rests with you. A grave responsibility devolves upon you. You have to anticipate the functions of the courts of law; and it is well, therefore, that, being liable to such duties, you should know something of legal rulings in as far as these affect the validity of wills. Under such circumstances, you have nothing to do with medical or scientific standards of mental unsoundness; you have to view the case from the legal stand-point, and to make your advice conform to the decision of the courts, which, notwithstanding the abuse which it is fashionable for some members of our profession to heap upon them, are generally in harmony with common sense.

Now, first of all, I need scarcely tell you, that the mere natural infirmity of old age does not in itself disqualify for will-making. Second childishness does not imply a second period of minority or nonage. The mind may be debilitated, the memory enfeebled, the senses weakened, and yet, if sufficient intelligence and discernment to appreciate the character and consequences of the testamentary act be retained, the power to dispose of property by will remains. The faculties of the mind may be greatly obscured by the advance of life without being unsound in such a sense as to establish legal incompetency, for the law jealously and judiciously guards the rights of declining years. Old age would, in many instances, be indeed forlorn, even in civilised communities, were it not that a control over the disposition of property is preserved after other attractive qualities have been lost. But, notwithstanding the liberal construction thus put upon patriarchal privileges, there is a point at which they cease to exist, by reason of defect of intellect. There comes a time in dotage when mental power has reached so low an ebb, that it would be dangerous to all concerned to allow the exercise of rights involving important interests. That time, the law says, has arrived, when a man cannot understand the character and effect of his actions, or appreciate his relations to the natural objects of his bounty. Not until mental infirmity has gone to this extent, can a man be deprived of his power to distribute his means as he may think best. So long, then, as a testator has an ordinary knowledge of the nature and amount of the property which he possesses, and a full and intelligent consciousness of the nature and consequences of the proceedings in which he is engaged, and feelings towards those persons or objects who are to participate in his benefits, or to be excluded from them, unbiassed by diseased ideas or beliefs, he may be declared to be of a sound and disposing mind, memory, and understanding.

In seeking, in any case of senile dementia, to determine whether the legal limit of competency has been attained, you will not, of course, be content with questions bearing merely upon ordinary and indifferent topics, or upon the health and immediate wants of your patient, as a conversation upon such subjects may be maintained creditably by a mind which is really much crippled. Having possessed yourself of some preliminary information, you will, during your interview with your patient, first observe whether he can apprehend what is said to him, and whether he can fix his attention so as to return a rational reply. You will next test his memory, both as to recent and remote events, and especially as to his power of embracing the proper objects of his bounty and the means at his disposal. You will next ascertain whether he realises the plain and simple results of any disposition of his property which he may have in contemplation; and you will then probe for delusions—embodying exaggerated notions of his own rank, wealth, or importance, suspicions of the motives and practices of others, or ideas as to supernatural agencies operating upon him or communicating with him. But even if, in this exploration, you should discover delusions in the mind, you must not think that you have thereby established its incapacity. No doubt, the presence of any delusion in a mind creates a presumption against its testamentary

capacity; but that will not be legally established until it can be shown that the delusion in some way influenced the testamentary disposition. Dr. Johnson, and many other great and sensible men, laboured under single delusions or hallucinations, which, however, never modified their conduct; and surely the existence of these ought not to have reduced them to a state of legal infancy. If, however, it can be demonstrated that even a single delusion or hallucination restricts the exercise of the faculties, interferes with discrimination or prejudices, either by enhancing or depreciating the claims of natural affection and relationship, then it is fatal to the power of making a will.

Further than this, you will endeavour to satisfy yourself that the will is free in its action, and not the slave of recent impressions made upon the mind. In some aged persons, a sense of helplessness and dependence eventuates in a paralysis of volition, so that they cannot choose for themselves, but seize upon any suggestions that may be offered by those who are in attendance upon them, and at whose mercy they perhaps believe themselves to be.

I shall give you a few practical directions as to the conditions under which a patient ought to be declared incapable of making a will; and, whenever you come upon a case not covered by any of these exclusive clauses, then, I think, you may safely sanction the execution of one.

When the memory is so much impaired that the amount of property possessed, and the names, relationship, and claims of those who might be expected to benefit by a testamentary disposition cannot be recalled, then a patient ought to be declared incapable of making a will. It is clear that the mind, in order that it may act with reasonable freedom and justice, ought to be fully informed as to the matter with which it is dealing, and ought to be able to submit itself to those sentiments of regard, or gratitude, or respect, by which sane men are influenced in providing for the distribution of their property. And it is clear that the mind cannot be so informed unless the memory be adequate to the slight exertion of recalling facts, which are of primary interest and importance to every man, which are the most easily recollected, and which are among the last to fade from a failing memory. The inability to recall such facts must of course depend upon a real and persistent weakening of the memory, and not upon any transient embarrassment, agitation, drowsiness, or other temporary cause, in order to amount to a permanent disqualification for making a will.

When the apprehension and judgment are so much deteriorated that no clear or consistent conception can be formed of the objects and purposes which are to be held in view, or of the methods by which these are to be attained, then the patient ought to be declared incapable of making a will. Of course, it is not requisite that a testator should comprehend the legal bearings of a will, or all its complicated provisions. It is essential, however, that he should appreciate the simple elements of which it is composed; and if he neither know what he desires to do with his property, nor how to do it, then his mind is a blank, and is not in a sound or disposing condition. It has been held that less apprehension and judgment go to the making of a will than to the making of a contract, because in the latter the antagonism of interests is likely to bewilder and mislead; whereas, in the former, the mind is left to its own impulse, and is engaged in a subject which may have occupied the thoughts many times previously. To me it seems that this is a hazardous and erroneous distinction, as a weak mind will often act with greater energy and accuracy when stimulated by antagonism of any kind than when left to drift on its own course, and as making a bargain or contract is a much more familiar operation to most minds, and less disturbing than making a will. The balancing of interests, the just recognition of contending claims, the providing for contingencies involved in will-making, require, in my opinion, more delicacy and force in apprehension and judgment than most contracts.

When speech is so incoherent as to convey no rational meaning, the patient ought to be declared incapable of making a will, as no trustworthy expression of his wishes can then be obtained. Although, under such circumstances, intelligible sentences may now and again be uttered, and although assent or disapproval of any suggestion offered may be emphatically expressed, so that a scheme for the distribution of property might thus be elicited from the patient, it would be obviously unfair to allow any force to instructions obtained in such a manner, even should these instructions be in accord with the testator's deliberate and long cherished intentions. Incoherent and unconnected conversation is a sure criterion of mental incapacity.

When the perception of the identity of surrounding persons is interfered with, so that one person is mistaken for another, then the patient ought to be declared incapable of making a will, as it is clear that a confusion of thought of this description must fatally prejudice the information by which rational action is determined, and must peculiarly expose the person labouring under it to be influenced by attempts to coerce or deceive him. The existence of this loss of the power of recognition must,

of course, be proved by adequate evidence and repeated tests, and must not be inferred from the mere accidental misapplication of a name, or from the forgetfulness of a comparative stranger, or from any blunder arising out of impaired sight or hearing. It is when relations and familiar friends are not properly distinguished from each other, or when the dead and the absent are confounded with the living and the present, that incapacity may be alleged.

When delusions which pass through the mind are multifarious and varied, and not of one species and constant, then the patient ought to be declared incapable of making a will. For multifarious and varied delusions, which are connected with the diverse relations of life, and which succeed each other in incongruous groups, invariably betoken a general subversion of the mind, and a rapid disintegration of the brain.

Unlike delusions which are of one class or kind, and constitute a monomania, they overthrow the whole mental fabric, and obviously unfit those who suffer from them for the performance of any legal act. Of delusions of such a nature, it is, of course, impossible to predicate what course they may pursue, or what transformations they may undergo; so that, although at one time they may leave untouched the knowledge of worldly affairs and the family affections, at another time they may link themselves with these, and disturb and stultify their operations.

When delusions, although of one class and confined to one department of thought, are rooted in a feeling of general suspicion, and refer to plots and conspiracies against the life and happiness of their victim, then the patient ought to be declared incapable of making a will. Nothing as certainly corrupts the judgment and perverts the sentiments as morbid suspicion. The man who is living in fear of a violent or insidious death because every man's hand is against him, or who feels satisfied that he is the object of machinations and persecutions of a world-wide character, or who believes that he is cheated and defrauded on all hands, cannot be expected to bring a well balanced understanding to the arrangement of his affairs. Either he is morbidly prejudiced against certain persons whom he imagines to be opposed to him, or he is extravagantly grateful to other persons from whom he fancies that he has received protection. In all cases of this kind, the man's relations and most intimate friends are mixed up with these delusions, and in all his equanimity and power of calmly contemplating his own circumstances are compromised. Where general suspicions exist, it is not necessary, as in cases of isolated suspicions, to endeavour to ascertain whether there is any reasonable, though insufficient, ground for the suspicious ideas. Their universality proves that they do not result from prejudice or defective reasoning, but from a diseased state of the mind. Now, it is into delusions of general suspicion that the querulousness of old age tends to gravitate as the powers of mind fail; and hence the importance of studying the disabling effects of these delusions, and of bearing in mind that they inevitably vitiate any will made under their influence.

When a delusion—although single and isolated, and leaving general intelligence and business aptitude little, if at all, impaired, but connected in some way with some one who, in the ordinary course of events, would be interested in a testamentary disposition—exists in the mind, then the patient ought to be pronounced incapable of making a will. This is so, altogether irrespectively of the complexion of the delusion; for a father might be led to act with injustice whether he believed that his son had attempted to poison him, or that he was the chosen of God and the Saviour of mankind. In the one case he might unduly impoverish, and in the other unduly enrich him. Of course, I presume that, in cases of this kind, you take sufficient pains to satisfy yourselves of the really delusional character of the supposed delusion. You must see that the apparently preposterous statement has no real foundation in fact, or is not merely an extravagant way of putting a genuine experience. Some delusions are visibly stamped as such, but others are less easily distinguished from *bonâ fide* and reasonable beliefs. I have heard a testy old gentleman speak of his son as a conspirator and thief, and thought him deluded, until I discovered that he had good grounds for the allegation; and I recollect once recording that an aged coachman had the delusion that he had driven an unicorn, and being much surprised when Dr. Bucknill explained to me that the patient was quite correct, and had frequently driven unicorn to his knowledge.

Now these are the conditions under which, according to my interpretation of the law, it would be imprudent to approve of the execution of a will by any patient about whose testamentary capacity you may be consulted. In the absence of all these conditions, I should see no obstacle to the making of a will, and should fear no impugment of its validity. If you have once decided that a sufferer from senile dementia is unfit to make a will, the question need not come up for consideration again in the same case, as in that form of mental disease lucid intervals do not occur. Fluctuations in the degree of mental obscurity, or in the accompanying excitement, may be observed, but not real lucid intervals. Remissions take place, but not intermissions. The disease is chronic,

habitual, and irremediable, and not acute, temporary, or curable; so that a right use of the faculties and a disposing mind cannot be recovered by those afflicted by it. The changes in the brain, upon which it is dependent, are organic, and not functional.

One other hint let me give you before quitting the legal relations of senile dementia; and that must be especially addressed to any of you who may think of entering my own specialty. I would advise you, as far as possible, to avoid becoming experts in cases in which the validity of a will is disputed on the ground of mental aberration. The position of an expert, always a difficult and invidious one, is particularly disagreeable in such cases. He is regarded as a fantastic theorist, an intolerable dogmatist, or an amiable nincompoop. No matter how comprehensive his judgment, or how sound his conclusions may be, he is discredited and looked at askance. The impression is, that he is placed in the witness-box to dictate to the learned judge and highly intelligent jury; and the wisdom of Solomon would avail him nothing under such circumstances. True, the conflict of experts, the cross-swearing in which they have been wont to indulge, and the tone of advocacy which some of them have assumed, have contributed to this result; but, above and beyond all that, they are a suspected and proscribed class.

We come next to treatment; and respecting that not much need be said. We cannot arrest the course of nature, nor restore the vigour of youth, nor make the shrivelled brain plump again. When the journey is nearly over, and the final descent is begun, all that we can do is to put the drag on and retard the progress downhill, while we avoid certain points of danger by the way. This may be done better by feeding than by pharmacy. A liberal allowance of nourishment, in such a shape that it will be readily masticated and assimilated, ought to be administered at regular intervals, both by day and night. The quality of the food offered must be determined by a regard to the tastes of the patient, to the amount of exercise which he is able to take, and to the state of his digestion. Stimulants are almost invariably requisite. A little negus or hot brandy and water in the evening will often secure sleep to a restless and excited patient; and wine or beer during the day will support strength and prolong life. Alcohol, in some form, is needful in senile dementia; and you may prescribe it, under these circumstances, without feeling alarmed lest your patient should contract habits of drinking, and date his moral ruin from the doctor's directions. Especially when restlessness and excitement are present is alcohol demanded. You saw a garrulous and riotous old man in No. 4 Ward lately, who was silenced and subsidised instantly by two pints of porter *per diem*. Whether the beneficial effects of alcohol on senile dementia are due to a check imposed upon excessive tissue-changes, or upon disintegration of blood-corpuscles, or to a hardening of the vascular walls, cannot at present be determined; but there can be no doubt that they are often shown forth in the most striking manner.

Then, besides attending to the feeding of patients who are afflicted by senile dementia, see that they are kept warm. Old age is chill and frosty. The faculty of producing animal heat is diminished; external cold has a special tendency to cause the heart to beat more slowly, so artificial warmth must be provided. Those patients who are apt to get out of bed during the night should be clothed in flannel suits, and should be placed in rooms which are supplied with hot air. By such means, you conduce to tranquillity, because you insure physical comfort; and you sustain the functions of the skin, and ward off those internal congestions and lung-affections—such as bronchitis and peripneumonia *notha*—by which senile dementia is so often cut short.

In the next place, it is desirable to see that your patients have exercise, bodily and mental, in proportion to their strength. The functions of life dwindle away all the more rapidly when they are never called into requisition; and the old man who is left in an arm-chair, inert and useless, who is never disturbed by conversation, nor roused by new impressions, will dose off more rapidly than another old man, who is made to walk out, who is induced to occupy himself in some way, were it only in knitting stockings, who is encouraged to repeat his old stories, and who is bothered by his grandchildren. Exercise, short of fatigue, is an excellent antiseptic in the decay of age.

As to drugs, there are some which supply the elements of brain-nutrition in a convenient form; these are cod-liver oil and some preparations containing phosphorus, particularly the hypophosphite of soda. I believe I have seen these, when perseveringly employed, stave off sheer oblivion. Then, when there is prostration or debility, the carbonate of ammonia is a most valuable remedy. It is rapidly diffused, stimulates the brain, just to an adequate degree increases the force of the heart and pulse, braces up relaxed mucous membranes, and creates a feeling of agreeable warmth. You will have noticed that I very often prescribe it in combination with calumba in cases of senile dementia. The calumba is added as a mild tonic, to increase appetite and improve digestion.

Where there is much mental excitement, which does not yield to

nourishment or stimulants, you will have to seek medicinal means of subduing it, as such excitement soon ends in irremediable exhaustion. Opium, however, must not be included amongst these means. Its action is always ambiguous in old age, and in senile dementia those degenerative changes in the vessels, which are so frequently present, contraindicate its use. Even where the vessels are sound it may be hurtful, by strengthening the tendency to that vague drowsiness which is apt to lapse into coma, with effusion of serum, or by disordering the functions of the *prima viæ*. I should say that it is almost always contraindicated in senile dementia. A less dangerous sedative is found in hyoscyamus, which will generally secure repose in such cases, without doing damage in any other direction. I can attest its value, from long experience of it in senile dementia. Beginning with a drachm dose of the tincture, or succus, we increase the amount, until its soothing influence is manifested, and rarely require to exceed half an ounce as a dose. If hyoscyamus fail, cannabis Indica may be tried, with great caution. Chloral, as you know, I do not employ in such cases. When the excitement coexists, with a copious excretion of lithates from the kidneys, it may sometimes be mitigated by the administration of alkalies.

If muscular trembling be excessive, conium in large doses (from two to four drachms) of the succus will probably prove a palliative. Carbonate of iron or spirit of turpentine often also affords some relief.

ADDRESS ON THE PROGRESS OF MEDICINE.*

By JOHN RICHARD WARDELL, M.D., F.R.C.P.,

Physician to the Tunbridge Wells Infirmary.

[Concluded from page 605 of last number.]

No class of diseases is more familiarly, more thoroughly, known, than diseases of the chest. The great work of Laennec inaugurated a new era in thoracic pathology. It conferred a positiveness in diagnosis which can scarcely in such full measure be said to obtain in judging of any other order of ailments. Nor can it be held, though multitudes of observers have availed themselves of Laennec's discovery, that much of real practical significance has been done beyond what he accomplished. Prior to the recognition of the physical signs, capillary bronchitis and pulmonary collapse could not be distinguished from pneumonia; cardiac diseases were vaguely referred to ossification; effusions could only be decided upon by the Hippocratic symptom of succussion; and aneurisms could alone be guessed at by the more general and objective symptoms. The extent and degree of pneumonia can now be decided upon with not a little of certainty; and its treatment is more successful from a more rational pathology. Those intercurrent forms which constitute episodes in the graver epic of a wider lying general or constitutional malady, and with which frequently the pleura becomes locally implicated, can now be detected with much niceness and precision. Accumulated facts have made knowledge which has ceased to be contested. Pericarditis and endocarditis, we believe, never occur but in rheumatism; fibrin on the margins of the valves is looked upon as a deposit, and not an inflammatory exudate, on the valves themselves; hypertrophy now means cerebral or other hæmorrhages, rather than direct injurious influence on the action of the heart itself; extensive binding down of the lung to the costal wall, it is now allowed, may be compatible with lengthened life, and almost with health; and morbid anatomists now admit that considerable pericardial adhesion may evenuate with comparative recovery. The stethoscope has placed the modern physician on a vantage-ground which could in no wise have been hoped for by the older practitioners. They had not the means of arriving at any correctness in judging of the morbid changes within the thoracic walls. Thirty years ago, the average duration of phthisis was about two years. Under improved treatment, it is now estimated at four years. It has also been conceded that, in some cases, the disease admits of positive cure. Though such instances are exceptional, still they are sufficient to inspire us with the hope that with the progressive increase of our knowledge will come greater and greater success in this direction of our endeavours. *Post mortem* researches teach us that pulmonary cavities, even of considerable dimensions, may contract and heal up, and absolute recovery be the result; indeed, it may be added that such obliteration of these excavations are more usual than in former years was supposed. Our definition of the pathology of phthisis is more exact and defined. We now talk of fibrosis of the lung, a degenerative deposit which bears much resemblance to the amyloid substance; of embolic phthisis, in which are cheesy deposits and disintegrated blood-clots; of bronchial and pneumonic phthisis, characterised by cheesy matter and ulceration of the bronchi, or with exudation into the pulmonary tissue;

and of syphilitic phthisis, with gummata allied with the cheesy product. These pathologic distinctions in the description of phthisis render its treatment more successful. The late animated and diffuse debates on tuberculosis have, with other elucidations of its nature, clearly shown the infectious properties of phthisical inflammation. It is now believed by Niemeyer and others that phthisis may follow hæmoptysis without genetic connection between the hæmorrhage and the pneumonic process; and that blood retained in the alveoli gives rise to inflammatory products, which undergo the cheesy change, and that such metamorphosis is followed by tubercle. Grey and yellow tubercles are now shown as being identical; and an intermittent pyrexia or chronic phthisis has latterly been looked upon to denote the absorption of caseous matter. Such are some of our advances relative to this common and justly dreaded disease. The alternation with, or vicarious occurrence of, bronchitis in gout, is an important practical advance; and in bronchitic asthma we are more clearly impressed with the implication of the ganglia and the influence of the vaso-motor function. Pleurisy of the idiopathic or primary character is now considered to be far more rare than was formerly supposed; indeed, if we exclude mechanical and physiological causes, primary pleurisy is exceedingly rare. The types of this disease which we so commonly see are rather the complications or sequential conditions of some foregoing visceral affection, or some constitutional malady which has already produced an impress upon the organism. We contemplate its presence very much in the same way as we contemplate the presence of pneumonia, and we try to discover the indications of some antecedent vice in the system. We more greatly suspect its insidious character; we are aware of its not infrequent association with pyæmic infection, with pulmonary phthisis, with the various forms of renal disease; and in all cases of pneumonia there is, perhaps, a greater or less degree of pleuritic inflammation of the fibrinogenic type. The competent manner in which we can now diagnose fluid in the cavity of the chest, and elect between trusting to absorption and having recourse to thoracentesis, ranks amongst the greatest improvements in modern medicine. This operation is shown to be followed with as little danger as blood-letting. By its timely adoption, as compared with the non-instrumental interference, and the vacillating practice of the past, a large number of lives are now saved. The morbid anatomy of pleuritis with effusion, as well as clinical history, have established the axiomatic rule, that paracentesis thoracis should be had recourse to early, and before the pyogenic membranes become organised, and the lung-substance is bound down and compressed beyond the powers of expansion. The discovery of albuminous expectoration following thoracentesis, made by M. Pinault, and which last year was importantly brought forward at the Academy of Medicine in Paris, as illustrated by the cases narrated by MM. d'Espine, Woillez, Marrotte, Behier, and Terrillon, is a curious addition to pathological acquirements.

Though diagnosis is less certain in lesions of the abdomen than in the chest, still the knowledge of abdominal diseases has been most progressive. The viscera in this cavity being from numerous causes subject to great variation in size, configuration, and position, much difficulty will always be experienced in correctly comprehending the particular maladies which are there to be found. It is now affirmed that no parts in the body have such immunity from disease as the jejunum and the valvulæ conniventes. We have more trustworthy guides for observation on deciding between simple and malignant disease of the stomach. We maintain that acute idiopathic gastritis does not occur in this as it is said to occur in tropical countries. The discovery of sarcinæ ventriculi led to the cure of a tiresome stomach complaint. We know that the sulphites of potash and soda destroy these fungi, as certainly as the sulphites and sulphurous acids destroy these vegetable parasites in the skin. Between torpor of the colon and melancholic depression there is intimate relation. Ulceration of the ileum is never seen in any acute disease except in enteric fever. Ulcerations in the lower third occur in chronic phthisis, but they differ not only in their pathologic characteristics, but in their relation to the axis of the bowel. Cancer we know to be far less frequent in the ileum than in the colon; and if the pylorus be excepted, it is more prone to be located at the sigmoid flexure than at any other part of the digestive tube. Perforation of the intestinal serous covering is most rare, except in enteric fever. Respecting our recent knowledge of the liver, many facts have been accumulated. It has been ascertained that the hepatic cells perform the function of secreting from the blood a substance named glycogen, which is rapidly transformed into glucose or animal starch; and that this principle is carried into the heart, thence to be oxidised in the respiratory process and evolve animal heat. This glycogenic function is a physiological fact, of much significance in a practical point of view. In acute or yellow atrophy, it has been discovered that the urine exhibits remarkable changes, as there may be the total disappearance of urea, uric acid, the chlorides, sulphates and phosphates; and these are replaced by the fibro-albuminous pro-

* Read before the East Sussex and West Kent District Branches.