from our memoir; the disease results have been recently worked out by Miss Elderton.

Correlation of Keeness of Vision with Refraction and with Disease.

	Keeness of Vision and Refraction. (Contingency.)	Keeness of Vision and Disease.	
		Squint Included.	Without Squint.
Boys ...	0.58	0.36	0.21
Girls ...	0.54	0.50	0.32

It will be seen that, if we exclude strabismus, the diseases of eye and eyelid do not produce half the effect on vision that refraction does.

Now I do not intend to argue for a moment that the Edinburgh data provide the final word in these matters, but they form the first solid attempt to provide information as to the influence of home environment. Neither the school medical officer nor, as a rule, the teacher can follow the children into their homes. All that has hitherto been done has been more or less plausible guesswork as to the relation of home environment to the health and intelligence of the child. I shall not be surprised to find, when further data are available, that the nation has for years been putting its money on "Environment" when "Heredity" wins in a canter. To say this is not to discourage all attempts to better defective sight in the schools or to check the intensification of myopia. But it would be foolish—in face of our increasing degeneracy—to neglect the possibility that only other methods can in the long run hinder the spread of defects. Better qualities, such as keen and strong vision, are no longer an absolute requisite for survival, and defectiveness, instead of meeting the stern judgement of Nature, is by governmental and charitable agencies supported to multiply its kind. The curative art in its tenderness for the individual may be disastrous for the race, unless it realizes fully the relative biological importance of heredity and environment.

MEDICINE OR SURGERY IN EARLY CASES OF CANCER.

By SKENE KEITH, M.B., F.R.C.S. EDIN.,
LONDON.

At the present time surgery claims the treatment of all early cases of cancer, and allows an experiment only when it has failed. I hope to show a fair case for medical treatment on an early case, after extensive experience gained by experimenting on hopeless ones has apparently rendered this permissible. I do not for one moment suggest a prolonged course of treatment in any suitable case for operation, but one limited to a few weeks only. When a case presents itself where the diagnosis lies between cancer and syphilis, it is considered good practice to clear up the diagnosis by giving antisyphilitic treatment—in other words, to experiment to a certain extent; and this brings me to the point I wish to make, why, as surgery is not altogether satisfactory, not experiment for two or perhaps even three weeks. This is, of course, allowable only after encouraging results have been obtained in hopeless cases. If this length of time would make any appreciable difference to the prospects of permanent recovery, if operation had eventually to be had recourse to, it would be a very serious matter to suggest such delay; but if the disease is growing so rapidly as to show much difference in that time, the case would be one of those in which return is certain to be rapid.

When an experiment has been carried on, it has always been difficult to say if there is any real improvement. All who have much experience with malignant disease know that a certain amount of temporary improvement can be gained in many different ways. If one can show that some definite change is caused by cancer, and that this change can be arrested by treatment, it seems to be reasonably probable that a right line for farther investigation has been arrived at. I believe that it is possible, perhaps probable, that the change which takes place in the blood in all cases of cancer when at all advanced may prove the

guide which is wanted. The changes are not confined to one element; the red corpuscles are diminished in number except when there is pressure leading to starvation, and are altered in appearance, being weak and more or less colourless; the haemoglobin is diminished; the white cells are increased in number, and are altered relatively, the polymorphonuclear cells being increased at the expense of the lymphocytes.

If a careful blood examination were made before every operation for cancer it might, and probably would, show that the cases in which there was no return were those in which the blood was normal or nearly normal, or where it quickly returned to a healthy condition after operation. As examination of the blood after operations shows in some cases a gradual return to a normal condition of the white cells, it is apparent that once the local disease is removed, the general condition it had caused may right itself. It is therefore reasonable to advise after all operations for cancer the treatment my brother and I recommend, or any other which has the effect of materially improving the condition of the blood, even when the actual disease is present. There is not sufficient information to enable one to say how quickly the blood should become normal after the whole of a cancerous growth has been removed; but as an illustration of what may happen I give the figures of a case in which the patient became, exceptionally quickly, well and strong after two abdominal operations.

The history was that a colotomy had been performed, followed by the excision of about 9 in. of the transverse colon. My brother saw the patient for the first time on November 4th, 1908, seventeen days after the second operation. He made a blood examination, and found 4,400,000 red and 30,000 white corpuscles per cubic millimetre. As no blood count had been previously made, we do not know if there had been any improvement in the seventeen days. There were 78.1 per cent. of polymorphonuclears and 21.2 per cent. lymphocytes. Treatment was begun at once. On November 25th the white cells numbered 15,000, and there were 68.8 per cent. of polymorphonuclears, showing that while the percentage was within the normal limit, the number of polymorphonuclears in the total quantity of blood was roughly half as many as there should be. On March 7th, 1909, the number was 8,000 and the percentage 66, the total number of the polymorphonuclears being thus normal. The red cells had been in excess since the end of November, the count always being over five millions. On May 4th the number was 9,000 and the percentage 67, again within the normal limit. The treatment consisted in fifteen injections, each containing soamin 1 grain, green citrate of iron and ammonium 10 grains, and saturated solution of sodium cinnamate 20 minims. The treatment was finished by the end of December.

Examinations made at intervals after operations might show that the disease was returning before local evidence could be made out. This would not of necessity upset the local theory of the disease, as there might be return internally.

If we take the condition of the blood as a starting point for treatment, we see at once that no one remedy is likely to bring it back to normal, and we must give remedies which will increase the number of red cells, and the amount of haemoglobin, while the white cells are reduced, and the relative numbers of the polymorphonuclears and lymphocytes are put right.

My brother and I have now been working for six years with practically the same remedies. They are arsenic, iron, and sodium cinnamate, all old-fashioned cancer remedies. The preparations we have found best are soamin, green citrate of iron and ammonium, and a saturated solution of sodium cinnamate. Soamin is sodium para-aminophenyl arsenate, and contains 22.8 per cent. of arsenic. Whether these remedies should be given together or separately we are not certain.

Beginning any new line of treatment, one must naturally limit oneself to hopeless cases, to those in which the death sentence has been passed. This is only fair, but after six years' experience with such cases and with the knowledge gained by their study, and more especially when treatment can be placed on a scientific basis, and when certain failure can be seen within a very short time by its want of effect on the blood, surely the time has come when one cannot be accused of great rashness when one advises treatment which is capable of correcting the condition of the blood caused by a cancerous growth, in an early case, and provided always that treatment will not complicate operation should it be necessary later. I was exceptionally fortunate in meeting with an early case lately

before the white blood cells had become altered, and where a radical operation was not possible.

In the middle of last January I was sent for by Dr. Leonard Brown of Pau to see a gentleman 59 years of age. Dr. Brown had diagnosed the presence of an epithelioma of the rectum, and this was confirmed by Dr. Diriaut, who advised that a radical operation was impossible on account of matting together of tissues in front of the rectum, and advised colotomy. The growth was confined to the front and left side of the bowel. I entirely agreed with the diagnosis. The patient was anxious to come back to London, and it was agreed that treatment should be commenced as soon as possible, and that the question of colotomy be left open.

The examination of the blood was very encouraging, as, though the red cells numbered only 3,000,000 per c.mm. and the haemoglobin was 70 per cent., the white cells were normal. The injections were very badly borne, as they were usually followed by violent sickness lasting sometimes for an hour and a half. The blood quickly became normal. The treatment extended over a period of nearly two months, seventeen injections being given. The growth entirely disappeared, leaving on the left side a small pucker. The patient also gained very considerably in weight. One is so thoroughly imbued with the idea that cancer can only be cured by operation, that I naturally began to be doubtful about the diagnosis, and wrote Dr. Brown to ask if he or Dr. Diriaut had even a shadow of doubt on the subject, and received the reply that neither of them had any doubt whatever.

It may be said that one case does not prove anything, and with that I agree; but the case is interesting when taken along with others in which the altered condition of the blood in advanced cases has been modified by injections of iron, arsenic, and cinchinate of sodium.

The blood should be examined in all cases of cancer, and especially when any treatment is being carried out. At present it is our only guide, and time alone will show if it is a thoroughly reliable one.

The following extract from a letter received from Dr. Taves of New York, dated April 20th, 1909, is of interest as showing the practical benefit which may be derived, though the blood examination was not carried out, as I had only recently written him about it.

I began the injections recommended by you on October 1st last on a case of carcinoma of the stomach. The patient was a man, aged 74, suffering from vomiting, epigastric pain, and a loss of 20 lb. in weight. The tumour was visible, measuring about 4 in. across and 2½ in. from above downward. Since being put on the injections he has gained 12 lb. in weight, has no pain, vomits only very infrequently, and the tumour has decreased more than one-half in size. He is able to enjoy life, and goes to his business every day.

Another case, a man of 40, has carcinoma of the oesophagus. He could not swallow even water. The obstruction was demonstrated by bismuth paste and the x ray. As he was starving, a gastrostomy was done for feeding purposes, and then he was put on the injections. He has gained a few pounds in weight, and is now able to take by mouth two quarts of milk, several eggs, and two platefuls of cereals per day. He is stronger, has no pain, and seems to be getting along fairly well.

Memoranda :

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF LANDRY'S PALSY.*

LANDRY'S paralysis is a rare disease in Bombay. The following notes of a case may therefore be interesting :

Jan Mahomed, a Mohammedan from Cutch-Mandvie, aged 60 years, without occupation, was admitted into hospital on April 19th, 1909. He was a well-developed and well-nourished man. He lived on a mixed diet. He had syphilis eighteen years ago; he did not drink, but smoked moderately.

The present trouble began with tingling and heaviness of the legs and difficulty in walking. He felt exhausted on walking slight distances, and once he fell down while walking. Since then the legs have become very heavy. A few days after this he felt heaviness of his body and weakness of the left arm. Four or five days before admission he was not able to move his legs and left arm.

I saw him in the out-patient department for the first time on April 19th, 1909, that is, eighteen days after the commencement of the illness. He then had paralysis of both legs and of the left arm, but there was no wasting,

nor any loss of sensation. Knee-jerks were absent; Babinsky's sign was not present; there was no marked incontinence of urine and faeces. The cerebral functions were perfect; there was no ocular trouble, neither was there any loss of cutaneous reflexes. The vessels were atheromatous, and there was a history and evidence of chronic bronchitis. The spleen was enlarged. There were strong evidences of syphilis—scar on the penis, enlarged lymphatic glands, and swollen tibia. He was admitted with the diagnosis of disseminated myelitis.

The next day paralysis of the laryngeal muscles and weakness of the right arm came on; there was also some weakness of the diaphragm, as indicated by impaired movements of the abdominal walls. Within the next forty-eight hours the respiratory muscles became paralysed, there was dyspnoea and orthopnoea, and great restlessness. He got worse every day, the paralysis affecting all the respiratory muscles as well as the muscles of the neck. His mind was clear to the end, and swallowing and speech were unaffected. He was taken home, five days after admission, in a dying condition. He had no fever all along, except that the temperature was 99° F. on the first day.

The diagnosis rested on the following factors; (1) Rapidly advancing motor paralysis with very little involvement of the sphincters; (2) absence of wasting and the other trophic lesions; (3) absence of fever.

The points of interest in this case were: (1) Landry's palsy generally occurs between the ages of 20 and 30, but the patient under my observation was 60 years of age; (2) at first the case was difficult to diagnose, but later on, when the paralysis spread with such uniformity, as is noted, it was easy to diagnose.

FRAMROZE N. KAPADIA, L.M. and S.,
Honorary Assistant Physician, Sir J. J. Hospital, and
Tutor in Medicine, Grant Medical College, Bombay.

AN EASY METHOD OF REMOVING THE NAIL OF THE GREAT TOE BY COMPRESSION.

In the treatment of ingrown nail the ordinary operation of erosion is undoubtedly a method of barbarism. There are many variations and I am surprised that the following method has never been suggested.

I shall describe my last case. A commercial traveller, aged about 40, had suffered for some months with ingrown nail of the great toe. On its inner side it was inflamed and suppurating. First of all I applied a compress of lead and opium for twenty-four hours. Then a tape was tied round the root of the toe till it produced intense congestion. Then I took a large Péan's forceps with long parallel blades, and compressed the nail in the middle of the inner half with moderate firmness. A check as to the amount of compression can be introduced between the handles so as to prevent excessive pressure. Much less force is required than would be supposed. Then the toe was again wrapped in lead and opium lotion for three days. Then the inner part of the nail was found discoloured and loose, so that it was easily removed with the scissors without any bleeding save a few drops from the root of the nail.

In all, I have removed the great toenail five times by this method. The force applied need not be great, and if it produce no result (which I have never found) it can always be applied again. In one case a young lady applied the pressure herself, as she would not permit me, and it was successful. In another case, where the toe was very inflamed and very tender, and the patient was afraid of the process, which I had explained, I applied the blades very slightly, not expecting any result but just to give him courage so that I could apply it more firmly next time. To my surprise the result was perfect. Previous to this I had used much greater force.

Next, as to the place of application, it is better not too close to the edge of the nail. In my first attempts I applied it quite close to the edge, causing very free bleeding and not producing a dark, contused appearance, but a thin white line along the compressed part. To give the best results the force, I find, should be applied to the middle third of the half of the nail on the side affected. No anaesthetic is necessary. Lead and opium lotion I found better than cocaine.

Manchester.

PETER TYTLER, M.D.

* Read before the Bombay Branch.