controlled, and the incidence of carditis reduced to a minimum.

3. That in it an instrument of research is provided for increasing our knowledge of the heart of the child and its response to the rheumatic toxin, and that the correlation of records obtained in such clinics would throw very valuable light upon the nature of the disease.

4. Finally, that the cardiac classification proposed offers a suitable basis for such correlation.

It is a special pleasure to record our indebtedness to Miss Watson, almoner, for her invaluable assistance in the organization of the clinic, since the success of the department has been in a large measure due to her efforts. To Professor Leonard Findlay, to whose initiative the inauguration of the clinic was due, and under whose care it continues, I wish to express my sincere gratitude for his unfailing help and encouragement in the development and correlation of the work and the supervision of its details.

REFERENCES.

¹ BRITISH MEDICAL JOURNAL, October 31st, 1925, p. 791. ² Ibid. ³ Ibid., March 14th, 1925, p. 496. ⁴ Hospital Service Series, May, 1920, 151-181.

THE ACTION OF INTESTINAL EXTRACTS.

(Preliminary Communication.)

BY

W. E. DIXON, M.D., F.R.S.,

AND

J. H. WADIA, B.A., B.Sc.

(From the Pharmacological Laboratory, Cambridge.)

Cow and Dixon have shown that injections of boiled and filtered intestinal mucous membrane into dogs induce a secretion of pituitrin in the cerebro-spinal fluid. The effect is not immediate, and the pituitrin cannot be detected till about an hour after injection and does not reach its maximum for one and a half hours or more. The determination of the amount of pituitrin was made by the routine method on the uterus of the virgin guinea-pig. These observers also showed, however, that cerebro-spinal fluid so obtained exerts all the other known actions of pituitrin. The fact that the intestine is concerned in this secretion suggested to us that the pituitary secretion would likely be concerned with some digestive or metabolic mechanism. After numerous attempts to explain the secretion our efforts were at last led in the right direction by the observation of Burn that pituitary extract antagonizes the action of insulin.

If insulin is injected into anaesthetized dogs it produces a fall in blood sugar which reaches a minimum about three hours after injection. If in such an animal the cerebro-spinal fluid is tapped after the fashion of Dixon and Halliburton and tested for pituitrin it is found to be present one and a half to two hours after injection; that is to say, insulin increases the secretion of pituitrin just as it has been shown to increase adrenaline, but that this secretion is not obvious in the case of the pituitary until the blood sugar has been considerably reduced.

The following typical protocols will explain the nature of the experiments.

Experiment I.—Dog, male, weight 10.5 kilos. Anaesthetized by chloroform, then A.C.E., and finally morphine and urethane.

	Blood Sugar.	Pituitrin in C.S.F.
After 15 mins. anaesthesia ...	= 0.067	 —
After 45 mins. " ...	= 0.074	 —
After 1 hr. 15 mins. " ...	= 0.085	 —
After 1 hr. 45 mins. " ...	= 0.095	 —
After 2 hrs. 15 mins. " ...	= 1.040	 —
After 2 hrs. 45 mins. " ...	= 1.150	 —

Experiment II.—Dog, female, weight 12 kilos. Anaesthetized by chloroform, then A.C.E., and finally morphine and urethane. 24 units insulin were given intravenously fifteen minutes after anaesthesia.

	Blood Sugar.	Pituitrin in C.S.F.
Before injection and 14 mins. after anaesthesia ...	= 0.066	 —
3/4 hr. after injection... ..	= 0.061	 —
1 1/2 hrs. " " ...	= 0.055	 +
2 1/4 hrs. " " ...	= 0.047	 ++
3 hrs. " " ...	= 0.043	 ++
3 3/4 hrs. " " ...	= 0.051	 —

Experiment III.—Dog, male, weight 10 kilos. Anaesthetized by chloroform, then A.C.E., and finally morphine and urethane. 20 c.cm. of boiled and filtered intestinal extract were given intravenously fifteen minutes after anaesthesia.

	Blood Sugar.	Pituitrin in C.S.F.
Before injection and 14 mins. after anaesthesia ...	= 0.074	 —
3/4 hr. after injection... ..	= 0.069	 —
1 1/2 hrs. " " ...	= 0.060	 +
2 1/4 hrs. " " ...	= 0.052	 ++
3 hrs. " " ...	= 0.041	 ++
3 3/4 hrs. " " ...	= 0.047	 —

It will, of course, be suggested that the secretion of these two ductless glands is a provision for antagonizing excessive insulin action. The analogy between injections of intestinal extracts and those of insulin is so marked in this respect that we were induced to try the effect of alimentary extracts on blood sugar in rabbits. Injections of boiled and filtered duodenal mucosa in these animals induce a fall of blood sugar comparable with that of insulin. The fall often goes down to the convulsant level, though we have never been able to produce convulsions. The active substance is not secretin since it is destroyed by boiling with dilute acids, which process does not destroy the secretin, since we were able to show that the extract still contained a plentiful supply. Boiling with 1 per cent. sodium bicarbonate also destroys the blood sugar reducing substance. Boiled and filtered extracts of pancreas and many other tissues which we have used do not exert this effect. Ivy and Fisher state that the intestine contains one-fiftieth the amount of insulin of that in the pancreas. We have prepared insulin from the intestinal mucous membrane of pigs by the Dudley method; we are not prepared at the moment to give any figure of its amount, but it is considerably greater than that suggested by Ivy and Fisher. Nor at this stage are we prepared to offer information as to why this insulin body comes out in boiled intestinal extracts and not in other tissue extracts. We think, however, that the evidence suggests that pituitary secretion following the injection of intestinal extract is of the same nature as that which obtains after the injection of insulin.

A COMMENTARY

ON

TWO CASES OF HUNTINGTON'S CHOREA.

BY

ALAN F. GRIMBLY, M.A., M.D., D.P.M.,

DEPUTY MEDICAL SUPERINTENDENT,

AND

ISABEL G. H. WILSON, M.B., Ch.B., D.P.M.,

LATE ASSISTANT MEDICAL OFFICER,

SEVERALLS MENTAL HOSPITAL, COLCHESTER.

We have recently had under our care at Severalls Mental Hospital two brothers who suffered and died from Huntington's chorea. In view of the slight incidence of this disorder we venture to set forth in some detail an account of these cases based on our clinical and *post-mortem* investigations.

CASE I.

W. G., an ex-soldier, aged 34, was admitted to hospital on July 9th, 1917.

History.—The patient had served in the army for eleven years prior to 1914, and he re-enlisted during the war. He was appointed to the Field Artillery, and was stationed at Woolwich, but never saw active service abroad. A few months after re-enlistment he was sent to a military hospital for observation of his mental condition, and was found unfit for further service. He was discharged from the army and admitted to the local infirmary, being subsequently certified insane and sent to Cane Hill Mental Hospital, whence he was transferred to Severalls. He was stated to have contracted syphilis in India about 1906, and had been diagnosed as a case of dementia paralytica. A brother had died in Brentwood Mental Hospital.

Condition on Admission.—Mentally he was dull, apathetic, and took very little interest in his environment. He was rambling in his talk, and his memory was extremely defective; he could not remember his regimental number or the addresses of his near relatives. Speech was slurred. He was not hallucinated, but was restless, threatening, and inclined to be violent in his conduct. Physically he was well nourished, and showed no signs of injury. The cardiac, respiratory, and alimentary systems were normal. The pupils were equal, but sluggish in reaction to light. The knee-jerks were diminished and the gait was ataxic. He was