AN OPERATION FOR FIXING MOVABLE KIDNEY.

By ANDREW FULLERTON, B.CH., F.R.C.S.IREL.,

Examiner in Surgery, Royal College of Surgeons in Ireland, Assistant-Surgeon to the Royal Victoria Hospital, and to the Hospital for Sick Children, Belfast.

It is not claimed for this operation that it exactly replaces the kidney in its normal position. The kidney is probably fixed a little lower than normal, but it is slung up by its own capsule, and for all practical purposes it is in excellent position.

In the method about to be described use is made of the strong, thickened upper border of the lumbar fascia which stretches from the transverse process of the first lumbar vertebra (T) to the outer end of the last rib—the ligamentum arcuatum externum. This strong, thick band (LAE in drawing) is very easily demonstrated from the incision for reposing the kidney, and is more horizontal than the last rib, besides being below the lower limit of the pleura. That portion of the ligament which is beyond the outer border of the quadratus lumborum (QL) is made use of in this operation.

Fig. 1.—The kidneys from behind. 10, 11, 12, ribs; T, transverse process of first lumbar vertebra; LAE, ligamentum arcuatum externum; Q.L., quadratus lumborum; L, liver; S, spleen; S.I., small intestine covered by peritoneum; R.K., right kidney; L.K., left kidney.

Operation.—An incision about 4 in. long is made from a little to the vertebral side of the angle between the last rib and the erector spinae about a finger-breadth below the rib, to obviate all risk of injury to the pleura. The direction is downwards and outwards towards the anterior superior iliac spine. Deepening the incision the following structures are cut: The latissimus dorsi, a few fibres of the serratus posticus inferior, the external oblique, the internal oblique, the transversalis, and the thin transversalis fascia. The last structure is first nicked close to the vertebral end of the incision to avoid wounding the peritoneum and intestine (S.I.). The kidney is then sought for by carefully tearing through the perirenal fat. It is pushed up to but not out of the wound, and a small puncture is made in the true capsule, so that a probe or director may be insinuated and a large blister gradually separated from the posterior (vertebral) surface and outer border of the kidney (see Fig. 2). This is the portion of the kidney that normally looks backwards, and, by peeling the capsule off here, the organ is kept as nearly as possible in its proper place. A horse-shoe-shaped flap of capsule can be separated, so that the base is just above the centre of the horizontal axis of the kidney. One blade of a blunt-pointed pair of scissors is now

inserted under the blister, and the margin cut in the form represented in Fig. 2. To preserve the inner tilt of the upper border of the kidney, the inner limb of the incision may be made a little longer than the outer, as represented in the diagram (Fig. 2).

Fig. 2.—Diagram of right kidney and flap.

The finger is now insinuated under the ligamentum arcuatum externum (LAE), and the tissues on its deep surface peeled up, so as to get rid of the pleura should it descend lower than usual.

While the finger thus protects the pleura, an incision is made about a third of an inch or more above the lower margin of the ligament (LAE), and parallel to its fibres for the whole available distance between the quadratus lumborum (Q.L.) and the tip of the last rib (12). The last dorsal nerve, which can be seen at this stage of the operation, should be avoided.

A pair of Kocher's artery forceps is pushed through the slit thus made, and the free end of the separated capsule is drawn through, spread out, and stitched down to the ligament and neighbouring parts with formalin catgut or silk. The kidney is thus slung as on a pulley. Other stitches may be used to unite the capsule at the margins of the raw surface to the lumbar fascia at the sides, and below if considered necessary. The wound is sutured in layers, formaline catgut being used for the deep stitches, and silkworm gut for the skin.

I have performed this operation on the cadaver, and three times so far on the living subject. It is easy to perform, and, so far as my short experience of it goes, it fixes the kidney effectually.

For the accompanying drawing and diagram I am indebted to Mr. Henry Hanna, M.B., late House-Surgeon to the Royal Victoria Hospital, who assisted me at two of the operations.

A NOTE ON THE TREATMENT OF THROMBOSIS OF THE SUPERFICIAL VEINS OF THE LOWER EXTREMITIES.

By C. MANSELL MOULLIN, M.D. OXON., F.R.C.S.,
Senior Surgeon and Lecturer on Surgery at the London Hospital;
Examiner in Surgery at the University of Cambridge.

THROMBOSIS of the superficial veins of the lower extremity is a very common and a very tiresome complaint. The patient is laid up in bed for at least three weeks. Not infrequently, just as everything appears to have cleared up, there is a recurrence of the complaint in another segment of the vein, and this necessitates rest for three weeks more. There is always the risk of pulmonary embolism, or of the thrombus extending into one of the deep veins through a communicating branch, and causing a condition of venous congestion that persists off and on for life. Even when there is no special degree of phlebitis, the thrombosed veins are very tender and painful if touched; and as the veins are seldom obliterated by organization of the thrombus, a patient who has had one attack lives in a state of constant apprehension that some trivial blow or slight over-exertion may at any moment excite another.

The thrombosis may be limited to one venous segment, or it may involve several, and occasionally it occurs on both legs at the same time, with more or less symmetry; but, unlike the thrombosis of the deep veins of the thigh that is so frequent a complication of abdominal operations and such complaints

as typhoid fever, there is seldom any evidence of a septic or infective origin. Prolonged venous stasis with consequent malnutrition of the walls of the veins is the usual predisposing cause, and some trivial injury, perhaps scarcely noticed at the time, does the rest. In a few instances the thrombosis is secondary to an attack of phlebitis or periphlebitis. This is not uncommon in the early stages of constitutional syphilis; but in the class of case to which I am alluding at present, middle-aged men and women whose employment involves much standing, and who nearly all suffer from varicose veins with incompetent valves, the thrombosis is primary, and the inflammation around rarely of any extent.

The usual treatment for these cases, as I have mentioned already, is prolonged rest in bed with the leg elevated, and covered either with lead lotion, or with a mixture of extract of belladonna and glycerine. For some years past I have abandoned this entirely, and, instead, have at the very earliest opportunity excised the whole thrombosed portion of the vein, with the most excellent results. The wound is sound in a week, and the patient can get up cured and freed from all the risks of embolism, deep thrombosis, or recurrence. At first I limited this proceeding to cases in which there was merely a thrombosed loop or outlying pouch. But by degrees I have been led by its success to adopt it more and more extensively. In one instance in which both internal saphena veins were plugged right up to the saphenous opening, I cautiously exposed the vein, slit it open close to its termination, withdrew the clot, which must have reached almost, if not quite, to the femoral, and tied a catgut ligature around the vein immediately below its junction. The rest of the vein was then excised, and the patient left the hospital within the fortnight. Deep communicating branches the anatomical situation of which is fairly constant, if they are found to be thrombosed, should be treated in the same way. I have not found that a moderate degree of inflammation makes any difference. It begins to subside as soon as the offending vein is removed; but of course, in such a case, the wound should not be sewn up tightly, as there is sure to be a considerable amount of oozing afterwards.

I have no doubt that the same idea has occurred to many others, but, as I cannot find any mention of it in textbooks or in ordinary publications, I have thought it might be worth while to call attention to it.

THE ANTHROPOMETRIC INVESTIGATION OF HOSPITAL PATIENTS.

By F. C. SHRUBSALL, M.D.CANTAB.,

Assistant Resident Medical Officer, Hospital for Consumption, Brompton.

THE life-history of man, as of other animals, may be described as being the resultant of the two forces—race and environment; the former representing all that man is and inherits, the latter all that he does, and in large measure explaining the characters and tendencies that he acquires. Both are of importance, and in turn both have been looked on as of the greatest significance. In connexion with medicine, half a century ago hereditary tendencies held sway as the currently-accepted causes of many diseases, and the doctrine of types was considered to be unassailable. Nowadays, when so many disorders have been traced to the action of micro-organisms—vegetable and animal—the pendulum has swung round, and in dealing with any individual patient his past and present environment is almost exclusively considered. On general principles either of these methods seems to be objectionable, as in any and every case both factors must be in action. If we cannot conceive of illness arising without the seeds, whether micro-organisms or otherwise, which are sown as a result of the individual mode of life and surroundings, so also we should regard the soil, the product of ancestral inheritance, as profoundly modifying and often doubtless prohibiting the growth of the proximate causes of disease. Such being the case it would seem probable that a comparative study of healthy and suffering individuals from the same areas would throw some light on the relative influence of physical characters and environment, as also on any mutual interactions between these factors themselves. The chief features to which attention has been drawn under the conditions of modern life are the differences which exist between the rustic labourer and the citizen artisan, the former working usually in the open air, the latter in more or less ill-ventilated workshops and but rarely visiting the countryside even for a

few hours at a time. There would appear to be a general impression that the town dweller has deteriorated in physique from his rural brethren, and that if this be the case, the problem of seeking out and removing the deleterious influences should be at once faced. It is, however, by no means clear whether in such a change we have to deal with a true degeneration of fixed racial elements under changed conditions of environment, or whether the differences in the surroundings and mode of life leads rather to the survival in predominant numbers of one race in the towns and of another in the country. That is to say, whether in reality one race does not show a greater aptitude for urban environment than another as a result either of its special physical, mental, or social qualities, or more probably from the aggregate of these. In such a way only does it seem easy to explain the constancy of the distribution of physical characters among the populations of Europe. The physical characters which have been more especially studied, and which are at present regarded as the best tests of racial differences, are head-form, stature, and the pigmentation of the hair and irides. Many more observations have been recorded of the last than of the two former characters, since the co-operation of the individual studied is not absolutely necessary, and the time required is not so long. Professor Ripley, in his treatise on the *Races of Europe*, states that the inhabitant of the city is usually longer-headed, shorter, and darker than his rural *confères*, and that in the cities of the Grand Duchy of Baden, at any rate, this difference is progressive.¹ As only a small part of the population is truly urban, recruiting constantly going on by a stream of immigration from country districts, far and near, it would be only natural that the average of the population of any given city should closely correspond with that of the area from which it receives its accessions, which Lapouge has appropriately called its sphere of attraction. That the average should differ would show the influence of a constantly-acting set of causes of the utmost importance to the social economist.

Professor Ammon, of Carlsruhe, as a result of his investigations in Baden, formulated the hypothesis, which has since become generally known as Ammon's law, that the Teutonic race shows a special aptitude for city life. If the facts, so far as they are known, be collected into tables, this suggestion can be tested for each physical character in turn.

Head Form.

City populations have longer heads in	No difference between town and country in	City populations have shorter heads in
Baden. West, Central, and Southern France. Vienna. Munich. Madrid. Northern Italy.	British Isles. Scandinavia. Smaller towns of France and Switzerland.	Southern Italy. Spain.

Stature.

City populations are taller in	No difference between town and country in	City populations are shorter in
Belgium. Baden. Chief cantonal towns of Switzerland. Hungary. Capital cities of Russia.	Saxony. Smaller towns of France and the British Isles.	North Germany. Franconia. Bavaria. Alsace-Lorraine. Geneva. Turin. Madrid. British Isles.

Pigmentation.

City populations are fairer in	No difference between town and country in	City populations are darker in
Metz (children). Chief towns of Switzerland (adults).	Most of the smaller towns of Europe.	Germany, except Metz (children). Cities of the Rhine Valley (adults). Bavaria. Austria. Italy. Baden. Boston, U.S.A. British Isles.