is required. The observance of three cardinal rules of diagnosis prevents any serious blunder.

First: Look at the whole patient.

Secondly: Examine the whole of the diseased part, limb, or structure, and at rest.

Thirdly: Compare the two sides of the body.

Again, by looking at the whole patient, how much can be taken in at a glance "in a moment of time, for thought is quick." After awhile you may learn to guess the patient's social position, character, mental peculiarities, general health, and perhaps the disease. Habits of rapid observation and of rapid inference are capable of the highest cultivation and yield astonishing results.

A glance at the patient's face has revealed an error in diagnosis. One day some one said "this girl has a syphilitic rash which does not get well, although mercury has been given until she has been salivated." The girl's eyes were bright, her cheeks red, her hair glossy. Clearly she had no trace of the anaemia which is always present during the period of general syphilitic eruption. This glance at her face awoke suspicion, and the suspicion was confirmed when the rash was seen to be scaly and upon the extensor surfaces of the limbs, which had been scratched and torn to allay the itching. As a general rule syphilitic eruptions occur on flexor surfaces, are not scaly, and do not itch. The girl had simple psoriasis, which no amount of mercury would have cured.

Learn to watch the muscles of expression. The emotions of the mind always disturb the muscles of the face. Every one is born a physiognomist, but few cultivate the gift. Most of us are familiar with the commoner expressions of anger, pain and pleasure, and grief, but dead to the subtler ones. "When he spoke I saw a little muscle at the corner of his eye give a twitch, and then I knew that he was telling me an untruth." Whole books have been written upon the expression of the emotions. Those of Lavater, Bell, and Darwin ought to be read and compared. Lavater is full of observation without science, Bell betraying the dawn of science, and Darwin full of observation guided by scientific method and reasoning. Much remains to be done in this fascinating branch of science.

But the rule which tells you to examine the whole patient implies more than this. Over and over again have mistakes been made as to the nature of venereal sores when the removal of the garments would have revealed a general syphilitic eruption. By use of a little tact and kindness and the avoidance of unnecessary exposure there is seldom any difficulty in following this rule.

The second rule which tells you to examine the whole of the diseased limb or structure is often violated. Here is a man with a small ulcer upon the dorsum of the foot. He has had this ulcer for many years, but latterly it has grown bigger and become more painful. The base of the ulcer was hard, and adhered to the tarsal bones. I remember how much time was spent in endeavouring to tell what kind of ulcer this was, but no one knew until all the garments came off, and brought to light a mass of enlarged, hard, and adherent glands at the base of the Scarpa's triangle. Then it was clear that a neglected ulcer on the dorsum of the foot had become cancerous, with secondary invasion of the lymphatic glands.

It is also most important to examine diseased structures whilst the patient's body and muscles are at rest. Here is a patient with a mass of enlarged lymphatic glands beneath the left sterno-cleido-mastoideus. As he sits in the chair with his face turned towards the right, the glands feel immovably fixed to the spine, and some would think that they were enlarged by malignant growth which had spread beyond their capsules into the bone. But now ask the patient to lie upon the couch, and see how the glandular mass can be moved beneath the relaxed muscles. Further examination reveals the other groups of enlarged glands in the subclavian triangles.

Examine the whole of the diseased structure. In this instance the lymphatic glands of the neck are diseased. Examine, therefore, the lymphatic glands in the groin, axilla, and abdomen. This can be done in a few minutes. Next, go a step further and feel for the spleen. It contains a great deal of lymphatic tissue. Diseased lymphatic glands sometimes send forth lymph cells into the blood, so that a blood count has to be made.

The examination of the whole of the diseased structure may be a hard task. To find out the source of a little pus or blood in the urine the urethra may be looked at with an endoscope;

the bladder with another endoscope; the kidney may be photographed with *x* rays; and this in addition to the usual examination of the rectum, abdomen, and loins, and the microscopical and bacteriological examination of the urine.

Compare opposite sides of the body, for the sound side is a standard by which to judge the unsound. When a joint is diseased its healthy fellow tells the proper size, shape, temperature and range of movement. When the bones are at fault the comparison of opposite sides is all important, and may prevent serious blunders. I remember being shown the trapezium tubercle on the spine of the scapula by a man of long experience. He had taken it for an exostosis until the corresponding tubercle on the other scapula had been pointed out. When the bones are in question it is wise to have an *x*-ray photograph taken. Both sides of the body ought to be photographed for comparison because the shadow picture is so apt to mislead. A curious instance of misconception happened once. A man injured his hip. An *x*-ray photograph was taken, and as the neck of the femur on the injured side was so much shorter than the other an impacted fracture of the neck of the femur was diagnosed. The photographer had omitted to observe that on the sound side, owing to the position of his lamp, a longer shadow had been cast by the rami of the pubes, the ilium, the neck of the femur, and by the shaft of the femur, which looked twice its proper width. This made the injured side seem too short; as a matter of fact in the photograph it was the right length, and the opposite side was too long. Opposite sides of the body should be compared in feeling the arteries, testing the conductivity of the nerves, or the strength of muscles; hereafter you will learn to compare the eyes, the ears, the nostrils, and in truth all the paired organs.

Insist upon seeing what passes from the body. A man complained of a severe pain in the lower part of the abdomen, which was rigid and tender. The urine was passed into a glass, and contained flakes of lymph and mucus. He suffered from no increased frequency of micturition, and evidently did not attribute his pain and discomfort to the urinary bladder. A thin, anaemic woman had constipation and colicky pains in the abdomen. The course of the colon and sigmoid flexure was rather tender. After an aperient the motions were seen to contain mucous casts. A woman after parturition had a high temperature and rapid pulse-rate, abdominal pain, and, it is said, frequent vomiting. With very great difficulty a specimen of the vomit was seen, and found to be pneumonic expectoration. It had been assumed that she had so-called puerperal peritonitis.

Decline always to pass opinions upon things which you have not seen, and you will escape many pitfalls and humiliations. You ought to be ready to answer, "I cannot tell, for I have not seen it;" or, "I was not present." A pathologist asked to report upon a piece of tumour, said that the growth was cancerous and ought to be removed forthwith. Not having seen the patient, he was not aware that the unfortunate man had growth in nearly all the lymphatic glands of his neck. A surgeon was asked what he had found during an operation. In his reply, he advises that no further operation should be attempted, although he had not seen the patient for two years. He ought to have thought that in such a long time much might have happened. If you pass random opinions on things you have not seen, you are sure to be guilty of grave injustice to others, and will end by bringing yourself into contempt.

Learn to measure as accurately as you can what you see or feel. It is most unscientific and positively ludicrous to have tumours compared to fetal heads, oranges, apples, nuts, millet seed, and such like. Moreover, it is to my mind exceedingly nasty to compare the secretions and excretions of the body to cream, pea-soup, coffee, and other kinds of food.

These are some of the rules which I offer for your guidance. You will learn to use them by constant attendance in the wards and out-patient departments.

THE OPERATIVE TREATMENT OF CRANIAL DEPRESSION

(GREENSTICK FRACTURE OF THE SKULL).

By JAS. HENDERSON NICOLL, M.B., C.M.,
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The following six cases were shown to the Glasgow Medico-Chirurgical Society on April 3rd last. Four of the cases were "birth fractures" and two due to injury during infancy. Of

Fig. 1.—Case I; before operation.

Fig. 2.—Case I; after operation.

Fig. 3.—Case II; before operation.

Fig. 4.—Case III; before operation.

Fig. 5.—Case III; after operation.

Fig. 6.—Case II; after operation.

Fig. 7.—Case IV; Taken two weeks after operation. No photograph taken before operation.

Fig. 8.—Case V; before operation.

Fig. 9. Case V; after operation.

Fig. 10.—Case VI; before operation.

Fig. 11.—Case VI; after operation.

the four parturition cases, none had been treated at birth by Munro Kerr's manual moulding method.. All six cases were treated as out-patients after operation at the Glasgow Sick Children's Hospital, being nursed at home by the mothers, instructed by the surgical sister, who visited them and undertook the dressing.

The operation was similar in principle in all the cases—namely, inversion of the depressed area of bone. Scalp and pericranium having been reflected in one layer, the depressed portion of skull was cut out by trephine ($1\frac{1}{2}$ to $2\frac{1}{2}$ in. diameter), inverted on the dura mater, and fixed in position by suture over it of the replaced scalp and pericranium.

Name.	Lesion.	Operation.	Result.
1. Baby E., 2 months	Parturition depression of left frontal. Elder brother, aged 3, formerly operated on by another method for similar depression.	Aug. 29, 1902	Scalp sutures removed at end of first week, at which time bony union in the skull was found to be firm.
2. Baby McL., 10 months	Traumatic depression of left parietal from fall out of bed at age of 6 months.	Sept. 9, 1902	Do.
3. Baby S., 3 months	Parturition depression of left frontal.	Oct. 17, 1902	Do.
4. Jessie B., 4 years	Parturition depression of left frontal.	Feb. 18, 1903	Do.
5. Baby McD., 4 months	Parturition depression of left frontal.	Feb. 17, 1903	Do.
6. Baby M., 14 weeks	Traumatic depression of left parietal from fall on edge of stool at age of 2 weeks.	March 17, 1903	Do.

The patients were photographed before and after operation, with the exception of Case No. 4, in which no photograph was taken before operation. The photographs after operation were taken at dates varying from ten days to three weeks after the date of operation.

The result has been in five of the cases complete correction of the deformity, and in the sixth partial correction. In this case (No. 3 in list) the trephine available was not sufficiently large to include the entire area of depression, and it is intended that by a second operation the united bony "dome" and the surrounding remains of the original depression be reinverted.

One of the most striking features in the results has been the rapidity of union observed in the bone. At the end of one week, when the scalp sutures were removed, the inverted disc of bone was in all six cases found to be firmly united with the skull, and this even in the one case, Jessie B., aged 4, in which the child was over infancy.

CASE OF CONGENITAL DEFORMITY OF THE NOSE ASSOCIATED WITH A DEGREE OF MEDIAN HARELIP.

By ALEX. MACLENNAN, M.B., C.M., L.M.,

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DEFECTS in the development of the median parts of the face and head are somewhat rare, for it is owing to an arrest in the growth of the lateral maxillary processes that the very common deformity of so-called harelip is due. At one time it was doubted if a median cleft could occur in the upper lip, but the occurrence of a number of cases of this rare condition has settled the question, and it is generally admitted that the deformity occasionally is seen. It is the explanation of the facts which still gives rise to the diversity of opinion.

P. M., aged 7 months, was brought to the out-patient department of the Western Infirmary, Glasgow, suffering from a deformity of the nose, which was congenital. The accompanying photographs give a much better idea of the condition than any description can do, but there are one or two points which the photographs (Figs. 1 and 2) do not bring out with sufficient clearness.

The protuberance on the nose was covered with normal-looking skin, and on section the normal structures of skin were found to be present. The small tubercle seen about the middle of the swelling was somewhat more hairy than the other parts, which were covered with the usual fine down. The internal anatomy of the nose was normal with the exception that the septum was much thickened in the region of the external deformity. There was no trace on the protuberance of the red part of the lip. That part of the lip which ought to form the lunula

was thinned in the middle, and it was quite apparent that the lip had escaped further deformity owing to a compensatory expansion of the lateral maxillary processes. The continuation from the borders of the nostrils of the normal structures which form the upper lip could be

Fig. 1.

Fig. 2.

clearly traced downwards from either side, sweeping in a curved manner to bridge over the gap left by the missing fronto-nasal process, and curving away from each other again so as to leave a small notch in the upper lip. The palate and mouth were normal.

I would offer the following explanation of the malformation: The deformity has arisen from an error in the growth of the fronto-nasal process, either in direction or in punctuality. The defect might conceivably be attributed to the lateral maxillary processes, which by their excessive growth united in the middle line and caused the median process to become diverted from its proper course. This, however, was unlikely, for the amount of union below the protuberance was not sufficient to lead to the belief that the lateral maxillary processes possessed such an exuberant growth. In all probability then, the growth of the lateral maxillary processes was compensatory, and they attempted to fill in the gap caused by the failure of the fronto-nasal process to do its proper share; and just because the union was so slender, the error in the growth of the nasal process was one of direction rather than of punctuality. The maxillary processes possessing a normal formative power grew on till they met in the middle line, and in a similar way the misplaced fronto-nasal process exceeded its normal dimensions—perhaps an attempt to reach its proper situation.

From a scrutiny of other examples of this malformation, it seems evident that the error lies in the fronto-nasal process which takes on a wrong direction of growth, for in certain cases the same deformity of the nose may be present while the gap in the lip is retained: thus showing that to produce this deformity no barrier to the downward growth of the median process is required.

On the assumption that the defect is due to the median process growing forwards, instead of directly downwards, the deformity is quite explicable. The nasal process turned forwards and left a gap, which in the present case became filled in by a compensatory growth of the lateral maxillary processes, but these left enough trace of their action to indicate the origin and nature of the deformity.

The description of the deformity as a tumour has been carefully avoided, for this is an example of growth which can in no sense be called a neoplasm, being merely a piece of tissue, normal in every respect save its position, and it is questionable if this tissue would ever have taken on such an excessive growth as to warrant the term tumour being applied to it. Still less can it be described as a teratoma, for the mass neither formed part of another ovum or of a blighted twin. In an ordinary double harelip the misplaced or normally placed fronto-nasal process is never called a tumour, and this swelling is merely the misplaced nasal process or part of it. This aspect of the subject has been discussed by Kredel¹ in connexion with his case, which is very similar to the present one.

The failure to grow in a proper direction is probably the least fault to which the various parts of the developing ovum are liable, and it is wonderful that such an event does not happen oftener. The supposition that the defect is only a