CASE III.

J. G., aged 22. Old-standing interstitial keratitis was present with dense corneal opacities, and when first seen he was suffering from a recurrence, the eyes being in a semi-acute condition. On examination three days after the first application of x rays the pain and "gritty" feeling in the eyes were relieved, and after the second application all acute symptoms had disappeared. Local treatment was also carried out and the patient had weekly injections of neo-kharsivan. When last seen the corneal opacity was less marked, but vision was poor owing to the presence of central choroiditis.

This case would suggest that even in young adults treatment by x rays is useful in the semi-acute stage, especially for the relief of pain and photophobia.

CASE IV.

R. B., aged 17, had suffered from interstitial keratitis in 1920, and after six months' treatment a very dense central opacity remained. The Wassermann reaction was +, and antisyphilitic measures seemed to have little effect. When seen about twelve months later keratitis punctata was present in the left eye, together with ciliary injection and photophobia, followed later by irido-cyclitis, and finally by infiltration and vascularization of the deeper corneal layers. Active antisyphilitic and local treatment seemed again to have no effect. X -ray administration was commenced four months after the first symptoms appeared in this eye. Improvement started at once and after three attendances the acute stage was practically over. Nine applications of x rays were given, and though the amount of corneal opacity left was extreme the patient himself professes that the vision improved each time x rays were applied.

CASE V.

A. A., aged 63, had suffered from interstitial keratitis in childhood, and when she was first seen vision was reduced to hand movements in each eye. Both corneae were almost opaque, and in addition to the parenchymatous condition new superficial vessels had spread over the surface. Evidence of old iritis, ciliary injection, and firm tension were present in each eye. Pain and photophobia were marked. The usual forms of treatment were given but without any benefit. X rays were then applied, and after four doses the pain and photophobia had disappeared, but no improvement in vision took place.

This case would tend to show that in old chronic interstitial keratitis in aged adults relief of pain and photophobia only can be expected from x -ray treatment.

CASE VI.

S. W., a man aged 45, was suffering from Mooren's ulcer, which is, strictly speaking, a superficial disease of the cornea, but we include the case as a matter of general interest. The lesion was of a particularly progressive type, unaffected by treatment—local, medicinal, or operative. First the cornea of the right eye and then that of the left was totally destroyed, the pain, photophobia, and purulent discharge being very distressing. For these latter symptoms, as treatment seemed unavailing, x rays were suggested, and twelve applications were made at weekly intervals. After the first two or three doses there was marked relief; the discharge rapidly became less and shortly ceased altogether. The pain and photophobia disappeared. No improvement in the scar tissue was expected, and apparently none took place.

CONCLUSIONS.

1. In syphilitic interstitial keratitis (we have not treated by this method a case known to be definitely tuberculous) x rays in weak doses have an undoubted effect in cutting short the early stages of infiltration into the deeper corneal layers.

2. The earlier the stage of the disease at which this treatment is started the more rapid the improvement and the more satisfactory the results. Case II exemplifies this in a striking manner, and it will be noted that in this case x rays were practically the only curative agent used, till the acute stage was over.

3. The younger the patient the better the reaction to x rays. In the cases treated children reacted more rapidly than young adults, whilst in older people the reaction was less satisfactory.

4. It is in the relief of pain, photophobia, and lacrymation that x rays show the most striking results. The acute stage is also much shortened by checking infiltration and vascularization.

5. The opacities in young subjects are undoubtedly benefited by x rays. This was strikingly shown in Case I, but is opposed to the findings of the foreign writers.

6. In no case was any damage done to the eye or the surrounding tissues, and the patients complained of no inconvenience during the treatment.

7. Small doses only of x rays are necessary.

8. X rays should be used as an aid to, but should not take the place of, local, antisyphilitic, and general treatment.

9. The value of small doses of x rays shown in interstitial keratitis justifies their trial in certain chronic eye diseases where treatment has been disappointing, such as the painful blind glaucomatous eye and scleritis of the aged. Further, a safe and more stabilized technique such as that here described holds out hope of better results in many eye conditions, both chronic and acute.

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THE TREATMENT OF ASTHMA WITH COMBINED PEPTONE AND VACCINE.

NOTES ON TWENTY-FOUR CASES TREATED.

BY

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In regard to the treatment of asthma by the system or protein shock, it was found that certain cases did not react to peptone or vaccine when given alone. Some cases did better with a course of peptone followed by vaccine treatment; but still there were some that did not react, so I devised a system of giving a course of injections of peptone and vaccine combined in one solution. The solution used was in three strengths, as follows:

- 5 c.cm. of 5 per cent. solution = 0.25 gram peptone + 235 million organisms mixed catarrhal vaccine.
- 5 c.cm. of 10 per cent. solution = 0.5 gram peptone + 940 million organisms mixed catarrhal vaccine.
- 10 c.cm. of 10 per cent. solution = 1 gram peptone + 1,880 million organisms mixed catarrhal vaccine.

The injections were given every seven days: for the first four weeks half a tube of A solution per week, for the second four weeks half a tube of B solution per week, and so on, increasing in strength of dosage. The injections were given intramuscularly in the so-called painless area just below

No. of Case.	Sex.	Age.	Duration of Condition.	No. of Injections at Weekly Intervals.	Origin: Whether Specific or not.	Results.
1	M.	Yrs. 38	8	12	No	Slightly improved.
2	M.	32	10	24	Yes	Cured (nephritis case).
3	M.	37	9	20	No	Cured.
4	M.	21	2	24	No	Cured.
5	F.	17	2	20	No	Cured.
6	M.	13	8	24	No	Cured.
7	M.	24	10	24	No	Greatly improved.
8	M.	65	2	12	Yes	Cured.
9	M.	29	6	12	Yes	Cured.
10	M.	16	6	24	Yes	Greatly improved.
11	M.	17	2	12	Yes	Cured.
12	F.	10	4	12	No	Cured.
13	M.	12	10	12	No	Slightly improved: still under treatment.
14	F.	42	8	12	No	Slightly improved.
15	F.	25	5	18	No	Cured.
16	M.	34	10	19	Yes	Reduced number of attacks; longer period between attacks.
17	M.	13	6	12	No	Cured.
18	M.	43	12	24	Yes	Greatly improved.
19	M.	11	2	12	No	Cured.
20	M.	35	4	12	No	Cured.
21	M.	10	15	12	No	Improved.
22	M.	49	30	24	Yes	No improvement.
23	M.	35	12	18	Yes	Cured.
24	M.	11	8	12	No	Greatly improved.

the anterior superior spine of the ilium, by means of an ordinary-sized serum needle, the needle being pushed in till the bone was felt, then slightly withdrawn and the contents of the syringe injected. On withdrawal of the needle the area was briskly massaged with a hard pad of cotton-wool to diffuse the fluid through the tissues.

A sharp reaction usually followed in about six to eight hours; there was some local redness and tenderness, and the temperature rose a degree or so. Further, there was a tendency to perspiration, but no other symptoms developed. The injections were given at night, and the patient was able to be up and about the next day without discomfort. No special diet or medicinal treatment was indicated. The results of the treatment of twenty-four cases by this method are given in the accompanying table (p. 13).

The following points were noted: Generally the results were quite good. In younger patients the signs of improvement were to be seen early; age seemed to count more than the duration of the condition—as age increased the condition was more stubborn to treatment; but in some cases, as will be seen, prolonged exhibition of the combination gave satisfactory results. One of the cases after prolonged administration developed nephritis, which cleared up after stoppage of treatment. All the cases gained in weight while under treatment and their general health was improved.

OUTWARD DISLOCATION AT THE TARSO-METATARSAL JOINT.

BY

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DISLOCATION at the tarso-metatarsal joint is usually caused by great violence—when the foot is run over by a heavy wagon, for instance. The following case, in which the trauma was comparatively slight, seems worth recording:

Mrs. N., a heavy woman of 65, "sprained" her left foot in September, 1922. While standing on a chair she overbalanced, and as she stepped down her full weight came on the inner side of the left forefoot. In her own words, her foot "stuck out sideways" until reduced by a helpful neighbour, and it was very painful. She says that she heard a distinct snap as her foot struck the ground. She remained on a couch for three weeks,

FIG. 1.—Diagrammatic drawing from a skiagram.

FIG. 2.—Drawing from a photograph.

applying to the foot a liniment of great promise but defective performance. When seen four months later, the left foot was valgoid, and the forefoot displaced outward; the internal cuneiform bone was very prominent; there was a general stiffness of the foot, and movements were painful. A skiagram showed dislocation at the tarso-metatarsal joint outward and slightly dorsal, with considerable bone atrophy. She was ordered a light outside steel to the knee, valgus T-strap, and a surgical boot wedged on the inner side. A month later function was good.

Of the fifty cases recorded by Lenormant in his authoritative article,¹ only four occurred in women, and in none of those was the dislocation dorsal and outward. All were caused by great violence, and upon consideration of the anatomy it is difficult to understand how stepping down from a chair could have such serious consequences. Desprès insists that a fracture of the second metatarsal is always present in these cases. Bayer and others deny this. Quénu suggests that a fracture of the distal end of the external cuneiform renders the interarticular line

straight, and permits luxation. In the case of Mrs. N., fracture of both the second metatarsal and external cuneiform appears to have occurred. Girsensohn² attributes a similar injury to the joint approximating to the ball-and-socket type, and to the absence of a dorsal inter-metatarsal ligament.

The physical signs are quickly masked by the great swelling of the dorsum of the foot, accounting for the late diagnosis in 20 per cent. of cases (Lenormant). The history of the type of violence and of displacement of the forefoot is therefore of great importance. The cases soon become irreducible by manipulation (fifteen days, von Linhart), and fibrosis, exuberant callus, and retraction of soft structures occur. Lenormant describes an ossification of the plantar ligaments, forming a bony bridge under the site of injury, as the chief difficulty found in these late cases. But in those early cases submitted to open operation the obstacle to reduction has been that portion of the tibialis anticus tendon attached to the first metatarsal, which becomes lodged between the base of the metatarsal and the first cuneiform. When this is cut, reduction can be effected with ease,³ and the result of operation has been excellent. The results of operation in late cases have been poor (Lenormant).

It would appear, then, that in early cases an open operation with tenotomy of the tibialis anticus is indicated. In late cases function is fairly good anyhow, and the results of operation have not been encouraging.

I have to thank Mr. J. Jackson Clarke for permission to publish this case.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

CARBON MONOXIDE POISONING DURING PREGNANCY.

ALTHOUGH cases of carbon monoxide poisoning are of common occurrence, I have been able to find few references to such a condition during pregnancy. The following case was of considerable interest, and in view of its unusual features seems worthy of record.

On February 15th, 1923, a man, his wife, and a male child aged 2 years, were all "gassed" whilst asleep, through leakage from a fractured road main filling their house with coal gas. They were taken to the Bristol General Hospital at once. Husband and wife were unconscious on admission; the child was dead. Both patients had stertorous breathing, pulses almost imperceptible, and the complexion a pinkish-grey colour.

The man, aged 26 years, recovered consciousness in four hours after treatment with camphor injections, stimulants, and oxygen. He made an uninterrupted recovery in about five days.

The woman, aged 23 years, regained consciousness in three hours under similar treatment. She vomited once during this time. When the accident occurred she was six months pregnant, and because there had been no foetal movements since the occurrence she was examined by the physician accoucheur (Mr. D. C. Rayner), who decided that in all probability the foetus was dead. Having considerably recovered she was discharged from hospital on February 22nd. Three weeks later she was admitted to Southmead Infirmary for observation. The fundus uteri only reached the umbilicus. The tumour was "doughy" rather than elastic; the patient had felt no foetal movements; she had had no pains or discomfort; milk could be expressed from both breasts. Since she had lost her first child, the patient naturally clung to the smallest hope of the foetus being still alive. Consequently it was decided not to induce labour, and the patient continued in apparently normal health.

On April 15th (exactly two months after the accident) definite labour pains commenced at 8.15 p.m. About two hours later the os was found fully dilated, with a large elongated bag of membranes almost reaching to the vulva. The presenting part felt "soft and flabby" and during the examination the membranes ruptured. The liquor amnii which escaped was dark brown in colour, but not offensive. It seemed certain now that the foetus was dead, and the patient was left an hour or so in the hope that the uterus would expel its contents. During this time she complained of severe pains about every five minutes though the uterus did not feel to be contracting well. A second vaginal examination showed that the os was somewhat smaller than before and the ribs of the foetus could be felt.

In view of some slight haemorrhage it was decided that the uterus must be emptied as soon as possible. The uterine contractions still continued poor and seemed totally unable to express