oedema and thickening, while desquamation of the tubular epithelium following granular degeneration was usually present in varying degrees.

In the *skin* the first change observed consisted of a swelling of the superficial layers of epithelium with inability of these cells to take up stains properly. This swelling would appear to indicate infiltration of the cell with fluid, and these changes progressed until the cells lost practically all structure and were cast off, the separation occurring just at the junction of epithelium and corium. In the latter layer the tissue fibres stained irregularly, and were separated by oedematous infiltration, while marked dilatation of capillaries with extrusion of red blood cells was also seen here. The epithelium of the sweat and sebaceous glands, and also of the hair follicles, retained their normal appearance for a surprisingly long time, and in regions where such structures were plentiful—the *s a p*—the degenerative changes described were never so marked as in skin from other parts of the body.

The *placenta* in syphilitic cases presented the microscopic appearances usually described in this condition: crowding of the field with villi, small intervillous spaces, the absence of blood vessels from the villi, or if present few in number and small, and the structure of the villi consisting of a uniform and loose areolar tissue. In the placenta showing infarctions and haemorrhages changes of two kinds were seen: (1) Fibrinous deposit between the villi, gluing them together as it were and associated with degeneration and disappearance of the Langhans's cells covering the villi. At a later stage the villi appeared as degenerated, light-staining areas embedded in a dark mass of fibrinous deposit. This is the type of infarction described by Eden and Williams as a normal process. (2) In the infarctions associated with uteroplacental haemorrhage the first change observed was dilatation of the vessels in the villi, so that this part of the placenta looked red to the naked eye (red infarction); but in some cases this dilatation was so great that actual haemorrhage had occurred (haemorrhagic infarction or placental apoplexy). The primary event is considered to be the uteroplacental haemorrhage which had suddenly interfered with the nourishment of the placenta and so had inflicted an acute vascular injury the reaction to which was dilatation of the vessels or even a haemorrhage into the substance of the placenta. The villi concerned, being separated from their uterine attachment and deprived of their nourishment, degenerate and are finally replaced by a fibrous scar, which develops from the periphery towards the centre of the involved area. These changes have been fully worked out by Young and others. Space will not permit a full consideration of these placental changes in relation to foetal death; they will be made the subject of a later contribution. Suffice it to say that in these cases intrauterine death followed by maceration is considered to be brought about by (1) the ablation of a certain amount of placental tissue sufficient to interfere with foetal nourishment, and (2) possibly by the absorption into the foetal (as Young has suggested in the case of the maternal circulation) circulation of certain degeneration products from the infarcted and necrosed areas.

In this paper, which is intended merely as a preliminary contribution to the study of this subject, the findings and the deductions from them are stated shortly. It would appear that maceration is brought about by softening of the unprotected foetal skin by the liquor amnii, accompanied by an autolysis of the internal organs by enzyme action.

CONCLUSIONS.

1. Maceration is the result of retention of the dead foetus *in utero*, whatever be the cause of the death.
2. Maceration alone is no sign of the presence of syphilis.
3. In the investigation of any macerated foetus it is essential to have the placenta for examination also.
4. The bony changes in any macerated foetus bear a superficial resemblance to the chondro-epiphysitis of syphilis and have to be carefully differentiated.
5. The microscopic findings indicate a process of autolysis of the constituent cells of the various organs with oedema of the interstitial tissue and extrusion of red blood cells.
6. In the syphilitic cases the placenta will be thick and pale, while in the other cases haemorrhages and infarctions will often be present.

REFERENCES.

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RECOVERY OF VISION AFTER INCIPIENT PANOPHTHALMITIS FOLLOWING CATARACT EXTRACTION.

BY

LIEUT.-COLONEL H. KIRKPATRICK, I.M.S. (RET.).

THE recovery of useful vision in an eye which suffered from an early and virulent pyogenic infection after an operation for senile cataract is sufficiently rare to render it worth while to place the following case on record:

Mr. R., aged 69, was operated upon for senile cataract of the right eye on October 4th, 1921. Combined extraction was performed, the nucleus being easily delivered beneath a "bridge flap" of conjunctiva; the shreddy, shrinking cortex was readily washed out by the irrigator and the iris well replaced.

On the second day the eye was quiet, with a wide, black pupil, and the anterior chamber had re-formed. That night, in spite of having been warned, the patient got up unaided to pass water, and interfered with his dressings in order to see what he was about. Next morning the eye was still quiet, with a wide, black pupil. On the fourth morning a muco-purulent discharge was present, with conjunctival injection and chemosis. Aluminium goggles were substituted for the bandage, silver nitrate drops (0.75 per cent.) were instilled, followed later by argyrol. The chemosis and discharge increased during the day and the lids became greatly swollen. Eye baths of magnesium sulphate lotion (12 per cent.) were now ordered to be used for five minutes every two hours. On the morning of the fifth day, in addition to the swelling of the lids, the chemosis, and the purulent discharge, it was found that the lips of the wound were yellowish and infiltrated, and that the iris was cloudy; atropine was instilled and urotropine, 15 grains every three hours, was ordered. The aqueous became very turbid during the day. On the sixth day the infiltration of the section and the exudation in the anterior chamber had increased, but the purulent discharge and the swelling of the lids had diminished; 1 c.cm. of mixed catarrhal vaccine was injected, pneumococci and staphylococci having been found in the discharge. The intensity of the inflammation subsided from the sixth day, and on the eleventh day the eye was free from swelling and chemosis, but a deep exudate and ciliary congestion remained. Under the influence of hyoscine, etc., the pupil kept moderately dilated, though blocked by the deep inflammatory exudate; during the fifth week, however, contraction of the exudate began and the pupil became gradually drawn up. Some slight congestion persisted during the next two months, but the iris crypts were clear and corneal deposits were absent. Four months after the operation the eye was quiet, the ocular tension subnormal, the iris bombe, and the pupil drawn up and blocked. The projection remained good. An iridectomy after Ziegler's method was performed five months after the extraction and a wide, black pupil was made. The immediate visual result, however, was poor, since there was a considerable amount of opacity in the vitreous; this rapidly cleared after injections of mercury cyanide, and three months later the corrected vision was 6/12.

I have no hesitation in attributing this rather remarkable abortion of panophthalmitis and recovery of the eye very largely to the thorough use of eye baths of magnesium sulphate lotion. This form of treatment for purulent inflammations of the conjunctiva, cornea, and opened eyeball was introduced at the Madras Ophthalmic Hospital some eight years ago, and it has always been found of the greatest use in such cases. Although some surgeons stated, at the meeting of the Ophthalmological Section of the British Medical Association last year, that they had used it with benefit in the treatment of ulcers of the cornea, its great value as a remedy for septic conditions of the conjunctiva, cornea, and opened globe does not appear to be as widely known as it deserves to be. Its action in gonorrhoeal ophthalmia is especially striking. One of the chief dangers in the latter disease, as we all know, is ulceration of the cornea; this is greatly favoured by the intense chemosis or brawny oedema of the bulbar conjunctiva; the magnesium sulphate lotion appears to exercise a powerful osmotic action through the inflamed membrane, and its use is almost always followed by a very marked reduction in the chemosis and by the restoration of a healthy circulation in the conjunctiva.

Since using this treatment in combination with urotropine and vaccines, I have seen no eye lost from gonorrhoeal ophthalmia which had not reached a hopeless condition of corneal ulceration before seeking advice. Major Wright, the present superintendent of the Madras Ophthalmic Hospital, states in the annual report of the institution for the year 1920 that, using this treatment, not a single eye was lost from gonorrhoeal ophthalmia in the course of the year. If, of course, essential that the lotion should be thoroughly applied, and to ensure this the eye bath should be used with the patient in the reclining position, and he should be instructed to keep opening and shutting his eye in order to maintain the

circulation of the fluid in the recesses of the conjunctival sac. Each application should last for at least five minutes, and should be repeated within two hours in bad cases. The administration of urotropine is a valuable adjuvant, as this is excreted in the tears and acts as a mild disinfectant.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

MENINGITIS DUE TO PFEIFFER'S BACILLUS.

E. S., female, aged 7 months, was admitted to the Derbyshire Royal Infirmary on March 13th. The history was that the child had been ill for seven days with what seemed at first to be an ordinary cold. On the third day of the illness a red pin-point rash came out on the chest and back, and the child began to vomit. The rash disappeared quickly, but vomiting persisted, and the child began to have attacks of screaming.

On admission the temperature was 102° F. and the pulse uncountable; the child looked very ill, was fretful and restless; the head was markedly retracted; lifting the head off the pillow made the child scream; the fontanelle was bulging; the pupils reacted normally; there was no ptosis or strabismus; abdominal reflexes active; knee-jerks normal; no Kernig's sign; Babinski doubtful. The child had a very harsh and troublesome cough; breath sounds were harsh, and there were moist sounds all over both lungs.

Lumbar puncture showed the cerebro-spinal fluid to be under great pressure and that it was purulent. The cells were mostly polymorphonuclear, and a Gram-negative bacillus was also seen. Some cerebro-spinal fluid was sent to the county laboratory for culture.

The temperature ranged from 102° to 103° F., and the child died twenty-one days after admission to hospital.

The bacteriological report stated that cultures were obtained on human blood agar, ox serum, potato, egg, and plain agar, and subcultures on human blood agar. The bacillus showed a great variety of form—cocco-bacillary, bacillary, strepto-bacillary, and club-shaped forms. No growth was obtained on any of the above media anaerobically. The organism from cultural and microscopic appearances was proved to be the *B. influenzae* of Pfeiffer.

I am indebted to Dr. Barber, senior physician to the hospital, for permission to publish this case.

R. L. MANSON, M.B., Ch.B. Aberd.,
Late House-Physician, Derbyshire Royal Infirmary.

THE CREOSOTE TREATMENT OF PNEUMONIA.

IN the JOURNAL of June 10th (p. 940) Dr. F. C. McCombie relates his experience of the treatment of lobar pneumonia by potassium iodide and creosote, and gives results in a large number of cases. The slightly diminished percentage (2.2) of deaths during the eight months' trial of this treatment (with considerably fewer cases than in the previous year) was not an encouraging result, and does not support the claim for its specificity. My own experience with this treatment during the influenza pandemic of 1918-19 was equally discouraging, for though occasionally it seemed to do good it was by no means reliable, and I concluded that very little creosote is absorbed by the gastro-intestinal mucosa, and even that little must pass through the portal circulation before reaching the heart and lungs.

I have since adopted another and, I believe, more efficacious method of using creosote—namely, by innunction into the axilla. It is a highly vascular and absorptive part, and numerous veins, venules, and lymph ducts pass beneath the thin integument at a point close to the thoracic duct and large veins emptying directly into the right heart.

The mode of administration is very simple, consisting of the rubbing into either or both armpits of about 1 drachm of a creosote ointment about every four hours. I usually prescribe the ung. creosoti B.P.C., 33 per cent. creosote for adults and 25 per cent. for children. As the ointment has a tendency to chafe the skin it is well to use the right and left axillae alternately. The arm on the side treated should be brought across the chest to ensure absorption.

I have had very gratifying results with this method of treatment in both lobar and lobular pneumonia. When the case is seen early it virtually aborts the attack. Even when the disease is established the results are, in uncomplicated

cases, remarkable. Usually the temperature falls to or below normal within twenty-four hours, the breathing becomes slower and easier, and toxic manifestations disappear. The usual physical signs are still to be found for several days after commencing treatment, but resolution begins earlier, and the affected lung clears up within a week.

I regret I am unable to publish particulars of cases treated during the past three years, but without making extravagant claims for this method I can say that it has rarely failed in my hands.

London, N.W.

W. A. M. SWAN.

ANTIMONY IN YAWS.

I HAVE read with great interest Dr. Cawston's description in the BRITISH MEDICAL JOURNAL of February 18th (p. 266) of cases of syphilis successfully treated by antimony, and, it being one of my duties in this station to inject intravenously some 7,000 or 8,000 cases per annum of acute and so-called tertiary yaws, I was at once struck by the immense reduction of expense that might be effected if such a cheap drug as tartar emetic could be substituted for galyol and novarsenobillon, the two preparations that I have been using for the last twelve months. I accordingly took a few ordinary adult cases of acute yaws, for practical purposes exactly like Figs. 89 and 90 in Manson's *Tropical Diseases*, and gave them intravenously 1 grain of tartar emetic daily, no local applications being used; this was continued for from eight to ten days, one patient complaining of slight headache and nausea on the seventh, eighth, and ninth days; no amelioration whatever was noted; in fact, my assistant considered the fever to be slightly increased. The patients, accustomed to see their friends cured within three days by one injection of galyol or novarsenobillon, became restive and had all insisted upon their discharge by the tenth day. No cases of (so-called) tertiary yaws were tried with the antimony treatment, the presumption being that if the very curable acute yaws was not relieved this very much more resistant form could not be benefited.

This investigation, though incomplete, is, I think, of interest, and I hope that Dr. Cawston may have an opportunity of also investigating the action of antimony in yaws in South Africa, where I have seen (in the Western Transvaal) many hundreds of acute cases of yaws and a corresponding number of ulcerations, periostitis, etc., following. Since 1891, however, I have noticed myself, and have heard from others, that the number of cases has greatly diminished.

I wish to thank Dr. Gilks (principal medical officer of this colony's medical service) for permission to publish this note, and also to subassistant surgeon Wilayat Shah for assisting in conducting the investigation.

Fort Hall, British East Africa.

F. T. AUDEN, M.D. Edin.

ACUTE TORSION OF A HYDROSALPINX.

THE following case appears to be one of such rarity that its publication seems justified.

The patient, a female student, aged 19, was admitted to the Hospital of St. John and Elizabeth on May 3rd, 1922. The history was that at the age of 7 she had an attack of pain in the right iliac fossa, the condition being diagnosed as appendicitis; she recovered without operation. Apart from this she had always enjoyed excellent health until August, 1921, when one morning at about 7 o'clock, before getting up, she had a sudden severe attack of spasmodic pain localized in the right iliac fossa. She had slight nausea but did not vomit; the bowels had been quite regular. From this attack she recovered in a day or two. From January to April, 1922, however, similar attacks recurred, becoming more severe and of longer duration; the bowels were quite normal, the menses unaltered, and micturition unaffected.

On May 2nd the patient was obliged to go to bed on account of an exacerbation of the previous symptoms, which took place at 10 a.m.; this attack, however, was far more severe than any of the previous ones. When admitted, on May 3rd, the temperature was 98.4° F., the pulse 80, and respirations 20. The patient's general condition was good. The tongue was slightly furred. The abdomen moved well with respiration; it was not rigid, but there was some increased resistance deep in the right iliac fossa, as well as fairly marked tenderness. The pelvis was not examined.

On May 4th the temperature had risen to 100.8° at 6 a.m.; the pulse was 100, and the respirations 23; tenderness was very marked in the right iliac fossa. Under general anaesthesia a gridiron incision was made, and on opening the