a patient may succeed when all medicinal treatment has failed—that is, when the patient has been shattered by iodides and mercury and is still unfortunately not cured. What a pitiable plight for both patient and medical man—the one in despair, the other at his wit's end. What are we to do in such straits? I will relate a case by way of illustration; it occurred in a friend of mine when he was a student in London. He suffered from severe constitutional syphilis and sought the highest advice in several quarters. One and all advised mercury, and the worse he became the more mercury they gave him, until his teeth were loose, his gums bleeding on the slightest touch, and his symptoms growing worse. His surroundings in a London lodging were not favourable and he was sinking in despair. Luckily an old uncle, a man of the world of shrewd sense, called on him and took the case into his hands. He took the poor lad down to the country, gave him two quarts of strong beef-tea and a bottle of port every day, and prohibited all and every form of medicine. When at the end of two months he presented himself at the hospital again his friends hardly recognised him; all his specific symptoms were gone, his health was fully restored, and he has never had a symptom of syphilis since. Here was a case where the specific cure was pushed too far and a want of due regard to the patient's general condition and surroundings was hurrying him to an early grave; and yet we must suppose that the potentiality of the syphilitic poison had been destroyed by the mercury, while the remedy was keeping up the symptoms by some means—symptoms having the verisimilitude of the disease. In such a case probably quinine would have been of great use, but the other plan of “pure air, highly nutritious diet, and good wine” did the work alone and probably more effectually. I have never forgotten this case and have often seen similar but never such striking results.

The gist of my observations, then, is this: (1) that we must exercise the greatest judgment in giving mercury and the iodides; (2) that we must not trust to them alone; (3) that quinine is a most excellent supplement to the specifics; (4) that healthy surroundings with appropriate diet (wine) and regimen play a most important part in dealing with advanced stages of the disease; and (5) that we must often and again cut off the specifics and try hygienic treatment to see if we have gone far enough to effect a cure and if we have not succeeded we must again attack the disease by specifics.

Outbreaks of syphilis seem to come in waves or cycles. Each time the disease recedes under specific treatment it may redevelop itself and reappear in a milder or more severe form, requiring a fresh course of mercury or of iodide, and we must keep a most careful eye on the symptoms when giving mercury, cutting it off when the symptoms stand still or get worse and supplementing with iodide and quinine when these unfavourable indications occur.

Do not push the mercury too far, especially if there is no decided improvement when its action is fully established. Try the iodide alone or in combination with very small doses of mercury, or give the iodide with quinine in five-grain doses. “Ring the changes” is an excellent motto for the treatment of these cases, and if we follow it with judgment and perseverance we shall at last eliminate the disease; but if we rely on mercury alone, or on iodide alone, or give either or both too long, we shall defeat the end in view and possibly make the patient worse instead of better. It is by a system of giving and withdrawing the specific medicines as the symptoms indicate rather than by a steady and persistent use of them that we eventually get the better of the disease—we, as it were, let it exhaust itself while we are protecting the patient from its successive onslaughts.

Newcastle-on-Tyne.

GRANULAR KIDNEY AND WHY IT IS SO OFTEN OVERLOOKED.¹

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GRANULAR kidney is very often overlooked, not because the diagnosis is difficult, but because there is little in the symptoms to draw attention to the kidneys. The symptoms of granular kidney become pronounced, as a rule, in the middle period of life, but the disease has existed long before. Cases of granular kidney in young people or even in children have been recently recorded in fair number. The relation between granular kidney and acute nephritis is often misinterpreted; granular kidney does not often take its rise in acute nephritis. It is possible that acute nephritis may, if it last long, lead to a form of interstitial nephritis, but whether the disease recognised as granular kidney can result from acute nephritis is another question. Simple acute nephritis in the adult is by no means common; when acute nephritis occurs it is generally because the kidneys are already unsound and granular kidney is a very frequent antecedent. As in a child acute nephritis raises the presumption of antecedent scarlet fever, so in the adult it raises the presumption that the kidneys have been diseased beforehand. Two instances were given in which apparently an acute nephritis ended in interstitial change and in one of these albuminuric retinitis developed. One of the common results of granular kidney is hæmorrhage and this may take place in almost any part of the body; thus it is common in the brain and is a common cause of apoplexy, especially in early life. Epistaxis is frequent and a case is quoted in which epistaxis was almost the first symptom of serious disease though the patient died from uræmia within six weeks from the commencement of symptoms.

Hæmorrhage may also take place from the gums, pharynx, stomach, and bowels and a probable instance of hæmatemesis has been recorded. Hæmoptysis also probably occurs, but is rare. Hæmorrhage from the bladder is better known; it may sometimes be profuse and produce very puzzling symptoms. Cases of this kind were quoted in which the diagnosis had to be made from calculus in the bladder, but post mortem nothing was found but granular kidney. Recurrent hæmaturia is a frequent occurrence in small amount and is a point of diagnostic importance. Hæmorrhages into the retina are part of albuminuric retinitis and detachment of the retina is not altogether uncommon, but generally the effusion is not blood but serum. Hæmorrhage has also been observed beneath the conjunctiva and behind the orbit, the latter producing puzzling symptoms during life. Hæmorrhages into the skin are not known. Heart failure is a more common symptom and the cases may present themselves as instances of angina. Pericarditis is by no means a rare complication and may produce no symptoms, so that the discovery is more or less accidental and made by physical signs. A case is recorded in which pericarditis was the first grave symptom to be recognised and the patient died within six weeks from the time when he was thought to have been in perfect health, the first complaint being some defect of eyesight.

General failure of vision is a marked symptom in the later stage of the disease and may amount to what might be almost called cachexia. Such cachexia developing in early middle life without other obvious cause should always raise the suspicion of granular kidney; it may considerably modify the course of other diseases, as in two cases of morbus cordis quoted, in which, though the patients had morbus cordis, the symptoms were due to granular kidney and from that they died. As intestinal symptoms are common the cases may be diagnosed as dyspepsia or as some other form of intestinal affection. In the latter connexion a very interesting case was recorded in which uncontrollable diarrhoea occurred, from which the patient died, but at the post mortem nothing was found but granular kidney.

General acute or sub-acute skin eruptions bear a very important relation to granular kidney, for they are almost without exception fatal; two or three striking instances of this

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.
—The annual meeting of this institution was held on Feb. 17th. The financial statement showed that during 1897 the receipts had been £1919, whilst the expenditure had necessitated the withdrawal of £260 from the Investment Fund. The medical report showed that 345 in-patients had been admitted during the past year, giving a daily average of 20 beds occupied. There were also 552 out-patients and 763 casualties. The report of the provident dispensary showed that at the close of 1897 there were 2330 patients on the books and that during the year 8179 home visits had been paid by the medical officer.

¹ Abstract of a paper read before the Harveian Society on Feb. 17th 1898.

have been given. Nerve symptoms which develop may be very misleading; thus headache may resemble hemicrania and may also suggest cerebral tumour, especially when associated with optic neuritis; cases of this kind were mentioned. Cramp, especially when associated with general loss of power, may suggest various forms of nerve disease and an instance is recorded in which the symptoms very closely resembled those of locomotor ataxia; another case presented itself as an instance of peripheral neuritis. The association of gout and lead poisoning in granular kidney is well known and often produces difficulties in diagnosis.

The toxic conditions are generally arranged under the heading of uræmia, but this occurs in two forms; the chronic uræmia, or, as it may be called, "chronic renal toxæmia," no doubt explains many of the symptoms which have been already described. Acute uræmia in granular kidney is, of course, generally fatal. It is often very difficult to diagnose from apoplexy, epilepsy, diabetic coma, and some other conditions. An instance is given in which the patient was admitted into the hospital as a case of apoplexy but proved to be one of uræmia, and although the patient was a well-marked instance of granular kidney he completely recovered and has been now well and at work again for some months without any other symptoms.

It is thus obvious that it is only too easy to be misled by the prominent symptoms and to miss the prime cause of the disease—viz., granular kidney. The early diagnosis of granular kidney is important, for although it is true that in the later stages little can be done, still in the early stages it is probable that if the disease were sooner recognised a good deal might prove possible either to prevent its development or, at any rate, to check its progress.

Wimpole-street, W.

"RADIOSTEREOSCOPY."

BY W. S. HEDLEY, M.D. EDIN.

THE progress of radiography seems to open up a field of usefulness for the long neglected stereoscope. If it be realised that upon the radiographic film or the fluorescent screen there are thrown upon one flat surface, as in a transparency, the shadows of a variety of objects, which latter in reality occupy in space very different planes, and if further it be borne in mind that such light and shade as the radiograph presents are nothing more than indications of relative opacity to the x rays, it is evident that such a picture can only very imperfectly display the true relationship of objects and must entirely fail to give any adequate idea of the contours of their surfaces. In the case of foreign bodies an exact localisation can of course be secured¹; that is to say, the radiographer is able to give the exact position of the foreign body with reference to certain artificial surface marks; but such information cannot convey to the mind as sight does a clear conception of the various objects that go to make up the picture. Yet this is what is chiefly wanted. Any method therefore must be acceptable which will enable the surgeon to see with his own eyes at one glance, and at any time during an operation, the *tout ensemble* of the region he is dealing with. It appears to me that the stereoscope is able to accomplish this.

To obtain a stereoscopic effect it need scarcely be said that the first requirement is true binocular vision on the part of the observer. The second indispensable condition is that there be two corresponding pictures of an object, the one seen from the point of view of the right eye and the other from the point of view of the left eye. It is evident that in the case of the radiograph these can be secured either by moving the object itself or by laterally displacing in a direction parallel to the plane of the sensitive plate the source from which proceed the x rays. In dealing with the living body the latter is the simpler process. But the vital point to ascertain is, what ought to be the proper extent of this displacement and what are the physical and physiological considerations upon which the extent of this displacement must be made to depend? In other words, given a certain distance of the positive electrode from the object to

be radiographed and the thickness of the object itself, what is the proper lateral displacement of the focus tube? or given a certain displacement of the tube and a certain thickness of the object, what is the proper distance of the anode from the object to be radiographed? I have experimented on a purely empirical basis with the ordinary lenticular stereoscope and have at times obtained effects which were fairly correct. More often the relief is exaggerated or otherwise untrue. But M. Marie and M. Ribaut have lately attacked the question from another standpoint and have published certain formulas² the use of which will save a vast amount of experimental trouble. These writers point out that in looking at an object in the ordinary way the angle of convergence of the eyes and the accommodation vary simultaneously in passing from one plane of an object to another plane; but in stereoscopic vision the images are on one plane and therefore accommodation remains constant, while the angle of convergence of the eyes varies as it passes from one plane of the reconstituted object to another. This angle depends upon the thickness of the reconstituted object and its distance and these two of course depend in their turn on the distance from the real object and the thickness of the latter. This distance and this thickness must vary indefinitely, but the maximum limit of displacement of the tube cannot exceed a certain amount. Now, given the distance of the object and its thickness the lateral displacement of the tube may be calculated by the following formula: Where Δ is the relative displacement of the tube and object, D the distance of the tube from the object, and T the thickness of the object $\Delta = D \frac{(D+T)}{50 T}$.

Thus, if the object be, say, 3 cm. thick and its distance from the tube be 20 cm. then the displacement of the tube would be 3 cm. When the displacement of the tube is equal to the distance apart of the eyes, say 6.6 cm., the virtual image appears at the distance that the object has been photographed from and is the proper size. Therefore when practicable the displacement ought to be 6.6 cm. This being a known quantity and the thickness of the object also being known the following formula is given to calculate under such conditions the proper distance of the object from the tube: $6.6 = D \frac{(D+T)}{50 T}$.

I have lately worked on these lines and have been able fully to verify the accuracy of the method. Immediately the negatives are taken the images may be fused in the stereoscope³ without reduction even with plates $8\frac{1}{2}$ in. $\times$ $6\frac{1}{2}$ in. in size. In the case of metallic foreign bodies there is sometimes an apparent want of truth in the result, owing perhaps to the fact that those objects which are most distinct in the field of vision have a tendency to appear nearer. Such cases are best dealt with by the lengthier methods of localisation. But when, as occurs in the great majority of cases, it is of importance to realise the relationships of the various structures in all their dimensions, as in bone surgery at the present time, without anticipating the soft tissue radiography of the future, it appears to me that radiostereoscopy is destined to play an important part.

Mansfield-street, W.

A CASE OF ANTHRAX TREATED WITH LARGE DOSES OF CARBOLIC ACID.

BY G. SCOTT JACKSON, M.D. GLASG.

THE following case seems to me to be worthy of report. The constitutional symptoms were so severe as to suggest that the disease was not only local but general, and treatment was not commenced until eight days after the inoculation and five days after the appearance of a "sore." I firmly believe that the free hæmorrhage, which was encouraged, and the exhibition of carbolic acid in such large doses contributed towards the recovery of the patient. He received ten minims combined with an equal quantity of tincture of perchloride of iron every hour and his urine was quickly affected. The kidneys were evidently strongly irritated and traces of albumin were found for some considerable time afterwards. The spores of the bacillus anthracis are said to

¹ THE LANCET, Oct. 16th, 1897, p. 1001.

² Archives de Physiologie, 1897.

³ The adjustable reflecting stereoscope of Cazé.