cholera vibrios, as the serums of animals injected with either vibrio agglutinate both. I do not believe that V. *Clan Ronald* is a true cholera vibrio, as it is haemolytic.

The experiments also show the degree of relationship existing between the six vibrios and between each and the cholera vibrio.

The conclusions which I base on the experiments carried out at Port Said are as follows:

1. A certain number of vibrios, although agglutinating to some extent with cholera serum, are sharply differentiated morphologically from the cholera vibrio, by the fact that they are multiciliated.

2. Whereas some vibrios found in ship water are agglutinated by very dilute solutions of cholera serum, others are agglutinated by far stronger solutions only. The latter form a transition stage, so to speak, between the non-agglutinating and the highly agglutinating vibrios.

3. Although an active cholera serum agglutinates all the vibrios to some extent, yet only two of these vibrios when injected into animals produce serums having a powerful agglutinating effect on cholera vibrios; two serums had the same property but to a slighter extent, and two had none.

These experiments therefore support the conclusion previously arrived at—namely, that it is not advisable to trust to the agglutination test only in the bacteriological diagnosis of cholera. The test is useful but not specific.

The Lumleian Lectures ON INSANITY, ITS CAUSES AND INCREASE.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS
OF LONDON.

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LECTURE III. ETIOLOGY.

Alcoholism as a Cause of Insanity.

ALCOHOLIC excess has long been considered to be one of the most powerful causes of insanity; any increase among the insane was looked upon as depending upon such self-indulgence. England is now much more temperate than it was; this is shown by the greatly-diminished consumption of all forms of alcohol, and by a general consensus of opinion that it is good to be temperate or teetotal. Notwithstanding all this there has been no decrease among the insane, but a fairly steady increase.

As a consulting physician I am much struck by the large numbers of teetotallers by whom I am consulted. This does not prove that such persons are unstable in consequence of their temperance, but it shows that teetotalism alone does not decrease insanity. Dr. Mott has expressed the same opinion. Doubtless alcohol affects the nutrition of the brain, and may be called a nerve toxin. It produces acute symptoms which may pass from delirium to mania, and this may pass into a chronic hallucinated state. Prolonged indulgence in certain persons leads more or less rapidly to mental weakness which has special characteristics. These are interestingly associated with sensory disorders, the ideas of time and place becoming confused. In many respects alcoholic excess resembles in its results senile mental decay. It may give rise to neuritis which may be misinterpreted so as to give rise to ideas of cutaneous annoyance or electrical interference. Chronic alcoholism leads to a state of the nervous system which is allied to that produced by strong neurotic heredity. Alcoholic parentage tends to produce mental weakness and criminality in the offspring. Dr. Mott, supported by Dr. Bevan Lewis, has shown that alcoholics admitted into general hospitals have kidney and liver disease, whereas the insane alcoholic dying in an asylum rarely has evidence of his excess in his viscera. It seems as if the brain of those becoming insane from alcoholic excess is a weaker organ or one more easily affected than that of the drunkards who escape. We

all know that injury to the head may render a person very easily influenced by drink, and it is easy to think that there are specially susceptible persons who readily suffer from alcoholic excess.

Alcohol leads to delusional insanity, to recurring mania, to delirious mania, and later to dementia of a peculiar type. It plays an important part in the production of general paralysis of the insane, for though I have never been able to satisfy myself that any one case was due to this cause alone, yet with syphilis it is common. The special report of the Irish Commissioners expresses very strongly the opinion of the Irish medical superintendents that alcohol is a real cause of insanity in that country, though they also mention the excessive indulgence in tea as a cause.

Influenza as a Cause of Insanity.

In the earlier epidemics it was thought that the insane were less liable than the sane to this disease, but later it was proved that their comparative freedom depended on their isolation. I am much struck by the numerous cases of mental disorder which always follow an epidemic. My own opinion is that the influenzal poison has a special and most potent effect on the nutrition of all parts of the nervous system. It acts most perniciously as a destroyer of sleep, and also has serious effects by its influence on the digestion and general nutrition. It is noteworthy, too, that the number of suicides rises rapidly at and after an epidemic of influenza.

It may produce any form of psychopathy; it may act either as a predisposing or exciting cause; it may precipitate impending dementia or general paralysis of the insane; it may be the starting-point of dementia of adolescence. In a few cases it causes an alternation in neuroses, so that it relieves an asthma but develops melancholia.

The severity of the influenza has no direct relation to the form or gravity of the insanity. As a rule, however, the prognosis is rather better when the insanity depends on influenza. The point to which I would make most reference is that, in my opinion, influenza, like alcohol, seems to have a specially dangerous influence on some persons and prepares a very large number of such persons for some form of nervous disorder. It puts them at a disadvantage to resist any physiological or social strain.

Sexual Causes.

I have not time to go into the question of sexual causes of insanity, but it would not be right if I did not express my opinion that the tendency to late marriages in men; the great limitation in the number of children, and the distaste of the mothers to nurse their children all have potent influence in producing mental instability.

Increase in the Number of the Insane.

There is sufficient evidence to show that there is a steady increase in the numbers of the insane in England, Ireland, and Scotland, though in the most recent reports there has been shown to be a reduction in the proportion of insane recognized, but I shall point out reasons for the apparent reduction.

Among the more wealthy in England particularly, there is a growing disinclination to send their insane relations into asylums. There is certainly no change in relationship to the feeling against asylums and against certification. With the more educated the dread of the transmission of insanity is very great, but if the malady is called by any other name and treated by other than alienist physicians people are satisfied.

Statistics are dry bones, but one must make use of some of them. On January 1st, 1906, there were 121,976 certified patients in England, this being an increase of 2,150 on the previous year, the rate of increase being less than that of the average for the former five and ten years.

The decrease was most in the private patients. Nowadays fewer insane patients are retained in workhouses; fifty years ago half of the pauper lunatics were in workhouses, now only a small number are detained there. The chief increase among the insane is seen in the metropolitan area. The capital attracts the weak as well as the strong.

The increase is shown by my tables to be very large in fifty years. In 1859 there were in England and Wales 36,762 certified insane persons. The increase in that time in proportion to the general population has been 231 per

cent., while the increase of the population has only been 75.4 per cent. In 1906 there was 1 lunatic to 283 sane persons, the proportion being 35.31 per 10,000 of population, whereas in 1859 it was only 18.64. I regret to say the recovery-rate has not increased in any way proportionate to the increased humanity of the treatment.

In Scotland as in England there is an increase, generally of the poor insane, though here too there has been a reduced rate of increase recently. The wealthy insane in Scotland are fewer in number as far as certification is concerned. In Scotland a very large number of poor patients are boarded out with peasants. This form of treatment seems more suitable for the careful and religious-minded Scot than for his English and Irish brothers.

In England and Scotland as well as in Ireland there is considerable increase among the general paralytics. The special report of the Irish Commissioners sums up the general result of their investigations as follows:—The increase in the number of the certified insane depends chiefly on accumulation, and is more apparent than real, being due to the fact that the patients now live longer than they did, in and out of asylums; to the withdrawal of a large number of quiet harmless patients from their village homes and from the workhouses to fill the asylums. The returns show that the large number of healthy men and women who emigrate leave a very feeble residuum which provides a large number of feeble-minded and insane.

Again, a large number of insane patients are repatriated from America, and thus add to the numbers in Irish asylums.

It is interesting to remark that of those who emigrate to America a larger number of Irish emigrants become insane than emigrants from other countries. In Ireland the proportion of insane in quiet secluded villages is greater than might have been expected, but this is due to the stronger having left.

Dr. Mott so very forcibly expresses his opinion as to the general pathology of insanity, that I will quote in part from a lecture of his:

A pathology which only considers the macroscopical and microscopical anatomy is useless; there must be a correlation of the clinical and psychological symptoms with the morbid, physical, chemical, and structural changes of the organs and tissues of the body, particularly of the brain.

No one with practical experience of insanity can come to any other conclusion than that the majority of the people who become insane suffer because there is an inborn tendency in their nature.

General Conclusions.

Though there is undoubtedly a great increase in the numbers of the insane, it does not follow that there is any ground for fear that the race is rapidly degenerating. There is increase in general paralysis of the insane, and also of those suffering from terminal dementia. There is doubtless a growing nervousness which means less ability to withstand the strains of life, but it appears to me that the indication is rather to do all we can—not very much, perhaps—to reduce these strains and thus prevent mental breakdowns.

I believe great good may follow a special receiving hospital for London such as at present is in working order in Glasgow. This hospital would sift out the acute, presumably curable patients and prevent many being sent to asylums. I do not think very much will be gained by a special staff with only knowledge of general medicine and pathology. Let as much study as possible be followed with the knowledge that in certain diseases like general paralysis of the insane a definite cause will be traced, and then we may be able to do more to arrest the decay induced by this disease. There are certain other forms of insanity allied to definite bodily states which may be studied with useful effect in a general or special hospital; but still, as I have been saying, so much so-called insanity depends on the patient being out of harmony rather than out of health, that supervision and general measures will still be found more efficient than elaborate prescriptions.

The late Mr. James Considine, of Rush, Dublin, formerly H.M. Consul in Majorca, left £100 to the Salamanca General Hospital, £50 to the Weymouth Eye Hospital, and £25 to the Chief Hospital in Calais.

MEMORANDA: MEDICAL, SURGICAL, OBSTETRICAL.

RECURRENT TORSION OF THE SPERMATIC CORD.
In the BRITISH MEDICAL JOURNAL of April 8th, 1893, I published a case of torsion of the spermatic cord, which I relieved by untwisting. This appears to have been the first instance in which this treatment was applied. Since then I have had under my care 2 cases in which recurrent torsion of the cord has occurred.

CASE I.

In the course of about three years I was sent for as many times to see a schoolboy, who suffered from a stiff ankle which necessitated the use of a crutch, on account of sudden painful swelling of the right testicle. On each occasion there was some swelling of the testis and tenderness of the cord immediately above it, but I was never able to detect any swelling of the cord. The swelling subsided in a few hours. The only explanation of the attacks was that a slight temporary twist of the cord occurred and that this relieved itself before my arrival. The twist might have been induced by the rotation of the body caused by the use of one crutch. The patient is now about 28 years of age, and for ten years has had no recurrence. He has ceased to use a crutch.

CASE II.

When 15 years of age this patient thought he bruised his right testicle in learning to ride a bicycle. The testis remained swollen a week. He is now 25, and during the past ten years the testicle has swelled about three times a year, generally after unusual exercise. He has never sought medical advice. On December 26th, 1906, he romped about more than usual, and when he got up next day noticed some swelling of the right testicle. As this got worse during the day and the attack was unusually severe, he consulted me at 9 p.m. on December 27th. I found the right testis considerably swollen and tender. There was also distinct tenderness of the cord as high as the external abdominal ring. He complained of pain in the lower abdomen, but was not sick and had no rise of temperature. The epididymis lay in its usual position. I was able to twist the testis two half-turns to the left, and immediately the patient felt relieved. Next morning the testis was normal. This appears to have been a case of recurrent torsion of the testis which previously had always relieved itself. I advised the man if he got any further recurrence to have the testis sutured in its normal position.

Bedford.

W. GIFFORD NASH, F.R.C.S.

LUPUS VULGARIS OF LONG DURATION: IODOFORM INJECTIONS: RAPID RECOVERY.

THE patient whose case is described here was shown at the Edinburgh Medico-Chirurgical Society, on November 7th, 1906.

In the family history of the patient in this case, a woman aged 29, there is nothing material. Her lupus began on the left cheek when she was between 15 and 16 years of age, and was then called "eczema." Almost simultaneously it appeared on the right pinna, and at the angle of the jaw on the right side. So far as she recollects no treatment was adopted for some years. When she was 21 she consulted the late Dr. Stewart Stirling, and was under his care from 1898 to 1902. He cauterized the spot and tried a number of different ointments without benefit, and seems from the prescriptions to have tried all drugs which have ever had a reputation in the disease.

In July, 1904, on the advice of Dr. Norman Walker, she commenced a course of Finsen lamp treatment, which she continued for twelve months. The lupus on the left cheek improved somewhat, but the right ear and cheek were unaffected. In July, 1905, she discontinued radiotherapy, partly because she felt that "it took a lot out of her," but mainly because of family circumstances.

On August 9th, 1906, or rather more than a year later, her statement was that the disease was worse than it had ever been, any benefit she had received from the lamp having quite passed off. She was dyspeptic, looked ill, and had lost 1st. in weight during the preceding