at the space between the fifth and sixth bastard ribs. The wound was healed up on the outside, yet for all that there remained a weakness of the stomach, whereupon a pain of the guts like to the colick took him, especially in the evening, and on the night, for which cause he durst not sup but very sparingly. But on the eighth moneth after, the pain raging more violently in his belly than it was accustomed, he died, though for the mitigating thereof Simon Malmedy and Anthony du Val, both learned physicians, omitted no kind of remedy. The body of the deceased was opened by the skilful chirurgion, James Guillemeau, who found a great portion of the colick-gut swelled with much wind, gotten into the chest through the wound of the diaphragma, for all it was so small that you could scarce put your little finger in thereat.

Further on he says :

Not long ago Gilles le Maistre, a gentleman of Paris, was run through the body with a rapier, so that he voided much blood at his mouth and fundament divers days together, whereby you know the guts were wounded, and yet he was healed in twenty days.

Another case he thus describes in his quaint way :

I can bring as a witness the steward of the Portugal ambassador, whom I cured at Melun of a wound made with a sword so running through the body that a great quantity of excrements came forth of the wounded guts, as he was a dressing, yet he recovered.

As analogues of these cases I quote the following, taken at random from the published records of No. 9 General Hospital, and do not doubt that they are typical of possibly many hundreds more :

CASE I.—Sergeant H., of the Shropshires, admitted April 30th, wound of chest, entering in front at the right border of the sternum in the fourth interspace, exit behind the posterior axillary line at the level of the ninth rib. Hæmoptysis began instantly and continued for some days, but on the fifth day patient sat up in bed and made a rapid recovery.

CASE II.—Trooper B., of the Imperial Yeomanry, also a chest wound entering on the left side 1 inch internal and above the left nipple, exit below angle of left scapula. There was hæmoptysis for three days, but on the eighth day patient was up and the wound practically healed. It is almost impossible to suppose that the right auricle was not involved in the first of these cases and the left ventricle in the second. A Mauser bullet may presumably pass through the thick muscular wall of the ventricle, and even penetrate the ventricular cavity, without a fatal result, owing to its small size, but one can scarcely imagine that the thin-walled auricle could so escape.

CASE III.—Private F., New Zealand Mounted Rifles, wounded April 30th, entry in the seventh right intercostal space in the anterior axillary line, 1½ inch below the upper limit of liver dullness. The bullet passed obliquely through the abdominal cavity, issuing on the left side immediately above the centre of the iliac crest. A quantity of blood was vomited two hours after the wound, but there was no subsequent hæmatemesis, and the patient was sent down convalescent a month later. In this case the pleura, liver, stomach, colon, and probably the small intestine must have been traversed.

The contrast between the cases of the sixteenth century and those of the nineteenth is very marked, both as regards course and result; and as for the treatment, in the latter series of cases, a "masterly inactivity" (that is, as far as surgical action is concerned) seems to have been the correct policy to pursue.

I am afraid I have only been able to touch very superficially in the time at my disposal upon the fringe of the subject in its modern phase, but I trust that what I have said has once more emphasised a fact which, unless we are careful, we are apt to forget—namely, that there is no standing still in medicine—I use the word in its broadest sense. It is a science which advances daily, and we must take our lessons from everywhere we can. Books old, books new; facts, observations, ideas, statements—old, revived, or new—all should help us to see and understand that medicine is one of the most rapidly advancing sciences, and that we, as its servants, wishing to do faithful service, must be willing and able to learn our duty from each and every source.

SUCCESSFUL VACCINATION.—Dr. Napier Close, Public Vaccinator, No. 2 District, Chard Union, has been awarded the Government grant for successful vaccination.

CONGRESS OF FRENCH NEUROLOGISTS.—The annual Congress of French and French-speaking Alienists and Neurologists will be held this year at Limoges under the presidency of Dr. Gilbert Ballet (Paris). The questions on the programme are as follows:—Neurology: Pathological physiology and pathogeny of the muscular tonus, of the modifications of reflexes, and of contractures in affections of the neuraxis (to be introduced by Dr. Crocq, of Brussels). Mental Pathology: Acute delirium from the clinical, anatomic-pathological, and bacteriological points of view (to be introduced by Dr. Carrier, of Lyons). Administration: Assistants and attendants in asylums (to be introduced by Dr. Faguet, Physician to the Maison Blanche Asylum). The Secretary-General of the Congress is Dr. Doursout, Naugeat Asylum, Limoges.

A CLINICAL LECTURE

ON

A CASE OF PURPURA RHEUMATICA.

Delivered at the Western Infirmary, Glasgow.

By RALPH STOCKMAN, M.D., F.R.C.P.E., F.F.P.S.G.,

Professor of Materia Medica and Therapeutics in the University of Glasgow.

SYMPTOMS.

THE patient with whose case we are to occupy ourselves to-day is a man, aged 39, a "holder-on" by occupation, married, and who has now been in hospital more than two months. He was admitted on February 17th, complaining of diarrhœa, general weakness, pain and swelling in some of his joints, and an eruption situated chiefly on his lower limbs. He can assign no cause for his illness. The diarrhœa began about seven weeks before admission, loose motions occurring from two to six times daily without any particular pain, and during all this time he also had considerable discomfort and flatulence in the stomach after taking food. These symptoms were accompanied by a marked feeling of weakness, so much so, that from the very beginning of his illness he was off work and confined to the house or in bed. About the same date his ankle-joint and knee-joint became painful, so that he experienced difficulty in walking; but he states that he did not notice any particular swelling in them till about a week before his admission. The eruption on his legs was present from the beginning, but does not seem to have particularly attracted his attention.

He is a healthy-looking man, is not emaciated or pale, and has had no previous severe illnesses. Seven years ago, however, he had an illness which, he says, was exactly similar to this but much slighter in degree. He was treated for it as an out-patient of this infirmary, and very soon recovered.

On admission his legs and thighs were covered with very numerous purpuric spots mostly about the size of a pea, but some were smaller and others much larger. The smaller and medium-sized ones were more or less round in shape, but the larger were very irregular in outline and many of them elongated. There were also petechiæ and vibices, but not in large numbers. They appear in successive crops every few days, hence some of them are of a bright purplish-red colour and quite recent, while others are fading. They do not disappear on pressure, and are not followed by desquamation. There have sometimes been a few similar spots on the flanks and lower abdomen, on the shoulders and upper arms, but nowhere else. Since admission, sixty-nine days ago, there have been twenty-two distinct eruptions, some much more abundant than others, and chiefly on the lower limbs. The fresh spots are of a bright purplish-crimson hue, in a day or so they become dull-red, then of a light-rust colour, slowly fading until in four or five days they are almost imperceptible. Some take on a faintly greenish-yellow tint, but although carefully observed we have never seen them pass through the familiar pronounced green and yellow tints seen in bruises and in scurvy. Walking about the ward always developed an eruption at first, but has now ceased to do so. Each outbreak of spots is preceded for a few hours by pains in his large joints, so that he can foretell their occurrence. Both ankle-joints have been slightly swollen during the whole time of his stay in hospital; they are painful on manipulation, and there is slight œdema along the borders of the tibiæ. The knee-joint, shoulder-joint, and elbow-joint are also painful on movement and very slightly swollen. The forearms are both slightly œdematous, and occasionally he has complained of pain in the muscles of the arms and legs. The urine sometimes contains a trace of albumen, and he has a little bronchitis. His arteries are somewhat hard for his years, but otherwise the circulatory organs seem healthy. His gums are slightly soft and spongy, and bleed rather easily on pressure, but he has never had any particular tendency to hæmorrhage from this or any other mucous surface.

His blood was examined shortly after admission, when the red corpuscles were found to number 4,400,000 per c.mm.; the

hæmoglobin was 60 per cent., and the leucocytes and blood plates were normal in number. His temperature has been mostly subnormal—97° to 98°, but on five different occasions it has risen in the early evening to 101° or slightly over.

After a fortnight's stay in hospital the indigestion, diarrhoea, and bronchitis had all disappeared, and he felt stronger, but the attacks of acute joint pain followed by fresh purpuric eruptions still continued to occur every few days. He was kept on a bland but liberal diet, and gained 9 lbs. in weight during two months, so that his general nutrition has not suffered from his illness.

On March 23rd a more careful examination was made of the blood. With his consent 2 ounces were obtained by venesection and received into a cylindrical glass vessel. The blood clotted in five or six minutes, which is an average time, and next day the serum had separated out normally, leaving a firm clot which showed nothing unusual. Tested also by means of Wright's coagulometer the clotting time was found to be three minutes, which is the normal interval for such small quantities of blood. There was no difficulty in checking the hæmorrhage from the venesection. The red corpuscles equalled 5,200,000 per c.mm., the hæmoglobin 72 per cent., the leucocytes and blood plates were in the usual proportions, and the specific gravity was 1065. The red corpuscles were regular in size and shape and stained normally, but they did not form rouleaux. When a large drop of fresh blood was allowed to fall on a microscope slide it clotted in the same time as a drop of blood from a healthy person, but granules formed in it readily visible to the naked eye, and under the microscope these were seen to be due to the red blood corpuscles having run together into irregular clumps. This was the only peculiarity observed in his blood, and it persisted during the whole time of his stay in hospital. Two other patients in the ward suffering from tubercle of the lungs and pleura with high temperature showed the same peculiarity, but it was not seen in any other cases or in any of the students attending the clinique. I do not know what is the significance of this peculiar agglomeration of the red corpuscles or in what other cases it occurs, and on looking through the literature I can find no account of it given previously. It is probably due to some change in the plasma, as the blood serum of our patient when mixed with a drop of healthy blood caused the same granular appearance.

TREATMENT.

The treatment has consisted in confining the patient to bed for the first few weeks and keeping him on an easily-digested diet, and under this the diarrhoea, gastric dyspepsia, bronchitis, and feeling of weakness speedily disappeared. As regards drugs he got 20 grains of salicin four times daily for twenty-three days, then 1 drachm liquor calcis saccharatus thrice daily for six days, then extractum ergotæ liquidum 20 minims thrice daily for ten days, then oleum terebinthine 10 minims four times daily for twenty-seven days, and finally quinine sulphas 10 grains thrice daily for the last three days. Salicylic compounds are recommended in purpura rheumatica owing to a supposed connection between it and acute rheumatism, but as I shall shortly explain to you, arthritis is a symptom common to many specific affections, such, for instance, as scarlet fever, in which the salicylates have no curative effect. Lime salts are supposed to increase the coagulability of the blood and to lessen any tendency to hæmorrhage, but in this case there was neither a decrease of coagulability nor a hæmorrhagic tendency, so their administration could hardly be expected to do any good. Ergot and turpentine have both a great reputation as hæmostatics in purpuric bleeding. During the three days that quinine has been exhibited one outbreak of purpura has occurred. Arsenic has been advocated in purpura, and lately the intravenous injection of mercuric chloride, but both in the hæmorrhagic form of the disease, and I have had no experience with either in these cases.

I cannot say that any of the remedies given seemed to exert the slightest effect either on the joint pains or on the recurrent purpuric hæmorrhages. Both kept on recurring every few days and only towards the end of his stay in hospital with diminishing severity, a result which is probably to be attributed rather to the natural abatement of the disease than to any specific effect of the remedies employed.

This is a typical case of purpura rheumatica (peliosis rheumatica as described by Schönlein in 1837), the dyspepsia and diarrhoea, the joint pains, the purpuric eruption, the pains in the muscles, the slight albuminuria, the very slight degree of fever, and the general weakness, constituting the usual symptoms. Epistaxis and endocarditis are also not uncommon in the course of the disease, but they have been absent in this patient. It is apt to recur at intervals; each attack may last for a week or two or for several months. The prognosis is favourable, but one should be careful in expressing an opinion as to its probable duration.

With regard to the nature of the disease it is probably a specific infection accompanied by arthritis and purpuric eruptions, but we have absolutely no knowledge as to any specific microbe or the toxins which are responsible for the symptoms. It is to be remembered, however, that arthritis and purpura, either singly or together, are not uncommon accompaniments of various intoxications. Thus we find purpura occurring in pyæmia, small-pox, scarlatina, and other fevers, in pernicious anaemia, leukaemia, sprue, scurvy, in poisoning by potassium iodide, phosphorus, potassium chlorate, snake venom, and in numerous other conditions, while arthritis is a prominent symptom of acute rheumatism, rheumatoid arthritis, gonorrhoeal rheumatism, dengue, etc.

It is readily enough distinguished from acute rheumatism by the comparative mildness of the arthritis, by the absence of serious febrile disturbance, by the absence of acid perspirations, by its chronic course, by the purpura, and by the salicylates having no effect.

Hæmorrhagic purpura is probably a totally different disease, the cause of which is also unknown. In it, however, the bleeding may be very severe, and the prognosis grave. The pains in the joints are absent. Hayem says that the hæmatoblasts are greatly diminished in number, and that although the blood coagulates in the normal time, the clot does not contract, and the serum does not separate from it on standing. If these changes in the blood are invariably present they constitute points of great diagnostic importance.

In scurvy the larger hæmorrhages, the state of the gums, and the dietetic history render the diagnosis easy, and distinguish it from all varieties of purpura. Hæmophilia and leukaemia are scarcely likely to be mistaken for purpura rheumatica, although sometimes they bear a resemblance in symptoms to purpura hæmorrhagica.

THE CROONIAN LECTURES

ON

THE CHEMICAL SIDE OF NERVOUS ACTIVITY.

[ABSTRACT.]

*Delivered at the Royal College of Physicians, London,
June, 1901.*

By W. D. HALLIBURTON, M.D., F.R.S., F.R.C.P.,
Professor of Physiology, King's College, London.

LECTURE III.

THE lecturer stated that in his two concluding lectures he proposed to deal with the more strictly pathological side of the subject. Chemical pathology is a comparatively new branch of science, and has a great future before it. He stated that the credit of opening up a new area of research, namely, the application of chemical methods to the investigation of nervous diseases, should be largely given to his colleague, Dr. Mott. The three researches with which he proposed to deal were:

1. The Chemical Pathology of Hyperpyrexia.
2. The Chemical Pathology of General Paralysis of the Insane.
3. The Chemistry of Wallerian Degeneration.

THE CHEMICAL PATHOLOGY OF HYPERPYREXIA.

The experiments on this subject were described in detail, but they may be summed up by saying that they fully confirm the hypothesis that the physico-chemical cause of death