INAUGURAL ADDRESS

DELIVERED AT THE

INTERNATIONAL MEDICAL CONGRESS,

Held at Washington, U.S.A., Sept., 1887.

By NATHAN SMITH DAVIS, M.D., LL.D.,

President of the Congress.

WITH a full consciousness of my own deficiencies, and still with a heart overflowing with gratitude, I thank you for the honour you have bestowed in selecting me to preside over the deliberations of this great and learned assembly. It is an honour that I appreciate as second to no other of a temporal nature, because it has been bestowed neither by conquest nor hereditary influence, nor yet by partisan strife, but by the free expression of your own choice.

Addressing myself now more directly to those here assembled who have left homes and loved ones in other lands, and encountered the fatigue and danger of travelling by sea and by land, in the name of the medical profession of this country, I welcome you, not only to this beautiful city and the hospitality of its citizens—as has been so admirably done already by the honourable representative of the Government who has just taken his seat—but I cordially welcome you to the open arms and warm hearts of the medical men of this whole country, in whose name you were invited here three years since, and whose representatives are now here, side by side with you, gathered from the east, the west, the north, the south, as well as from the rugged mountains and fertile valleys of the centre, to make good the promise implied by that invitation. If they do not cause you to feel at home and happy, not only in the social circles and halls devoted to the advancement of science, literature, and art in this city of our nation's pride, but wherever you may choose to roam—from the rocky coast of New England on the Atlantic to the Golden Gate of the Pacific—it will be from no want of earnest disposition to do so.

And now, I not only thus welcome you from other lands, but I take great pleasure in greeting you, one and all, as leading representatives of a profession whose paramount object is the lessening of human suffering, by preventing, alleviating, or curing diseases wherever found and in whatever class or grade of the human family. Nay, more, with profound reverence I greet you as a noble brotherhood, who, in the practical pursuit of that one grand object, recognise no distinction of country, race, or creed, but bind up the wounds and assuage the pains of the rich and poor, ruler and ruled, Christian and pagan, friend and foe alike. Not that every medical man does not love and defend his own country and fireside with as fervid a patriotism as the members of any other class of men; but, as disease and pain are limited to no class or country, so is the application of his beneficent art limited only by the number of those suffering within his reach.

With a common object so beneficent in its nature, and opportunities for its practical pursuit so universal, it is but natural that you should be found searching for the most effectual means for the accomplishment of the one object of lessening human suffering, in every field of nature and in every department of human knowledge.

The living human body—the chief object of your solicitude—not only combines in itself the greatest number of elementary substances and the most numerous organs and varied functions, so attuned to harmonious action as to illustrate the operation of every law of physics, every known force in Nature, and every step in the development of living matter, from the simple aggregation of protoplasm constituting the germinal cell to the full-grown man, but it is placed in appreciable and important relations with the material objects and immaterial forces existing in the world in which he lives. Hence, a complete study of the living man, in health and disease, involves a thorough study, not only of his structure and functions, but more or less of every element and force entering into the earth, the air, and the water with which he stands in constant relation.

The medical science of to-day, therefore, embraces not only a knowledge of the living man, but also of such facts, principles, and materials gathered from every other department of human knowledge as may increase your resources for preventing or alleviating his suffering and of prolonging his life.

The time has been when the medical studies embraced little else
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the fanciful theories and arbitrary dogmas of a few leading minds, each of which became for the time the founder of a sect or so-called school of medicine, with his disciples more or less numerous. But with the development of general and analytical chemistry, of the several departments of natural science, of a more practical knowledge of physics, and the adoption of inductive processes of reasoning, the age of theoretical dogmas and of medical sects blindly following some more plausible leader passed away, leaving but an infinitesimal shadow yet visible on the medical horizon.

So true is this that, in casting our mental vision to-day over the broad domain of medicine, we see its votaries engaged, some searching for new facts and new materials, some studying new applications and better uses of facts and materials already known; some of them are in the deadhouse with scalpel and microscope, not only studying the position and relations of every part from the obvious bones and muscles to the smallest leucocyte in health, but also every deviation caused by morbid action or disease. Some are searching the fields, the forests, the earth, and the air, both for more knowledge concerning the causes of disease, and for additional remedial agents. Some are in laboratories with crucible, test-glass, and microscope, analysing every morbid product and every remedial agent, separating the active principles from the crude materials, and demonstrating their action on living animals, while far the greater number are at the bedside of the sick and wounded, applying the knowledge gained by all other workers to the relief of human suffering. A more active, earnest, ceaseless and beneficent field of labour is not open to your vision in any other direction, or occupied by any other profession or class of men. And thus has the science of medicine become a vast aggregation of observed facts, many of them so related to each other as to permit practical deductions of permanent value, while many others remain isolated through incompleteness of investigations, and therefore liable to prompt, hasty, or even erroneous conclusions. Indeed, the most defective and embarrassing feature in the science and art of medicine at this time is the rapid accumulation of facts furnished by the vast number of individual workers, each pushing investigations in some special direction without concert with his fellows, and without any adequate conception of the coincident lines of observation necessary to enable him to see the true bearing of the facts he evolves. Hence he is constantly mistaking mere coincidences for the relation of cause and effect, and the pages of our medical literature are being filled with hastily formed conclusions and rules of practice from inadequate data.

This results in part, at least, from the extent and variety of the fields of inquiry and the complexity of the problems presented for solution, for nowhere else within the realms of human thought does the mind encounter problems requiring for their correct solution the consideration of a greater number of data than in the study of etiology and pathology.

To determine the appreciable conditions of the earth, air, and water of any country before, during, and after the invasion of an epidemic disease long enough to include several consecutive visits of the same, is not possible for a single individual, nor for any number of observers acting separately or without concert.

Yet just this complete knowledge is necessary to enable us to separate the conditions that are merely coincident or accidental from those that are such constant accompaniments of the disease as to prove a necessary relation between them. And it is only by such persistent, coincident systematic observations of many individuals, each having a definite part, and the results carefully compared analytically and synthetically at proper intervals, that the real conditions and laws controlling the prevalence and severity of epidemics and endemics can be clearly demonstrated. It is not enough to discover the primary infection, or the *contagium vivum*, whether it be the bacillus of cholera, yellow fever, or tuberculosis, for abundant experience has shown that not one of these will extend its ravages in any community or country unless it finds there is a soil or pabulum congenial for its support and propagation.

It is on the development and diffusion of knowledge concerning the local conditions necessary for receiving and propagating the specific infections of disease that nearly all the important sanitary measures of modern times have been based. And it is on a further development of knowledge in the same direction, gained by more systematic, continuous, and coincident investigation, that we shall most successfully protect our race from the pestilences that have hitherto "walked in darkness and wasted at noonday."

It was the extensive and ever extending field of medical science, the complexity of the problems pressing for solution, and still more the individual responsibility of applying the resources at command for the direct treatment of disease, that early disposed medical men to seek each other's counsel, to form groups or clubs for comparison of

ship dues by the members of each society were appropriated and judiciously expended in the prosecution of such systematic and continuous investigations from year to year, it would accomplish more in advancing medical science directly and indirectly in benefiting the human race than ten times that amount would accomplish if expended in any other direction.

For it must be remembered that, when money is expended for material objects, even for food, clothing, or medicine, such materials feed, clothe, or relieve but one set of needy individuals, and are themselves consumed; but the expenditure of money and time in such a way as to develop a new fact capable of practical application, either in preventing, alleviating, or curing disease, that fact does not, like the food or medicine, perish with the using, but it becomes literally imperishable. Neither are its benefits limited to one set of individuals, but it is transmitted with the speed of the lightning over the land and under the sea to every civilised people; and whatever benefits it is capable of conferring are as capable of being applied to a million as to one, and of being repeated with increasing efficiency from generation to generation.

It has been tersely and correctly stated that associated action constitutes the characteristic and predominating power of the age in which we live. It is by associated action that education in its broadest sense, religion, and civilisation have been more rapidly diffused among the masses of mankind during the present century than during any other period of the world's history. It is by the association of capital, wielded by the associated intellects of the nineteenth century, that highways of commerce have been opened over the valleys, through the mountains, across the deserts, and on the oceans, over some of which the material productions of the nations are borne by the resistless power of steam, and along others the products of mental action are moved with the speed of electric currents, until both time and space are so far nullified that the most distant nations have become neighbours, and the inhabitants hold daily converse with each other from opposite sides of the globe. Indeed, it is only by means of such of these highways as have been constructed within the memory of him who addresses you, that you have been gathered in this hall from the four quarters of the earth, and through which an account of your doings may be daily transmitted to your most distant homes.

I congratulate you on the fact that the profession you represent has taken the lead of all other professions or classes of men in rendering available these grand material achievements of the age for cultivating fraternal relations, developing and interchanging knowledge, and planning concerted action for rendering human life everywhere healthier, happier, and of longer duration.

This is the ninth grand International Congress in regular series within little more than two decades, and let us hope that all its work will not only be done in harmony and good order, but with such results as will add much to the aggregate of human happiness through all the coming generations.

Without trespassing further on your patience, I must ask your forbearance with my own imperfect qualifications, and your generous assistance in the discharge of the responsible duties you have devolved upon me.

REQUESTS AND DONATIONS.—The late Mrs. Jemima Ivory gave £1,800 consols, subject to the payment of succession duty, to the Worthing Infirmary, on condition that one ward, to be called "The Ivory Ward," should be set apart for ever "in perpetuation of the blessed memory of John Ivory, deceased, the late husband of Mrs. Jemima Ivory."—The Great Northern Central Hospital has received £1,000 under the will of Mr. C. E. T. Holmes.—Mrs. Thompson, of Hythe, has bequeathed £500 to the Kent and Canterbury Hospital.—The Leicester Infirmary has received £300 from the Infirmary Sports at the Aylestone Road Grounds on June 20th, and £100 under the will of Mrs. Jane Clare, of Knipton.—The Leicester and Leicestershire Provident Dispensary has received £100 under the will of Mrs. Jane Clare.—Mr. R. C. L. Bevan has given £100 to the British Home for 'ncurables.'—"Alpha" has given £50 to the Great Northern Central Hospital.

TRIPS TO AUSTRALIA.—The first of the series of trips to the Colonies, organised by the Peninsular and Oriental Steam Navigation Company, will take place by the Company's fine new steamer *Britannia*, 6,500 tons, which will leave London for Melbourne, Sydney, and Adelaide on November 4th. The *Britannia* will carry no emigrants or steerage passengers, but has unequalled accommodation for first and second class saloon passengers, whom she will carry at the favourable rates arranged by the Company for these trips. She will leave Sydney for England on January 6th, 1888.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FIFTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

THE TREATMENT OF SCARLET FEVER.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association held in Dublin, August, 1887.

By C. R. ILLINGWORTH, M.D., M.R.C.S.E.

ON consulting that valuable medical work—the *Medical Digest*—upon the Treatment of Scarlet Fever, one is struck by the wide difference in the remedies which have been suggested and used by different authorities. Acids are lauded by some, alkalies by others, whilst antiseptic and germicide remedies find an important place in communications of more recent date.

In an epidemic of the disease, extending over two years, I have had ample opportunities of observing the course of the disease, and of its sequelæ, and of testing the value of various remedies, which, at one stage or another, have been found efficacious.

Definition.—Scarlet fever may be defined as an inflammation and ulceration of the mucous membrane of the throat, due to the lodgment and development of specific germs upon it, and characterised by the appearance of a uniformly red and more or less extensive rash upon the skin, between the second and fifth day of the disease, followed by desquamation.

Cause.—The action of specific germs in the production of this disease has, I think, been fully shown by the labours of Drs. Jamieson and Edington, of Edinburgh, reported in the *JOURNAL* of June 11th. During the epidemic I have referred to, I removed a portion of the exudation from the throat of a very well marked case of the fever, and examined it under a magnifying power of 300. I reported in the *JOURNAL* of May 1st, 1886, that I found numbers of "minute nucleated bodies in active movement." These I regarded as the cause of the disease. They appeared in small masses of protoplasmic-looking material, with a dark nucleus.

A knowledge of the existence of germs has an important bearing on treatment. Absorbed into the blood, they are thrown out to the skin, where, by their presence and further multiplication, they excite inflammation, as indicated by rash; in some cases they rapidly deprive the blood of its fibrin and hæmoglobin, and thus, by acute poisoning, produce the malignant form of the disease; and, if unchecked, they eventually find their way to the kidneys, there to give rise to serious disorders of those organs. Finally, they so weaken the vital fluid itself by their depredations that effusions into one or more serous cavities, and into the subcutaneous connective tissue, are of common occurrence from pure spanæmia.

Treatment.—This may be divided into local and internal.

Local: Having had proof of the value of tannic acid as a local application, I added that drug to the glycerine of carbolic acid (1 in 20), and dissolved it with the aid of heat. I thus got a powerful astringent and germicidal remedy, which I used twice a day with a straight laryngeal brush.

Internally, I think it is generally agreed that diaphoretics, in the shape of the compounds of ammonia, should be given to "throw out the rash." In such treatment, in the early stages of all cases of scarlatina simplex, I entirely concur. It has been my practice to give remedies, such as liquor ammoniæ acetatis, salicylate of soda, and carbonate of ammonia, for two or three days; but I always follow with iron and chloride of potash as the febrile symptoms subside, in order as rapidly as possible to supply, by this hæmatinic treatment, those important constituents of the blood which have been damaged by the poison.

But not thus would I treat any case of scarlatina maligna, in any of its stages; and for this reason: that the blood is already over-fluid, and the administration of such remedies as ammonia would simply increase the mischief by increasing the over-fluidity. In the malignant form, the symptoms notably presented are: a dusky hue of the skin; scanty rash; prostration, with coldness of the extremities; and, very frequently, diarrhœa. In these, which indicate that the poison is concentrating its energy upon the blood, iron should be given at once, and in frequently repeated doses, to restore to the blood that fibrin and hæmoglobin of which it is rapidly being deprived.

The Biniiodide Treatment.—I wish in this paper, however, more particularly to direct attention to a method of treatment which I re-