destroyed or life threatened, and in which the condition was not evidently due to malignant disease, an exploratory incision should be made. This principle, and the comparative immunity of patients from danger after exploratory incisions, might be abused by unscrupulous practitioners, but afforded a relatively safe way of arriving at an accurate diagnosis in obscure abdominal cases which endangered life.

The general sense of the profession at large, and not the dictum of specialists alone, must ultimately define the legitimate sphere of abdominal surgery, and draw the line between that which was rash and speculative and that which was sound surgery. The opinion of such a Society as this Branch, even when not expressed in any formal resolution, could not fail to exercise a healthy influence over the majority of its members. Our art was progressive, and should not be subjected to any restrictions based on false sentiment. Some men might be a little too zealous as others were too apathetic. Some were slow to receive new ideas, others rushed to an opposite extreme and greedily assimilated every new fashion of practice, as if old ideas were necessarily bad and new ideas invariably good. Not every new feature of medical or surgical practice could stand the sure test of time, for extended experience often gave the lie to first impressions. Specialists in gynaecology and abdominal surgery must be judged, but fairly judged. They only claimed the same privilege which was accorded to all others, to exercise such skill as they might possess for the prevention or cure of disease, the relief of suffering, and the prolongation of life. No branch of our art had achieved more splendid triumphs than abdominal surgery. That which once was a sealed book was now opened, although many pages had yet to be read.

ON SANITARY SCIENCE OR PREVENTIVE MEDICINE.

Delivered at the Annual Meeting of the South-Western Branch of the British Medical Association.

By JOHN WOODMAN, M.D.,
President of the Branch.

REFERRING to the regret with which the "good old times" of the last century were often mentioned, Dr. Woodman pointed out that it was too frequently forgotten that in those days cleanliness was little thought of. When anyone was taken ill, especially with fever, the windows of the sick chamber were closed, the curtains drawn round the bed, and the patient kept in as close and foul an atmosphere as possible. The only preventive treatment, when the advent of plague or other communicable disease was feared, was a rough quarantine, which often was so badly managed as actually to propagate the disease. Fires were lighted in the streets, and "camphor and spices to smell" were carried in the pocket.

Dr. Woodman dwelt in some detail on the progress of sanitation in Exeter, for which city he acts as a medical officer of health, and indicated several lessons to be learnt therefrom. The first attempt at sanitation in that town appears to have been made just previous to the outbreak of cholera in 1832, when quarantine was first relied upon, and boards of health were formed in each district. At that time the streets were chiefly drained by a gutter in the middle of the road, and the only supply of water (except wells) was the conduit in South Street, supplied from St. Ann's Well in St. Sidwells. The entire absence of any system of drainage was shown by the fact that the first water-closet erected in Exeter was constructed simply to empty the contents of its pan (after use) into the street. In fact, the sanitary arrangements of the city were practically *nil*. No doubt, however, the boards of health mitigated (in some measure) by their action the severe epidemic of cholera which visited Exeter, as well as the rest of England, in 1832; and between that year and 1867 the Improvement Commissioners did much for the city by widening the streets and draining the town. As regards water, a company was formed to provide a supply for the inhabitants. In short, the work of sanitary improvement was stimulated by the visitations of cholera in 1832, 1849, and 1866. A sanitary inspector and a sub-committee were appointed, a house-to-house visitation was made, and considerable improvements in connection with house-drains, abolition of cesspools, etc., were effected; but, when the cholera passed away, a good deal of the sanitary activity also disappeared.

Hospital Provision.—In 1866 the first attempt at providing a

separate place for the reception of cases of infectious diseases was made by the removal of a few cases of cholera from common lodging houses, to two isolated rooms at the workhouse. By these and other means the severity of the outbreak of cholera in 1866 was undoubtedly mitigated. In 1871, when an epidemic of small-pox threatened the city, the Town Council secured a site near Whipton, about a mile and a half from Exeter, and hastily erected on it a wooden hospital or "sanatorium," with four wards capable of accommodating 28 or 30 patients. This building was in the first instance intended for small-pox isolation, and during 1871, 1872, and 1873, 79 cases of that disease were admitted, and 7 of them terminated fatally. In 1877 it was decided to keep the hospital always open and ready to receive any cases of zymotic disease; and in addition to this wooden structure the Town Council erected a permanent brick and stone building, containing two wards, with nine beds in each. Between the opening of the original hospital on November 2nd, 1871, and December 31st, 1887, 770 cases of infectious diseases, mainly scarlet fever, typhoid, and small-pox, were treated in hospital, and of these 56, or less than 8 per cent., died. This death-rate Dr. Woodman regards as a low one.

Treatment of Scarlet Fever.—Dr. Woodman drew special attention to the scarlet fever cases treated in hospital, and pointed out that the whole of the deaths among them occurred in 1877, when 80 cases were admitted and 6 proved fatal. From 1877 to December 31st, 1887, 241 cases of scarlet fever were treated by the medical officers at the sanatorium without a death. This he attributes to the following causes: (1) that by at once removing the cases from the courts and alleys a number of cases are prevented from remaining at the same time in the same court, and thus the intensity of the poison is believed to be diminished; (2) that patients are kept on an average three weeks in bed; and (3) that patients are given frequent warm baths, beginning at the end of the first week. Warm baths with some Jeyes' fluid in them are used, the latter preventing the spread of the infection. Dr. Woodman believes that the warm baths, by assisting to get rid of the peeling skins, and above all by opening the pores of the skin, and stimulating the sweat glands, relieve the congestion and overwork ordinarily cast on the kidneys, and prevent the dropsy so common after this disease. At least it is very remarkable that since the regular use of the baths, no death from, or case of dropsy after, scarlet fever has occurred. Dr. Woodman adds that he has employed the same treatment in his private practice with equally satisfactory results. Of course the healthiness of the situation of the hospital and the care taken of the patients have something to do with these results. But the marked difference between the deaths from scarlet fever for over ten years and the deaths which still occur amongst the typhoid cases, points to some other reason, and Dr. Woodman therefore believes most thoroughly in the importance of the repeated use of warm baths after scarlet fever daily, or every other day, beginning almost as soon as the eruption disappears, and continuing until all peeling of skin is finished.

Disinfection.—The mode of disinfection adopted in Exeter is to paste up the room in the usual way, and to burn bisulphide of carbon in one, two, or three lamps according to the size of the room, using one lamp containing 16 ounces of the bisulphide to about every 1,000 feet of capacity. This is said to be very effective, does very little damage to things left in the room, and requires the room to be shut up for a few hours only. The mattresses, beds, clothes, etc., are disinfected in a Lyon's steam disinfecter, which has frequently been described in these columns.

Water Supply.—The waterworks at Exeter are the property of the sanitary authority. The supply is derived from the River Exe, and filtered at first through a natural bed of gravel. It is then pumped up to reservoirs, and there carefully filtered once more. It is analysed every month, and is a soft, wholesome water. The supply is constant, and did not fail during the widespread drought of the summer of 1887.

Drainage and Treatment of Sewage.—Dr. Woodman recognises the objections attaching to all the existing methods of disposing of sewage, but he looks forward with some hope to the plan of treatment by electricity proposed by Mr. W. Webster, F.C.S. The principle of that plan is that a constant current of electricity is passed through the sewage in a tank by means of metallic electrodes, thus causing a rotary motion in the sewage. Certain chemicals are evolved from the sewage itself, and certain gases formed which, mixing with the solid portions, raise them to the top instead of precipitating them to the bottom as usual. By agitating the fluid the gases pass off and the solid particles

scend to form a precipitate without showing any tendency to again permeate the fluid.

Food.—In his remarks on the subject of food Dr. Woodman expressed his opinion that man is an omnivorous animal, and should not be either a vegetarian or an excessive meat-eater. Moderation in eating and drinking should be observed.

Schools.—In Exeter the co-operation of school teachers has been secured in dealing with infectious diseases. Affected scholars are watched for and excluded from attendance, as well as children from infected houses.

Notification of Disease.—This Dr. Woodman considers should be compulsory, but the duty should devolve on the householder alone, and not on the medical attendant, although of course the latter should be obliged to inform the householder of the nature of the malady. The objections to the alternative system were briefly referred to.

Medical Officers of Health.—Dr. Woodman admits that the appointment of these officers is at present in a very unsatisfactory position. In his opinion, the appointment should be for life (except for neglect of duty or infirmity), and while much might be said in favour of medical men not in practice being appointed for large consolidated districts if the appointments were now being first made, it would be unjust to dismiss at once and without compensation a number of medical officers of health who have been for some years giving their services, for the most part for very inadequate salaries, and who have taken much time and trouble to qualify themselves for their duties, often to the damage of their private practice.

ON SOME POINTS OF INTEREST TO THE GENERAL PRACTITIONER.

Delivered at the Annual Meeting of the Yorkshire Branch at York.

By JAMES RAMSAY, M.A.St. AND., M.D.EDIN.,

President of the Branch.

AFTER thanking the members of the Branch for having elected him President in succession to so distinguished a man as Mr. Wheelhouse, Dr. Ramsay alluded to the special fitness of York as a place of meeting for a scientific society, inasmuch as it was in that city and in the very building (the Museum of the Yorkshire Philosophical Society) in which he was addressing them, that the first meeting of the British Association was held. That association, he pointed out, had originated with some members of the Yorkshire Philosophical Society, and upon the model of that association, the British Medical Association itself was at the outset framed.

Their special function as a Branch was to localise the spirit and work of the parent Association, and to bring the power and influence of the whole organisation to bear on the particular area which they represented. The British Medical Association, by the labours of its various Committees, its ably conducted JOURNAL, and its scientific gatherings, was an enormous power for good to the public, not less than to the profession. As the good of each individual member was important for the general effectiveness of the Association, it might be said with truth that it was before all an *educational* body. Medical men were learning and unlearning all through their professional lives, and they should be incessantly striving after an ideal perfection as "general practitioners of medicine and surgery." He disliked the term "general practitioner" as clumsy, and not expressive of any definite legal qualification, and he should be glad to substitute some one word which would adequately convey its meaning. It was a reproach to the language of Shakespeare that it could only furnish a periphrasis to describe a practitioner of the whole art of healing. In England, the collegiate title "surgeon" was employed for the purpose, whereas in Scotland, where a university degree had long been the aim of most who sought to undertake the same line of work, the assumption of the title of "doctor" was common. Considering that the general practitioner was more largely engaged in medical than in surgical work, the latter usage was more logical than the former. It resulted that the profession was made up of surgeons who practised physick, and physicians who practised surgery. Hippocrates, who was known to history as a physician, and who was for his time an ideal general practitioner, showed that in his day "surgery" was included in the total covered by the term "physic," and it was inferred that he was himself an operative surgeon, though the general drift of his writings and observations

showed that he did not regard himself as anything but a physician. "Physic," in its wider sense, meant *physis*, that was to say, "Nature." The physician was a student of Nature all round. In this country, the study of natural phenomena in general had been accorded the name of "physics," but all this study and inquiry had been undertaken by the physicians of old, with the object of relieving and curing disease, and in the sense here given to the word "physic," medicine and surgery were one. In the practice of physick, however, the surgeon was not always a necessary figure, his operations used to be classed among the *opprobria medicinae*.

Outside the sphere of his handicraft, the surgeon was bound by medical methods, and in the matter of physical diagnosis, he was under great obligations to the physician. In his introduction Hippocrates had said: "It is the business of the physician to know in the first place things similar and things dissimilar; those connected with things most important, most easily known, and in anywise known; which are to be seen, touched, and heard; which are to be perceived in the sight, in the touch, and the hearing, and the nose, and the tongue, and the understanding; which are to be known by all the means whereby we know other things." The Father of Medicine had also said: "The things relating to surgery are the patient, the operator, the assistants, the instruments, the light, where and how, how many things and how, where the body and the instruments, the time, the manner, the place." These two passages gave the scope of the general practitioner of ancient Greece, in whose hands the work of the profession chiefly was. Even then, however, there were surgical specialists, as was proved by the Hippocratic oath, whereby the candidate bound himself to leave cutting for stone to those who practised that art. Avenzoar, the Arabian, had even characterised lithotomy as an operation "which no respectable physician would witness, far less perform."

Nowadays there was a fairly defined boundary between the physician and the surgeon. That this division was tending to be overstepped by the surgeon, who had achieved wonderful success in regions formerly held sacred from the knife, was a fact which every true physician recognised with the keenest satisfaction. To the physician would still be left the function of detecting the cause of the mischief and indicating the mechanical procedure necessary for its relief. Sir William Stokes, in speaking of the indebtedness of surgery to medicine, had exemplified this by a reference to the work of Dr. Ferrier, of which, as he said, "brain surgery has to a large extent been the outcome."

Though there was a certain fitness in the term "doctor," as used by the public to designate any and every member of the profession, those who had acquired the title from a university might hesitate to follow this custom. It was to that prefix, however, that the whole profession owed a good deal of its social status. For centuries, while surgery was working in a lower sphere, medicine had kept its place as one of the faculties in all universities. The medical profession was justly called a "learned" one, and an excellent case could be made out for calling it the learned one.

Medicine and surgery were no doubt sciences, but the successful application of these sciences in practice constituted an art of no little difficulty. This art was greatly advanced by personal intercourse among those who cultivated it, and it was in this sense more especially that the Association was pre-eminently an educational institution. The history of medicine should find a place in the curriculum because it clearly taught the important truth that there was a medical art no less than a medical science. To the successful cultivation of that art a study of human nature was essential; and it would be most advantageous to us to note the difficulties and the errors as well as the achievements of our professional ancestors. A survey of the past would show us that success in the practice of medicine was something dependent on individual prowess, apart altogether from the perfection of scientific apparatus and modes of inquiry. The very perfection of modern methods tended to the elevation of the whole profession to a uniformity of excellence which made it relatively more difficult for anyone to attain eminence nowadays than used to be the case. If the clinical records of cases of the same disease were taken from the practices of our predecessors so as to illustrate the treatment of any particular ailment by the leading physicians of each period, it could not fail to be highly instructive. It would be found that the reputation of these leading men was due more to their success in treatment than to their peculiarities of doctrine. This was illustrated by the contrast between the theory of such men as Cullen, Sydenham, and Cardan, and their actual practice.

The medical practitioner should strive to acquire as much