coveries to which I have alluded, and all their bearings on the relief of human suffering, been but for the frog? Now we have recourse to the merciful anaesthetics; and I trust none of our researches will be made but under their influence, and even then no vivisection should be done except for the establishment of facts, and not for the mere curiosity of ourselves in verifying what others have well established.

Few subjects have undergone greater modification than the treatment of stone. The late Mr. Cornelius Tripe, to whom I was bound, was singularly successful, and I saw him operate several times. When I look at the small, handy, exquisitely made lithotrite of the present time, I smile to think of the apparatus of Baron Heurteloup, who came to exhibit it to us at Guy's Hospital. A heavy table, with all sorts of straps, kept the patient immovable. Some sort of instrument was passed into the bladder to secure the stone, and then screwed into a vice; lastly, the stone was attacked with a hammer and steel rod. I cannot remember how successful the operation was, nor did I see more than one performance.

Certainly wonderful progress has been made in the general treatment of women. In my early recollections there occur to me a very large number of cases in which young women were consigned to the supine position for indefinite periods, sometimes extending over years, under the impression that they had spine-disease. You seldom find the spinal column of a young girl absolutely perpendicular; and the practice was, if the slightest curvature were observed, or if any tenderness were produced by passing the finger over her spinous processes, down she went on her back, or an inclined plane. No doubt most of these cases were uterine or hysterical, or both. The effects of uterine displacement in unmarried young women are fully recognised now. We ourselves have known most serious loss of power in the lower extremities result from this cause, which disappeared entirely when the uterus was rectified. But I am inclined to suspect the existence of a *nimia diligentia medicandi* in these displacement cases. This, perhaps, applies more especially to the specialists of the metropolis than to us provincial surgeons. Of course, devoting their whole attention to these cases, they obtain a singular facility in discovering them. I wish I could congratulate them and ourselves on greater success in curing them. I find a large number of patients returning little the better for their sojourn in the metropolis.

I was for a short time clinical clerk to Dr. Bright while he was investigating that class of diseases which bears his name. I have no doubt that subsequently he became aware of the microscopic anatomy of the kidney, as demonstrated by Todd and Bowman; but at the time of which I speak of, the search was for *fat*. We used to soak the specimen in alcohol or ether, and fry it, to estimate as nearly as possible the amount of oily matter. It was reserved for my friend Dr. G. Johnson to point out definitely the relations existing between the tubular structure of the kidney, the functions of the Malpighian bodies, and the various forms of cast which we find in the urine of those suffering from any form of albuminuria. I regard his work unrivalled as a monograph, and a fine specimen of inductive conclusions.

Mr. Swain then briefly referred to the plan of enucleating a fibroid from the substance of the uterus, the great success of ovariectomy, and the value of the speculum vaginae. He said that, when in Italy last year, he saw in the National Museum at Naples, among the Pompeian relics, a three-valve speculum vaginae, which was made to expand by a rack and pinion movement.

The battle of the microscope was now being hotly waged over the bacteria, and no doubt the majority of the members present had read the discussion on the germ-theory at the Pathological Society. The presumed spontaneous generation was a very different matter now from what it was in Virgil's time, when bees were said to be produced from carcasses. Nor did it approach to the comparatively recent announcements of Mr. Crosse, that he had obtained fully developed acari from gelatinous silx, under the influence of electricity. The organisms under discussion were the most minute and simple beings in creation. He quite entertained the opinion that inorganic matter might be converted into protoplasm by the direct combined influences of the forces of nature.

In concluding, he said: When one turns from the known to the unknown, we enter into a transcendental region, where speculation is all we can indulge in, and where imagination imparts a somewhat poetic glamour to these atomic beings which are assembled together, and, under the reign of law, combine to make up ourselves. Their very smallness astonishes us; and it would seem the less they are in bulk the more remarkable is the power they exercise. Contemplate the protoplasm of the brain; the exquisite cells which Beale describes, with their delicate offshoots interlacing with one another, and which make up the grey matter of the cerebrum. What is their condition, when they despatch their behests along the nervous lines of communication too deli-

cate to be even compared with an electric wire? Still more subtle is the speculation as to their conduct when the will is at rest, but thought and imagination busy. Does every emotion wear away its parent? and is thought the result of some chemico-vital process? I fear no microscope can solve this problem. Again, think on the curious effects produced on the protoplasm by those diseases which leave behind them an immunity from future attacks. Nearly fifty years ago I had scarlatina: not one cell or particle of protoplasm which made me up then now remains; nothing but my identity, yet I am protected. All my life long each cell has been bequeathing my safety to its successor. Still more extraordinary are the circumstances connected with the reproduction of the species. Lionel Beale tells us that a single spermatozoon weighs as much only as the one-hundredth part of a red blood-corpuscle, and yet think of the force with which it is endowed. Within its infinitesimal limits it contains a power which can determine the external lineaments of the future man; cause him to be tall or short, black or white; confer beauty or deformity; nay, endue him with the highest intellect or make him a fool; determine whether he shall be a Borgias or a Howard. Queen Eleanor says to her youngest son, King John, speaking of the Bastard Faulconbridge:

"He hath a trick of Cœur de Lion's face;
The accent of his tongue affects him.
Do you not read some tokens of my son
In the large composition of this man?"

Considerations such as these, as Hamlet says, "must give us pause". They strike forcibly at the roots of our materialism; they refer to forces moved by such tiny agents that we hesitate to call them functions. No intellectual microscope can reach them; and we peer beyond in search of some ministering spiritual essence which plays upon them, possesses an independent existence, and will survive when all its tiny minious become "notes in the sunbeam".

THE RISE AND PROGRESS OF THE BRITISH MEDICAL ASSOCIATION.

Extract from an Address delivered at the Annual Meeting of the Lancashire and Cheshire Branch.

By T. DAVIES-COLLEY, M.D.,

Senior Physician to the Chester General Infirmary; President of the Branch.

IN taking the chair as your President, I feel bound to offer you my sincere thanks for the honour you have conferred upon me. It is no light task to preside over the deliberations of so large a number of my medical brethren as are included in the Lancashire and Cheshire Branch of the British Medical Association. I only hope that by your assistance I may be able to discharge the duties appertaining to my office satisfactorily.

When I became a member of the Association in 1840, at the annual meeting held in Liverpool, under the presidency of the late Dr. Jeffreys, a relative of mine, the Society had then been established a comparatively short time by Sir Charles Hastings. Of those who then attended from all parts of the country, and whose names have become a part of its medical history, I fear most have passed away, and I know of two only in Chester, besides myself, who survive. Previously to 1840, the Society had held several meetings at Worcester, Bath, Birmingham, Oxford, Cheltenham, and Manchester. It had secured to itself a very large amount of support, and had corresponding members connected with almost all the medical societies on the Continent. The name of the Provincial Medical and Surgical Association was given to it at first, and its members at the time named amounted to 1,180. It confined itself to the publication of an annual volume of *Transactions*, in which, among other papers, were to be found the results of inquiries specially instituted into the hygiene of different large districts of the country, the occurrences and causes of epidemics, the prevalence and practice of vaccination, and its success in warding off small-pox, and reports on efforts to reform abuses in the profession, whether arising in the corporate bodies granting degrees, or in the regulations affecting medical men in the army and navy, or in administering relief under the Poor-law. Who that has watched the gradual progress of this Association has not seen cause to admire the far-seeing sagacity of its founders and early friends, and also to value the important work it has accomplished?

It was early found necessary to substitute a weekly journal for the annual volume. This added greatly to the influence of the Society, forming as it did a bond of union for the increasing number of members, a means of circulating information on professional subjects, and an opportunity for advocating the interests of the profession, which was

greatly needed. For more than twenty-five years, this JOURNAL has continued the organ of our Association, and it has increased in value year by year, until, under the able management of its present editor, it has arrived at such a state of efficiency as may enable it to compare advantageously with the best medical journal of the day.

It became necessary, as the members of the Association increased in numbers and its area of operations extended, to substitute the name of British Medical Association for that of Provincial. Scotland and Ireland were included in its sphere of operations. Several of the annual meetings of the Association have taken place in distant parts of the country, and, as you are aware, the annual meeting of the Association this year will take place in Scotland. Recently, the Association has been incorporated, in compliance with the requirements of an Act of the legislature.

The influence for good that the British Medical Association is capable of effecting is very great, and it only remains for its constituents to act with unanimity, bringing their legitimate influence to bear upon the eradication of such abuses as are capable of being removed by the legislature, and advocating the cultivation of scientific medical inquiry for the good of the community and the credit of our noble profession.

For the third time, gentlemen, this Branch meets within the walls of this remarkable city. I need hardly say, on the part of the resident members, we welcome you heartily, and, were there time, we would gladly take you round and show you some of the many objects of interest to be found in the neighbourhood, and especially our hospital, founded in 1755, and to which has recently been added a supplementary building for the treatment of small-pox and other infectious diseases. But the long list of papers laid before the meeting will, I fear, prevent our having the pleasure indicated.

Dr. Davies-Colley then proceeded to give an historical sketch of Chester, principally with regard to medicine.

ON THE HISTORY OF BLEEDING, AND ITS DISUSE IN MODERN PRACTICE.

Extracts from an Address delivered at the Annual Meeting of the Bath and Bristol Branch.

By W. MICHELL CLARKE, M.R.C.S.Eng.,

Consulting Surgeon to the Bristol General Hospital; President of the Branch.

AFTER describing his experience of the mode of practice followed when he commenced the study of the medical profession as an apprentice, Mr. Clarke said: Since that time, the management of disease by the antiphlogistic treatment has been gradually and completely given up; and this, I think, is the greatest change that has been made. There have been many others; but this abandonment of the old heroic plans, and the substitution of a more careful following of natural processes, stands preeminent, and is so great that, as I said before, the whole condition of things is altogether so altered that it appears to be entirely new.

We are not likely to see so great a transformation again, and more particularly as to the complete way in which the principal item of the antiphlogistic class, viz., bleeding, has been given up. It would be difficult to overestimate the influence that bleeding has had upon medical practice, from a period almost beyond the beginning of the history of medicine, or how in a vast number of cases the chief point considered was whether the patient should be bled or not. No doubt, there have been great variations in the amount of bleeding done, and there have been opponents of the practice asserting that it was never necessary from the earliest times; but, on the whole, it has been the most important part of medical treatment from very early times.

It is not easy to trace the exact beginning, but it was in free use in the time of Hippocrates, from which it may be fairly inferred that it was introduced long before by the schools of the Asclepiadæ. The discovery of the probe and the employment of bandages for wounds is attributed to one of the three individuals who were distinguished by the name of Æsculapius; but there is no mention of the lancet at so early a period.

The practice of purging, too, is recorded of a time long before we have any mention of bleeding. Thus Melampus is said, long before the times of any of the Æsculapii, to have cured the daughters of Prætus king of Argos, by the free use of hellebore; and we have retained until modern times the name Melampodium. But no mention of bleeding is made so early, nor, indeed, until we find it used as an ordinary remedy by Hippocrates and his school. Homer makes no note of bleeding in either the *Iliad* or the *Odyssey*, although it has always been a matter of wonder how ingenious he was in inventing various kinds of wounds and

injuries. We know from this author that two surgeons, at least, accompanied the Trojan army to the siege of Troy, Podalirius and Machaon, reputed sons of the Æsculapius who is said to have first used the probe and bandages. They do not appear to have practised bleeding. Perhaps, if Homer had known what we do, they would have been esteemed still more for that omission.

Podalirius, it is said, was cast, on his return, by a tempest on the shore of Caria. A shepherd rescued him; and, learning that he was a physician, says Kenouard (a surgeon would have been more correct, as Celsus says they only treated wounds, "sed vulneribus tantummodò, ferro et medicamentis, mederi solitos esse"), he conducted him to Dametus, the king of the country, whose daughter had lately accidentally fallen from the top of the house. She was insensible and motionless, and the attendants already supposed her dead; but this skilful surgeon bled her from both arms, and had the happiness of restoring her life.

Here is the first example of bleeding practised for the purpose of a cure; unhappily, it is not very authentic.

There is, in truth, no certain notice of phlebotomy until it stands out clearly as a common practice in the time of Hippocrates; and a search after the precise time, or the particular operator who first was bold enough to plunge in the lancet and abstract blood, will only lead to disappointment.

The Greeks derived their earliest medical knowledge from the Egyptians; but there is no evidence that they learned from them the art of bleeding, or that it was ever employed by them.

The Chinese claim even a greater antiquity than the Egyptians; but there is no evidence of the practice having been employed by them, nor by any other of the ancient Eastern nations. (Bancroft.)

Although, however, we cannot ascertain the exact period during which bleeding has been in vogue, we know that it was in use for nearly 2,500 years; and I have often thought that the remarkable and abrupt cessation from its use in our own times has not surprised us so much as, when we consider the subject, it ought to have done. Whether we consider the antiquity and duration of the practice, and the universality of its employment, or the completeness of its abandonment now, it is equally astounding—nothing less than a complete revolution in the practice of medicine.

Experience must, indeed, as Hippocrates says in his first aphorism, be fallacious if we decide that a means of treatment, sanctioned by the use of between two and three thousand years, and upheld by the authority of the ablest men of past times, is finally and for ever given up. This seems to me to be the most interesting and important question in connection with this subject. Is the relinquishment of bleeding final? or shall we see by and bye, or will our successors see, a resumption of the practice? This, I take it, is a very difficult question to answer; and he would be a very bold man who, after looking carefully through the history of the past, would venture to assert that bleeding will not be profitably employed any more.

There have been opponents of the practice from the earliest times; and this is one of the strongest arguments against those who have held, or hold now, that bleeding has gone out because of a change in the type of disease, or because of a deterioration in the strength of the present race of patients. There have been, also, periods when it has been scantily, and others when it has been profusely, employed; and some of the facts connected with this point seem to show that, although the change of type theory cannot afford the whole explanation, yet there have been times when bleeding has been better borne, or more beneficial than at others.

Nearly as early as the time of Hippocrates, who "sometimes carried bleeding to a great extent, even in chronic diseases" (Hamilton), we find that Chrysippus, a pupil of Eudoxus of Cnidos, had an insuperable objection both to purgatives and venesection. (Hamilton, p. 71.)

Again, Erasistratus, who is supposed to have been a contemporary with Herophilus, and to have flourished in the reign of Seleucus, about three hundred years before our era, and is admitted by all but Galen, whose inordinate veneration for Hippocrates too often leads him to be unjust to the merits of others, to have been an anatomist of the first skill, and a practitioner of the first reputation, according to Galen, wholly banished the use of the lancet; but we are informed by others that, without absolutely interdicting it, he was much more sparing of bleeding than other practitioners. (Hamilton, pp. 85 and 89.)

There is no difficulty in finding evidence of the free use of bleeding in most periods of medical history; and, although not so distinct, there may yet be traced with sufficient clearness marks of the varying frequency with which it was employed. I have alluded to two instances of abstinence from bleeding at very early periods; my next illustration belongs to another time and another school.

Galen, in his work addressed to the Roman followers of Erasistratus,