

any spirilla by infecting a clean mouse. The patient's peripheral blood was examined under dark-ground illumination on 14th August, 1940, with negative results. A part of the centrifuged deposit of one c.cm. of this blood in citrated saline was injected intraperitoneally into a clean mouse. This animal showed heavy infection of *Spirillum minus* in its peripheral blood on 26th August (12 days after inoculation), although when examined on the 8th day none were found.

One cannot say if the kidney lesion of this patient was caused by the spirochaetal infection.

The recovery of *Spirillum minus* in this case is of interest in that with an experimental inoculation into a clean white mouse it is possible to demonstrate the presence of *Spirillum minus* in the peripheral blood of a patient with a clear history of rat bite, even in the absence of skin lesions and with no other manifestations than an irregular obscure fever with occasional exacerbation and therefore one may feel justified in recording this fact.

[Note.—Cases of this nature though uncommon are not unknown, and recovery of *S. minus* by inoculation of peripheral blood into mice is by no means an uncommon procedure. Also kidney irritation as a result of this infection is recognized to occur occasionally, especially in children.—EDITOR, I.M.G.]

THROMBOPHLEBITIS OF THE CAVERNOUS SINUS

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THROMBOPHLEBITIS of the cavernous sinus is a condition where, with expectant treatment, practically all cases die from septicaemia, meningitis, etc. The numerous tributaries and effluents of this sinus render it a very common site of infection. Boils and infections of the 'dangerous area of the face', that is, the upper lip, septum of the nose, and the adjacent area, are by far the commonest cause of this dreaded lesion. The anterior facial vein which drains the dangerous area has no valves and any clots therein may easily be detached and transferred to the cavernous sinus as the result of the massage to which it is subjected by the movements of the facial muscles. Thrombosis of the sinus may however also occur by extension of inflammation through its wall. It is now becoming increasingly recognized that timely and judicious surgical intervention and heroic doses of sulphonamide can save many an otherwise hopeless case. Notes of a few illustrative cases are given below:—

Case 1.—A Mohammedan boy, aged 10, had a boil on the tip of his nose which he scratched eight days previously. Spreading swelling of the face, suffusion of the eyelids and protrusion of the left eye followed. On the eighth day he was seen to have swelling of the entire face, chemosis and oedema of the left upper lid and root of nose, proptosis of the left eye, complete ophthalmoplegia with high fever and toxæmia.

The following treatment was instituted:—

- (1) Antistreptococcal serum 10 c.cm. daily—two such.

- (2) Sulphanilamide tablets (Albert David, Ltd.)—two tablets four hourly—two such, one tablet six hourly—four such, one tablet eight hourly—three such, half tablet eight hourly—six such.
- (3) Locally compress with lotio hydrarg. perchlor. 1 in 4,000. Lotio protargol 5 per cent dropped into left eye.

The patient responded marvellously and in 48 hours he was afebrile. On the sixth day of the commencement of this treatment he was given normal diet. Unfortunately the father of the child persistently refused to have the eye out which was sloughy and proptosed and took away the patient against medical advice.

Case 2.—A well-developed Hindu youth, aged 32, had a razor cut five days previously on the right cheek. This developed into an infected wound associated with high temperature and low delirium. The right half of the face became swollen with suffusion of the right eyelids. On the seventh day his temperature rose up to 104°F. The next day the right eye was proptosed and he was having swinging temperature with rigor. Unfortunately sulphanilamide was not given except at this stage. It was diagnosed as cavernous sinus thrombosis and the eyeball was enucleated in spite of its not being blind. The ophthalmic vein was found to contain purulent clots and the superior orbital fissure was enlarged and a drain was put in the cavernous sinus. The first part of Eagleton's operation in such cases, viz, ligation of the common carotid artery did not appear to be very sound being rather too severe for so ill a patient. After a prolonged convalescence the patient recovered.

Case 3.—A Mohammedan woman, aged 20, had a boil on the cheek below the right ear with oedema around. At first she was not very toxic. On the sixth day her condition became worse, temperature rose up to 103°F. with oedema spreading towards the inner canthus of the right eye and the eyelids were suffused. The cavernous sinus being in immediate danger the right angular vein was ligatured under local anaesthesia by novocain 1 per cent and sulphanilamide administered in heroic doses. Lotio hydrarg. perchlor. compress was given locally. Rapid improvement followed and the patient was discharged a fortnight later.

Case 4.—A man, aged 35, was admitted with swelling and oedema of the entire face and scalp, proptosis of the right eyeball, suffusion of left eyelids, temperature ranging between 100 and 104°F., and mild delirium. The left angular vein was tied and antistreptococcal serum was administered in heavy doses. Besides local treatment, stimulants and glucose were given as usual. Sulphanilamide was not given in this case. The patient expired on the eleventh day of disease. Operative interference could not be done on account of the party refusing it and sulphanilamide was not administered because it was not then available in an injectable form.

Infection of the face has a sinister reputation and the complication which heralds the fatal issue is thrombosis of the cavernous sinus; sulphanilamide therapy, as in many other dreadful diseases, has a notable place in the treatment of thrombophlebitis of the cavernous sinus. It has been seen that the combination of serum and sulphanilamide is certainly better than serum alone and probably also better than sulphanilamide given alone. A simple and small operation like ligation of the angular vein, if performed in time, may save a life. Eagleton's combined operation of ligation of the common carotid and enucleation of the eyeball is not, in our opinion, very sound and is apparently too severe for so ill a patient. Combined with sulphanilamide enucleation with draining of the cavernous sinus, if necessary, is certainly less drastic and more efficacious.