

but it is soon masked by other mental manifestations, and the feeling of *bien être* is never a prodrome but a declared symptom of insanity.

It is evident that the maximal elevations for onset of insanity on the chart are for April, June, and December, showing a singular abrupt fall in May and a more prolonged fall towards the autumnal months. These 913 cases have, of course, been spread over a period of 25 years and there does not seem to be reason to regard the results as untrustworthy. The fall in May and the rise in June is inexplicable, especially when it is noted that the charts of recoveries and deaths show the same regression. Sir Arthur Mitchell has kindly constructed a chart of incidence on onset for me, which shows a more equable course; for the influence of the preceding and succeeding months of any one month are taken into account. The average is carried out instead of the absolute numbers. The result is a period of greater and lesser intensity in winter and summer respectively, and I believe that this gives a more adequate idea of the total incidence as regards seasons.

Chart XI. is designed to show the age on first attack, arranged in quinquennial periods. The curve rises rapidly from ages less than 20 years to the maximum on the completion of adolescence. From that point it falls with two short increases to the eventual minimum. These regressions mark the climacteric periods of women and men when the curves for the sexes are separately studied. It is certainly disquieting to find that out of 809 persons admitted no fewer than 195 had already suffered previous attacks. It is good reason for a thorough revision of our methods, for a closer study of the early symptoms, and a revisal of treatment.

The cyclic order of life, the slight diurnal changes in health, are, of course, frequently magnified in disease, and there is distinct tendency to enter upon, and to continue, in a vicious circle of mental disorder. (Table XIII. A shows how common these relapses are.) I have stated that nearly a quarter of the whole number received were already relapsed persons on first admission, and may add that 76 of the 173 readmissions were returned relapsed. I am also informed that 18 relapsed after final discharge. Appended to the table is a statement of the number of attacks referable to 250 persons. Further, the recoveries reported have been regarded as either temporary or permanent, with the result that 38 per cent. of the former yields but 17·18 per cent. of the latter. It is a loose use of the word recovery which confuses the issues. A hospital recovery from rheumatism or an asylum recovery from insanity is justifiably recorded for the time being, but these diseases of obscure causation have a marked tendency to relapse or recur and must remain records of failures until our methods of treatment are efficient to prevent these relapses and recurrences.

One of the questions of prognosis has reference to *expectation of life*. This is of importance in the matter of life insurance, in the matter of financial arrangements made in the interest of private patients, in the matter of asylum accommodation for State-supported patients. Does insanity shorten the life of the individual, and if so to what extent? Obviously the occurrence of general paralysis decides this question for that class within a year or two, although one could recite exceptional cases of a chronic type. The somatic conditions must be taken into account in individual cases, and broad generalisations must be applied with discrimination. I find that the average age on admission for men is 36 years, and the age at death 54·65 years, as against 63·96 for healthy males; while the average age on admission for women is 38 years, and the age at death is 60·93, as against 66·83 for healthy females.

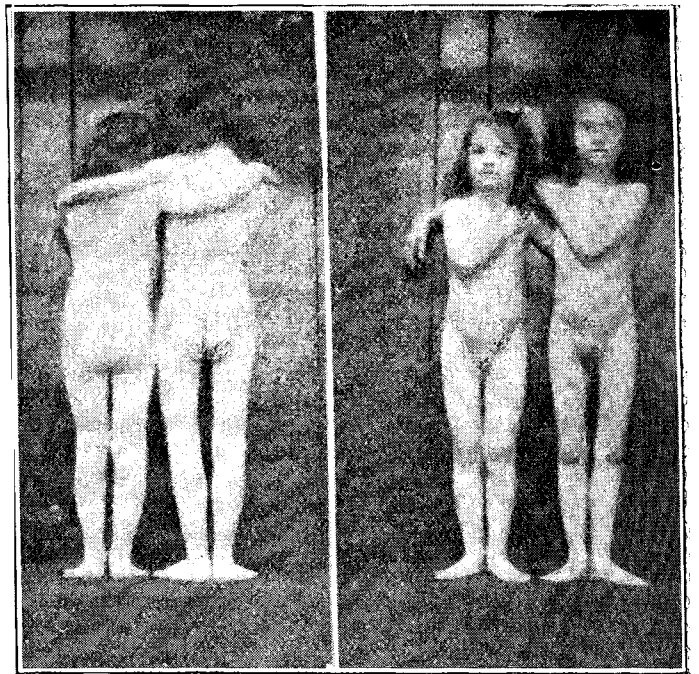
To resume: 809 persons were admitted; 252 recovered, 315 were removed unrecovered, and 140 died, leaving 102 resident. The percentages are: recovered, 31·14; unrecovered, 38·93; died, 17·30; remaining, 12·60; slightly differing from the returns of Table I. for admissions and readmissions. The expectation for this class of patients therefore would be: of every 10 patients received 3 will recover, 4 will leave unrecovered, 2 will die during residence, and 1 will remain indefinitely resident. But it is to be noted that of the 3 discharged recovered it is probable that not more than 2 will remain permanently sane. This practically agrees with Dr. Thurnam's finding in a similar institution half a century ago, "Not more than two remain well during the rest of their lives."

## THE POST-OPERATIVE TREATMENT OF CONGENITAL DISLOCATION OF THE HIP-JOINT.

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FOR some time past all surgeons have admitted that the proper treatment of congenital dislocation of the hip-joint is the manipulative and functional weight-bearing method of Lorenz. Since February, 1903, I have operated on 23 patients whose ages range from two to ten years. In the first 20 of these cases the results are now well established and they are very striking indeed to anyone who has much experience of this deformity. The 20 patients had among them 25 joints to be operated on, some being double dislocations. On my last visit to the hospital two of these patients happened to attend: one I operated on for a double dislocation in July, 1905, when she was three and a half years of age, and the other for a single dislocation in January, 1905, at the age of two years. Now both are perfectly normal children. Two others a short time ago I photographed, Fig. 1, to show the contour of the body restored to the normal. They romp and run as vigorously and safely as other children. The cure of the deformity does not only affect

FIG. 1.



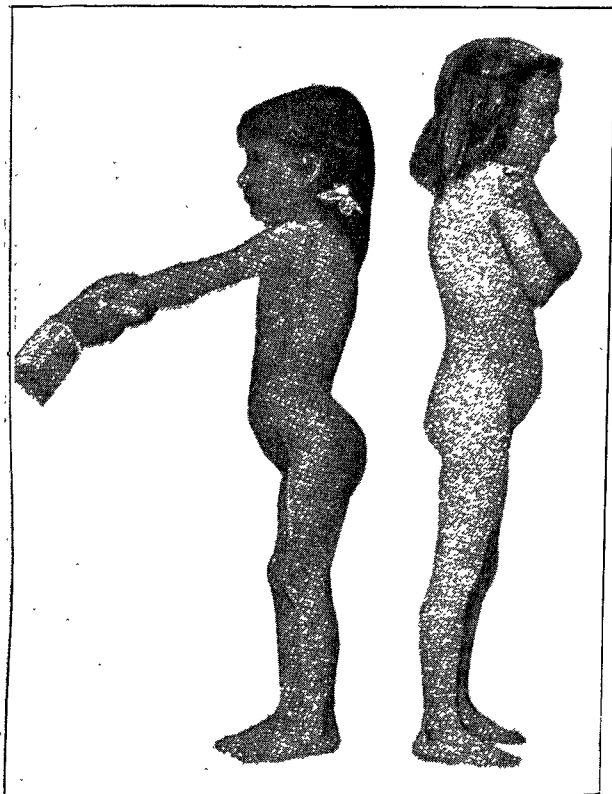
Two patients one year and nine months after reduction of congenitally dislocated hips; the taller girl had a double, the other a single, dislocation.

the hip-joint but the secondary deformity of the spine is also removed, as is shown in Fig. 2. Nor is it only in a few exceptional cases that such results as these are to be obtained. To the 25 joints mentioned above I may add the five joints of the later cases, for my experience now enables me to prognose their final results. The results appear as follows: Cured, 24; anteverted, 1; relapsed, 2; and doubtful, 3. By "cured" is meant a physiologically perfect joint, and also anatomically as far as skiagraphs and clinical examination enable us to test the anatomy. By "anteverted" is meant that the head of the bone is firmly lodged beneath the anterior superior iliac spine where it has a full range of movement and supports the body without any lordosis and with but slight shortening of the limb. Of the doubtful ones, one, a single case, has been lost sight of, and another, a double case, is still under treatment, and the acetabula being very shallow the final result may disappoint us. But what a pleasure it is to see 24 out of 30 congenitally dislocated hips completely cured. A few years ago this would have been impossible.

The operation and subsequent treatment involve nothing that any medical man of surgical habits cannot achieve, but

both the operation and after-treatment demand a sound knowledge of both the pathological and the surgical points involved and the operation besides this knowledge requires personal experience in the form of patient clinical work if certain dangers are to be altogether avoided. The operative measures I have described elsewhere;<sup>1</sup> it is the post-operative period that I wish to dwell on now. This period, extending as it does over from one to two years, requires a loyal coöperation between the surgeon and the regular medical adviser. This period involves nothing that taxes the patient's strength; on the contrary, the exercises and medical supervision combined invariably improve the physical condition and they are instructive in that they embrace nearly everything that is useful in the way of

FIG. 2.



Two illustrations of the same child before and two years after operation for double congenital dislocation: the marked lordosis has been completely removed by the treatment.

surgical massage, &c. As to the immediate post-operative events, I am pleased to say that where the surgeon is familiar with the operative details and the nurses are experienced in dealing with these cases there are no post-operative accidents. In younger children an occasional carminative dose and in older children one or two minims of liquor opii sedativus relieve the pain and spasm that in the severer cases mark the first two days. Two accidents have occurred after patients have left the hospital: one a bed-sore from the pressure of the upper edge of the plaster case on the back, and the other from pressure of the edge of the case on the popliteal nerves; in neither case were the results serious, and such accidents are to be avoided by attention to the simplest nursing indications. The patient in a unilateral case is able to stand and a few days later walks in a way with a patten on the foot of the side operated on. (Fig. 3.) After double operation the patient sits on a low chair and soon learns to hop sideways round a table and later to move in the same way, holding a stick by both hands.

In order to realise the chief aims of after-treatment it is requisite to consider the anatomy of the parts. The most striking anatomical change is the stretching of the hamstrings as shown in Fig. 4.

*Stretching the hamstrings.*—The first place among the exercises that are required in the six months, during which the patient wears the plaster-of-Paris apparatus, must be given to that of stretching the hamstrings. Twice daily the nurse or mother, steadying the knee in unilateral and working both legs simultaneously in bilateral cases, makes from

10 to 20 passive extension movements at the knee. These movements stop short of causing pain and are very gradually increased. This is followed by as many active movements on the part of the patient. These exercises must be done regularly until the knee or knees

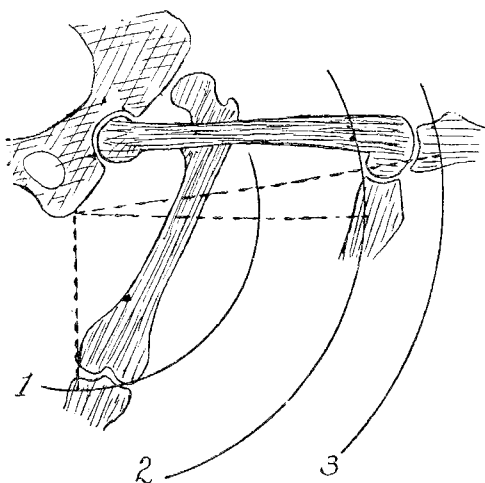
FIG. 3.



A patient a few days after operation in a unilateral case.

are capable of complete extension as shown in Fig. 5. The other points to be attended to before the plaster case is removed are: 1. The skin toilet by means of the chafing bands—i.e., bandages—which pass from the upper to the lower outlet of the case. 2. Massage<sup>2</sup>

FIG. 4.



A diagram showing by the radii of the circles—at 1, the length of the hamstring muscles before operation; at 2, the length of the same immediately after operation; and at 3, the length when the power of extending the knee has been obtained by regular exercises.

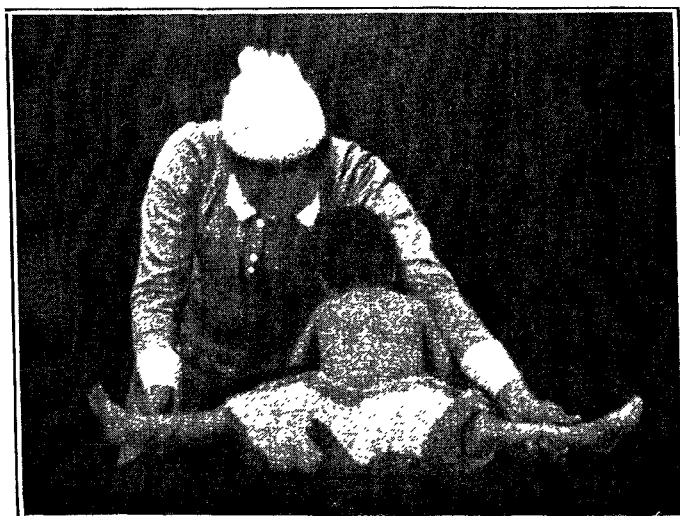
of the muscles of the foot and leg, and also those of the thigh as far as they can be reached by passing the hand as far as possible under the case in all directions, particular

<sup>2</sup> The massage consists in stroking with the flat hand or finger-tips (*effleurage*), kneading the muscles through the skin between the finger-tips and the thumb or thenar eminence (*pétrissage*), and circular frictions, the finger-tips being placed firmly on the skin and keeping the same portion of skin under them being moved in a circle, pressing the muscles between them and the bone (circular friction). The fingers are moved from point to point till the whole area has been treated.

<sup>1</sup> Congenital Dislocation of the Hip, second edition, 1905.

attention to be paid to massage of the gluteal muscles, this being done by circular frictions. 3. Besides encouraging the patient to stand and walk the patient is exercised (in unilateral cases) lying on the sound side and alternately raising and lowering the limb. After a time this same exercise can be done by making the patient stand back to a table and raise the legs alternately so that the feet in turn

FIG. 5.



Stretching the hamstrings.

rest on the table. In bilateral cases the patient lies on a table for the earlier adduction-abduction exercises. 4. Spinal exercise. After the operation the spine has a backward convexity (kyphosis) in place of the previous lordosis; to restore the normal degree of lordosis the patient, lying prone, throws up the lower part of the body as shown in Fig. 6. This exercise needs help for a time.

FIG. 6.



Exercise for the spinal muscles.

*Treatment after removal of the plaster case.*—The most anxious period of the after-treatment is when the plaster apparatus is removed about six months after operation. If the exercises have been thoroughly done the patient in a double case has the appearance shown in Fig. 7 when the plaster is removed. In most cases the limbs can be adducted to about  $45^\circ$ . If they move easily beyond this the joints may be unstable and require a further month or two of fixation. Those cases in which the stiffness will not allow the limbs to be adducted more than  $45^\circ$  are the safest. Thus a careful examination of the joint is necessary when the plaster

is removed in order to decide on the exercises that are required.

*In ordinary cases* the great danger is in trying to bring the legs down too rapidly. If we look at the diagram Fig. 8 another danger is made clear. The stability of the reduction depends much upon maintaining the position "3," or, in other words, of keeping the knees behind the mid-frontal plane of the body. To meet these indications in unilateral cases I order the patient to continue to wear the patten for some time after the plaster is removed and in both these and double cases the patient sleeps on a flat mattress with a firm cushion four inches thick, fastened by tapes to the thigh so that the rectangular position with the knee

FIG. 7.

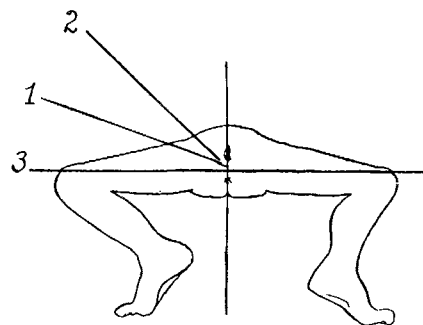


The appearance of a patient after removal of the plaster in a case of double dislocation.

well back is maintained. When one limb tends to become adducted too rapidly the patient should have the boot raised on the opposite side. The remaining exercises and rubbing are much the same as those required before the plaster was removed; especial attention is now paid to the spinal exercise. (Fig. 6.)

*In rigidly abducted cases* a special exercise is used as follows. The child lying on the back a thorough kneading of the muscles below the anterior superior iliac spine and all round the top of the thigh is done and then active, passive, and resisted adductions and abductions are done with the knee flexed as well as extended. In rare cases subcutaneous section of the tensor fasciæ femoris is required.

FIG. 8.



Shows the outline of the limbs traced from a photograph of a patient immediately after operation. Line 1 shows the degree of separation of the flexed limb that the hip-joints allow in a normal person, line 2 the degree in a case of congenital dislocation of the hip, and line 3 that after Lorenz's operation.

*In subpubic cases*, that is when the head of the femur is very prominent in the groin and well internal to the femoral artery, it is necessary to place the head of the femur in the acetabulum by flexing, and sometimes in addition internally rotating the limb and fixing it in this position in plaster for two months. At the end of this time there is sometimes a contraction of the ilio-psoas which requires special measures to correct; first, the patient lies prone, the knees elevated on a firm padded block and a sand-bag on the buttocks, for 20 minutes three times a day in order to overcome flexion at the hip-joint; and, secondly, the patient lies at the edge of a table, the pelvis being held by a nurse and the limb dropped over the edge of the table. This position allows of both active and passive extension of the hip. If these exercises are persevered in the worst-looking contracture will be overcome.

*Subspinous cases* are those in which the head of the bone

lies above the acetabulum and below the anterior superior spine. They give excellent results if the precautions against too early adduction and forward movement of the knees are

FIG. 9.



An exercise required in subspinous cases.

observed. For this the night cushion described above is required and also the exercise shown in Fig. 9, where the nurse holds the child's pelvis firm against her knee and at the same time draws back the patient's knee in the fully abducted position 10 to 20 times.

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## SOME OBSERVATIONS ON UTERINE FIBROIDS:

BASED ON A SERIES OF 150 CONSECUTIVE CASES TREATED BY ABDOMINAL OPERATION.

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### II.<sup>1</sup>

#### FIBROIDS IN RELATION TO PREGNANCY, LABOUR, AND THE PUERPERIUM.<sup>2</sup>

WHEN a uterus harbours both a foetus and a fibroid it may be confidently asserted that the fibroid got there first, although it may have lain latent and undiscovered until after the rightful tenant was known to have arrived. The foetus, as we know, may be a peaceable tenant or the reverse; the fibroid is at best a tolerated interloper, and at worst an anarchist involving in ruin the home of his adoption; but when both foetus and fibroid live in the same uterus the possibilities for mischief possessed by each are accentuated by their mutual disagreements, so that by their combination a dangerous crisis is always threatened and not always averted.

In considering this question we must discuss the matter first from the point of view of the fibroid, and, secondly, from the point of view of the foetus, and we may formulate our inquiry thus: 1. What is the effect of pregnancy upon fibroids? 2. What is the effect of fibroids upon pregnancy? 3. How should we treat a case of pregnancy complicated by fibroids?

1. *What is the effect of pregnancy upon fibroids?*—The effect of pregnancy has to be considered in relation to

(a) the condition of the fibroids; (b) the symptoms produced by fibroids; and (c) the question of operating upon fibroids.

(a) How does pregnancy affect the condition of fibroids? Much will depend on the relation of the tumour to the uterus. Thus, the growth of a subperitoneal fibroid is but little influenced by pregnancy, and when the tumour is attached to the upper zone of the uterus and has a moderately large pedicle it may remain undisturbed and undisturbing, and allow of a normal labour and puerperium. If the pedicle be narrow it may become twisted, leading to acute pain, necrosis of the tumour, and peritonitis. If the tumour is associated with the lower uterine zone, whether its site be subperitoneal, interstitial, or submucous, it may become incarcerated in the pelvis, and by interference with its blood-supply degenerative changes may result. An interstitial or submucous fibroid generally shows a marked increase of growth during pregnancy; but after confinement the fibroid commonly undergoes a measure of involution *pari passu* with that of the uterus. During labour the pedicle of a submucous fibroid may be so pressed upon as to lead to cutting off of the blood-supply and subsequent sloughing; or the capsule of the fibroid, whether interstitial or submucous, may be so injured that during the puerperium septic infection and sloughing occur. Thus, by serious annoyances or persistent pin-pricks pregnancy and labour may goad on a comparatively harmless fibroid into being a really dangerous character.

(b) How does pregnancy modify the symptoms produced by fibroids? The principal symptoms due to fibroids are four in number—hæmorrhage, pain, swelling, and pressure effects. Hæmorrhage is checked or arrested by pregnancy, partly because of the suppression of menstruation and partly because the ovum acts as a plug in the uterine cavity, but the plugging will fail if a submucous or polypoid fibroid is attached low down in the uterus or in the cervix, so that it lies lower than the ovum, and we shall then get hæmorrhage during pregnancy. Theoretically, a polypus in the uterine fundus might cause concealed, so-called "accidental" hæmorrhage during the later months, but I have not come across such a case. If a submucous fibroid be thwarted in its bleeding proclivities during pregnancy it may obtain an ample revenge at the time of labour by setting up profuse post-partum hæmorrhage. I shall have more to say on this point when discussing the effect of fibroids upon pregnancy. The other symptoms due to fibroids are all aggravated by pregnancy. Pain is a symptom which is due not so much to fibroids themselves as to complications, such as localised peritonitis with adhesions, diseased ovaries and tubes, or degenerative changes in the tumours; and all these conditions will be accentuated by the pressure of the enlarging uterus. Abdominal swelling and pressure effects result from the mere mechanical bulk of fibroid tumours and *a fortiori* the swelling and pressure will be intensified when to the bulk of the tumour is added the progressively greater bulk of the growing uterus. Thus pressure by a fibroid on the base of the bladder which is sufficient to lead to irritability of the bladder and frequent micturition may develop as the uterus enlarges into pressure on the urethra sufficient to cause retention of urine.

(c) How does pregnancy affect the question of operating upon fibroids? We may reply to this broadly that sometimes the incidence of pregnancy will defer operation, when the chances of natural delivery are good, for the child's sake; and on the other hand, an operation may be precipitated, if labour difficulties threaten, for the mother's sake. When an operation has to be undertaken the fact of pregnancy will make a myomectomy preferable to a hysterectomy whenever that is possible.

2. *What is the effect of fibroids upon pregnancy?*—Sometimes the fibroid is so peaceably disposed that when the foetus gives up possession at the expiration of his normal tenancy he has never known his peril and his landlady has never suspected that in addition to her accredited lodger she harboured an undesirable alien. Opinions among authorities differ as to whether this happy consummation is the rule or the exception; but of the potentiality for evil possessed by the fibroid there can be no doubt, and the risks may be summed up as follows:—

(a) Abortion occurs, due either to pressure or to the fibroid interfering with the blood-supply of the placental site; such abortions appear to take place usually at about the fourth month. In one case that came under my notice (No. 93 on the list) pregnancy was arrested at two and a

<sup>1</sup> Part I. was published in THE LANCET of March 2nd, 1907, p. 574.

<sup>2</sup> An address delivered at the North-East London Post-Graduate College, Tottenham, on Nov. 20th, 1906.