a high proportion of these were insensitive to penicillin and sulphacetamide. This in no way gives a representative picture of the general sensitivity of organisms in blepharitis, for the cases were selected because they had failed to respond to ordinary treatments. The percentage of penicillin- and sulphacetamide-insensitive causative organisms is certainly much higher than average.

The results of treatment with aureomycin are given in Table II. The cases designated as successful cleared up

TABLE II.—Results of Aureomycin Treatment

Culture Result	No.	Successful	Unsuccessful	
			Recurred	Did not Improve
<i>Staph. aureus</i> ..	22	13	6	3
<i>B. friedlander</i> ..	3	3	0	0
No growth ..	5	2	0	3
Total ..	30	18	6	6

as the result of a single course of treatment and have remained clear for from three to twelve months. The unsuccessful cases either failed to improve or recurred soon after cessation of treatment. Two recurrent cases responded well to a second course and have now remained clear for over two months.

Treatment of these cases was as follows: the crusts were removed with warm saline solution and aureomycin ointment was applied to the ulcerated areas. The patient was instructed to apply the ointment every two hours during the day, and the importance of removing any crusts which had re-formed was emphasized. After three to four days the ointment was applied four-hourly. In every successful case there was a marked improvement during the first week and the lids appeared to be cured within two to three weeks. Treatment was continued for total periods of five to six weeks, however, in order to minimize the risk of recurrence.

All the successful cases were treated by local application only. Those with a marked associated conjunctivitis were, in addition to the ointment, given aureomycin drops every three hours for three days. The cases which did not respond to these measures were also given systemic aureomycin (orally, 500–750 mg. every six hours) but without improvement. It would appear, therefore, that an intensive course of local treatment is the correct method of approach, and that if this is ineffective systemic administration is likely to be equally useless.

The ointment used was the standard preparation of the American Cyanamid Company (Lederle Division) and contained 1 mg. of crystalline aureomycin per gramme. This is a stable preparation remaining active without refrigeration for over a year.

Drops were freshly made up before use, as in solution aureomycin deteriorates rapidly. Lederle prepared a dry powder containing aureomycin hydrochloride 25 mg., sodium borate 25 mg., and sodium chloride 62.5 mg.; and 5 ml. of distilled water is added. In this way 0.5% solution of aureomycin, suitably buffered, is obtained.

"Terramycin"

During the past few weeks I have been fortunate in having available terramycin, in the form both of ophthalmic drops 0.5% and of ophthalmic ointment 0.1%, supplied by Chas. Pfizer, of New York. As with aureomycin, the drops must be freshly made up, and a suitable dry powder is supplied by Pfizer. The ointment is stable.

I have treated only two cases of blepharitis with terramycin and in each case ointment alone has been employed. In both, cultures revealed *Staph. aureus*, and in both the organism was insensitive to sulphacetamide and penicillin but sensitive to aureomycin and terramycin. Improvement with terramycin was immediate. It is, of course, too early to say whether the results are permanent.

Conclusion

In view of the number of antibacterial substances now available the best results will be obtained only if an orderly line of treatment is followed. The danger of allergic responses and the danger of producing insensitive organisms make it desirable to reserve antibiotics for cases failing to respond to older treatments. Empirical remedies, such as mercurial ointments, are very often effective, but if, after a reasonable trial, there is little or no relief a culture and a sensitivity test should be performed so that the most appropriate antibiotic can be chosen. In this way prolonged ineffective treatment will be avoided and the danger of allergic responses minimized. Once treatment with an antibiotic is decided upon it must be conducted with the utmost vigour so that the danger of producing insensitive strains of the organism will be reduced to a minimum.

Summary

The results of treatment with aureomycin of 30 cases of long-standing blepharitis are given.

The initial results in two cases treated with terramycin are mentioned.

A line of treatment for blepharitis is suggested.

I should like to thank Dr. N. H. Ashton and his staff in the pathological department of the Institute of Ophthalmology for performing so many cultures and sensitivity tests.

Medical Memoranda

Metastatic Adrenomedulloblastoma of the Pterygopalatine Fossa

It will be recalled that neuroblastoma of the right adrenal medulla tends to metastasize to the retroperitoneal glands, liver, and lungs, producing Pepper's syndrome (Pepper, 1901), whereas neuroblastoma of the left adrenal medulla usually metastasizes to the cranium and long bones, producing Hutchison's syndrome (Hutchison, 1907). It is with the latter that we are concerned in this brief contribution, although the two classical types tend to merge into one another, owing to the intense malignancy of the tumour.

Adrenal, mesencephalic, and retinal neuroblastomas all arise from undifferentiated neural elements. They are highly cellular, and the cells are small and dark, tending to become arranged in pseudo-rosettes.

Case Report

A baby girl aged 8 months was referred by Dr. Kenneth Dick to the E.N.T. Department of the Royal Halifax Infirmary because of a swelling in the right temporal region of three weeks' duration. There was no evidence of otitis media. The eyelids were slightly discoloured, but our ophthalmic colleague, Mr. P. M. Wood, reported that the media and fundi were normal. The temperature varied from 99

to 100° F. (37.2 to 37.8° C.). The blood count was: red cells, 4,520,000; white cells, 18,900 (neutrophil polymorphs 66%, basophils 1%, lymphocytes 32%, large monocytes 1%); haemoglobin, 74%; colour index, 0.8.

During the first week's in-patient treatment the temporal swelling increased and proptosis developed; the infant became increasingly pale, the haemoglobin eventually falling to 18%. As the most careful examination of the abdomen by medical and surgical members of our staff failed to reveal any abdominal tumour, Dr. Chester Williams's offer of deep x-ray treatment of the temporal swelling was accepted, but deterioration was inexorable. Eventually a nodular mass became palpable beneath the left costal margin; this gradually filled the abdomen and the legs became swollen. Death occurred on the twenty-second day after admission.

On post-mortem examination by Dr. F. E. Aaron a large tumour of the left suprarenal gland was found to have spread extensively, invading the ovaries. The left kidney was engulfed but not infiltrated, and the liver spared. There were several metastases in the cranium, particularly in the right pterygopalatine and infratemporal fossae and in the brain. Histologically, the tumour consisted of small round cells, with occasional pseudo-rosette formation, typical of neuroblastoma.

Comment

With regard to differential diagnosis, scurvy was mentioned by Hutchison in his original description of the syndrome. Blood examination will eliminate chloroma and the leukaemias. Splenic puncture may be carried out if Gaucher's disease is suspected. Sternal puncture and the test for Bence-Jones proteosuria are more likely to be called for in adults, but it is always a golden rule to have the entire skeleton x-rayed and not just the skull, to exclude multiple myelomatosis and also Hand-Schüller-Christian's disease. Eventually, as has been shown above, abdominal palpation confirms the diagnosis.

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Spontaneous Rupture of an Angular Pregnancy

The term "spontaneous rupture of the uterus" seems to vary in meaning from writer to writer. A fairly obvious use of the term would be for rupture occurring as the result of some primary defect in the uterus and in no way the result of external causes such as a contracted pelvis, trauma of any sort, or scarring from previous operation. The following case occurred in a woman who was not in labour and whose infant was dead *in utero* before rupture occurred.

Case Report

A middle-aged Mkamba woman was admitted to hospital on March 17, 1949, having had pain in the epigastrium and vomiting associated with pain in the lower abdomen for the previous 10 days. She stated that she was nine months pregnant, but that the pain was not like labour pains. She had had three normal pregnancies and deliveries; two of the children, the second and the third, were alive. When already three months pregnant she had had some abdominal

pain and slight vaginal blood loss for three to four days. She had had recurrent pain ever since.

Examination of the abdomen showed a tumour, presumed to be the uterus, rising 9 in. (23 cm.) above the symphysis pubis in the midline. It was narrower and much firmer than a normal pregnant uterus. Contractions were not felt, foetal parts could not be identified, and the foetal heart could not be heard. Laboratory examinations revealed no abnormality in the urine or stools. A radiograph taken at Nairobi on March 25 showed a foetus in a breech position with considerable overlap of the skull bones as in maceration. It was decided that this was a case of death *in utero*, and it was hoped that the foetus would be aborted in a natural way.

On the afternoon of March 31 she started to have a slight vaginal loss and the abdominal pains were intensified, suggesting a miscarriage. The next morning the abdominal pain had increased considerably and the abdomen was very tender. There was still some slight vaginal loss, and it was thought that there might be concealed haemorrhage. By the afternoon the abdomen was rigid and the patient pyrexial; it was then thought she had developed peritonitis due to infection from the dead foetus. A vaginal examination showed a slightly dilated external os which contained a blood clot. It was decided to treat the supposed peritonitis in a conservative manner in the hope that it would be easier to deal with when the abortion was complete; but next day, with the pulse steady between 110 and 120 and the temperature up to 103° F. (39.4° C.), a decision was made to open the abdomen—simply to insert a drain so as to embarrass the impending parturition as little as possible. It was felt that a caesarean section was out of the question.

On opening the peritoneum there was a gush of blood followed by the appearance of a foetal limb. Further exploration showed a macerated foetus extruding from a tear in the left cornu of the uterus above the point of entry of the tube. The foetus was removed and the blood mopped up; a low-grade peritonitis was found involving the lower coils of the intestine and the uterine peritoneum. Hysterectomy was performed, during which operation the cervix was found to be closed. The wound was sutured and a drain inserted into the pelvis through a separate incision. Intravenous saline was given during the later stages of the operation, as blood was not available. Post-operative penicillin was given. The drain was removed after 48 hours.

Comment

This case would appear to fit into the group of "spontaneous ruptures of the uterus." Riddell and Scholefield (1938) described a similar case which they thought should be included in the group of angular pregnancies as defined by Munro Kerr and Anderson (1934), such a pregnancy originating in the uterine end of the Fallopian tube, developing towards the uterine cavity, and being normally associated with pain and a tendency to abort. In the case described there was no marked tendency to abort, and the foetus continued to develop in the uterine cavity.

The rupture was presumably the result of infection of the dead and macerated foetus. This infection, by spreading to the already thinned out cornu, was sufficient to cause a spontaneous rupture.

I am indebted to Dr. T. F. Anderson, D.M.S., Kenya, for permission to publish this case history.

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