

whole case a fungating endocarditis. Blood culture was not done.

Expert examination of the slide—negative M. P.; this was clinically confirmed by want of effect on the temperature by the quinine injection (*vide* temperature chart). 30 c.c. of anti-streptococcic serum polyvalent (P. D. & Co.) was injected hypodermically. Temperature began to fall 3 hours after the injection.

20-11-1920.—At 8 A.M., temperature 100.6; at 6 P.M., another 10 c.c. of the same serum injected hypodermically.

21-11-1920.—At 8 A.M., temperature normal. Stimulant treatment was continued all this time.

22-11-1920.—Report from whitlow pus identified as streptococcus pyogenes. An autovaccine, prepared from it, was injected; dose 5 millions.

23-11-1920.—The pain, which was first complained of by the patient on the 21st evening on the plantar surface of the left heel, became very acute. She ran a little temperature of 101°. An abscess was suspected.

24-11-1920.—Abscess opened; agar slant inoculated with the pus obtained from it. Ten millions of streptococci (auto) injected. 8 P.M. temperature normal.

26-11-1920.—A third dose of autovaccine (20 millions streptococci) injected.

27-11-1920.—Heel wound dried up.

29-11-1920.—First dose of fresh autovaccine from the heel pus was injected (40 millions streptococci). From this time onwards another 2 doses of the second autovaccine were injected of the strength of 70 and 100 millions and at gradually increased intervals (*vide* temperature chart), without any untoward re-action. Pus from the heel abscess was identified to be the same streptococcus pyogenes.

The whitlow was completely cured by this time and the pain and discomfort over the præcordium gradually disappeared on a prolonged rest and a combined course of iron strychnine and phosphorus. The soufflé heard over the aortic region persisted all this time and continued after her complete recovery, although it changed its character and assumed a rough quality.

Conclusions: The Diagnosis.—In spite of the absence of a bacteriological examination of the blood and an autopsy to corroborate it, the diagnosis of fungating endocarditis was made because—

(i) Progressive anæmia in chronic heart case (no matter whether there is fever or no fever) following a localised chronic septic wound.

(ii) The three embolic processes: (a) the transient unconsciousness with very high fever; (b) inflammation of the mamma; (c) abscess of the foot.

(iii) Drop of temperature by crisis on the injection of a big dose of anti-streptococcic serum polyvalent.

(iv) The maintenance of the normal temperature curve after an initial fall on a combined

course of treatment by antiserum and autovaccine.

(v) Absence of M. P. in the blood and want of effect on the system by the quinine injection, and finally

(vi) The culture of streptococcus pyogenes twice from the whitlow pus and pus from foot abscess. There is no necessity for deploring that blood culture was not made; for it is remarkable how often blood cultures are negative in these cases, *even when the blood is obtained during a period of high pyrexia and leucocytosis is rather the exception than the rule.*

The diagnosis of rupture of a cusp of the aortic valves was made on account of the following considerations:—

(i) Patient's history—sense of uneasiness over the præcordium rapidly following a severe strain on the part of the patient which very soon developed into a sensation, "heart beating violently against the chest" to use the patient's expression, and was in turn followed by "choking sensation," leading finally into unconsciousness.

(ii) The presence of that unusual sound—the soufflé over the aortic area.

(iii) The persistence of this sound after recovery with change of character. (*Vide* article on Malignant Endocarditis, by Vaquez, the leading cardiologist of Paris, attached to *Hopital De la Pitié*, which appeared in the *Archives des maladies du Cœur*, August 1918.)

FRACTURE OF THE ATLAS AND AXIS VERTEBRÆ.

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THOUGH a number of cases of fracture of the upper two cervical vertebræ, in which the injury has not been followed by a fatal result, have been published, the occurrence is sufficiently rare to be worthy of record.

My colleague, Dr. Guruswamy, brought to my notice a Hindu boy, aged 10, who had been admitted to his wards in the General Hospital, Madras, suffering from fever, probably influenza, and who was also suffering from rigidity of the neck. The history obtained was that two months before admission the patient fell into a big well in which there was very little water. He fell on his side and remained unconscious for a short time. He had severe pain for ten days after the accident, and his neck has since remained stiff. He was very persistent that he had come to hospital for treatment of his fever and that the neck trouble was of no account.

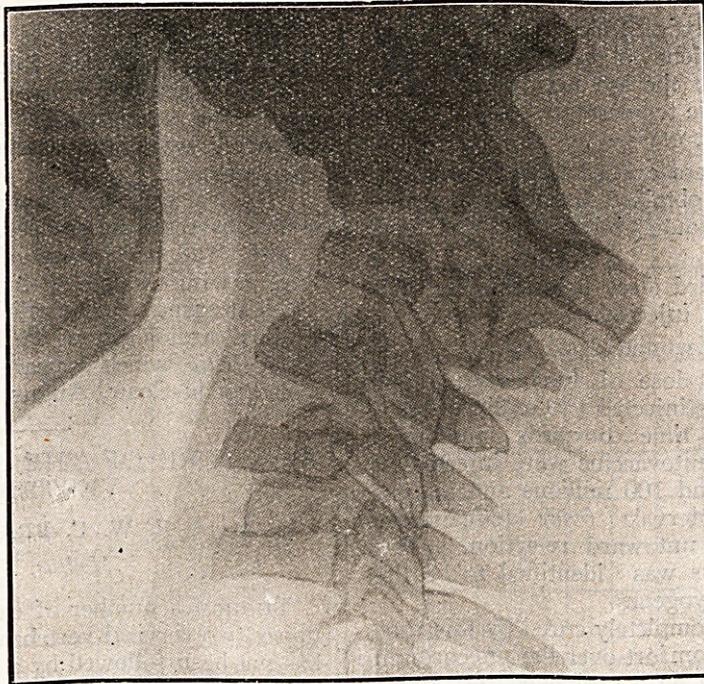
The patient, who is a healthy looking boy, holds his neck stiffly, with his head slightly turned to the right. He walks with the head and neck rigid, and when asked to look round, does so by moving his shoulders.

Only very slight lateral movement of the head, and that to the right, is possible, while flexion and

extension are both limited. Occasionally when turning, the patient supports his chin with one hand. A hard bony mass, which is not tender, can be felt to the left of the middle line behind and below the occiput extending downwards, for about one inch and a quarter. No swelling or protuberance could be detected in the pharynx. There was no anaesthesia nor neuralgia in the area supplied by the great occipital nerve, and no paralysis of any of the neck muscles. The knee-jerks were slightly exaggerated and the plantar response was extensor in character. No other nerve symptom could be elicited.

The condition was made clear by a radiograph taken by Captain Barnard, radiologist to the hospital. The axis vertebra is dislocated backwards,

mechanism of the fracture is a tension of the atlas ring, which becomes deformed into an oval with its long axis from side to side instead of from before backwards, and fractures at its weak points, namely, the anterior and posterior arches. The forces producing the fracture act upwards between the skull and the ground and downwards by the weight of the body through the vertebral column. Since the articular facets of the lateral masses are obliquely placed, the upper pair looking upwards, backwards and inwards and the inferior pair downwards and inwards, the resultant would be a *horizontal* force tending to cause a separation of the two lateral masses from each other and a consequent **tension fracture** at the weak points.



and it is difficult to see how this deformity can have occurred and the cord have escaped severe injury, unless the odontoid process had been fractured at the same time. That the atlas vertebra is fractured is shown by the marked increase in its antero-posterior diameter. Unfortunately, by this time the patient had become thoroughly alarmed at the interest which was being taken in his neck and hurriedly left the hospital, insisting that he only came to obtain treatment for his fever. For this reason, further radiographs could not be obtained.

Jafferson, writing recently in the *British Journal of Surgery*, describes 4 cases of fracture of the atlas and analyses 42 others previously recorded in the literature. Of this series, 21 of the isolated fractures of the atlas recovered, while of 15 cases, complicated by fracture of the odontoid, the cord has escaped injury in 8. The escape of the cord in these cases is explained by the fact that the probable

REFERENCE.

Jafferson. *British Journal of Surgery*, January 1920.

NOTICE.

OUR apologies are due to Major Wright, I.M.S., Madras, for the manner in which his paper on Rhinosporidium of the Conjunctiva was presented. A part of the article was omitted and the illustration represented Rhinosporidium of the Lacrymal sac and should have appeared in connection with that article by Major Wright on Rhinosporidium Kinealyi of the Conjunctiva cured by Tartarated Antimony (Tartar Emetic) and notes in a case in which the Lacrymal sac was affected by the sporozoon. The article on Rhinosporidium Kinealyi of the Conjunctiva will be reprinted in the March Number.