sidering the matter is to suppose the man or animal as forming the axis about which the hands of the clock are rotating, the head of either being in relation to the face of the clock. In this case man can be considered in the position natural to him—the erect—and animals in that natural to them—the all-fours—without any ambiguity as to the direction meant if “clockwise” or “anticlockwise” be the terms used to indicate it.

CONCLUDING REMARKS.

Of all the methods of describing rotation which have been considered in this paper, the simplest appears to me to be that of describing rotation in relation to a screw; for all that is necessary to avoid confusion in this instance is to state that a right-handed male screw is under consideration. This being clear, the direction of rotation either resembles a screw entering or coming out of an object.

The next in order of simplicity seems to be the method by which the direction is denoted by the terms “clockwise” and “anticlockwise.” Simple as the method is, however, it becomes useless unless the relation of the object to the face of the clock is clearly defined. This precaution possibly ought not to be necessary, as the correct relation should be understood; but I feel sure that the relation is not generally understood, therefore it would be well to always make this point clear in describing rotation according to this method.

There seems little to choose among the other methods of describing rotation, for in order to understand what is meant, they all require that the exact relation of the object to the observer should be clearly defined, and that it should be distinctly stated whether the direction of rotation is being described as it occurs in relation to the upper or lower quadrants of the circle described in the “all-fours” position, or in relation to the posterior or anterior quadrants of the circle described when the object happens to be in the erect posture.

NOTE.

^a In the case of the clock right and left refer to the observer's right and left when he is looking at the face of the timepiece.

A NOTE ON THE OCCURRENCE OF MALTA FEVER IN INDIA.

BY

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WE have elsewhere¹ in a paper on The Application of the Method of Serum Diagnosis to the Differential Diagnosis of Typhoid and Malta Fever directed attention to the fact that Malta fever probably prevails not only in the Mediterranean basin, but also in India. We have since the date of the publication referred to further investigated this question, and we have found confirmation of our conclusions.

In view of the importance of the question, and in view further of the fact that public attention has recently been called (in Parliament and elsewhere) to the extreme pre-

valence of typhoid fever in an Indian station (Sabathu), where, as our serum examinations teach us, Malta fever must be very prevalent, we desire to be allowed briefly to refer to the matter.

Our observations have been made on soldiers who have recently been invalidated home from India to the Royal Victoria Hospital, Netley. A minute quantity of blood was drawn off from the finger of each of these invalids. This blood was diluted and was then examined in capillary sedimentation tubes in the manner which was recently described by one of us in the JOURNAL.²

The results of our examinations are subjoined in tabular form (see below).

In confirmation of the results which we have obtained by the application of the serum test to the after-diagnosis of these cases of continued fever, we may mention that many of these patients have since their arrival in Netley suffered from the ordinary sequelæ of Malta fever (such as swollen testicle, sciatica, and rheumatoid joint pains), and that others have suffered from definite relapses of fever. Further, we may direct attention to the fact that careful Indian observers have described cases of “atypical typhoid” which presented a set of symptoms and a temperature curve which we now know to be almost characteristic of Malta fever. In this connection we would particularly direct attention to an able report on typhoid fever in India which was published by Brigade-Surgeon Marston in the Appendices to the Army Medical Report for 1879.

REFERENCES.

¹ Lancet, March 6th, 1897. ² BRITISH MEDICAL JOURNAL, January 16th, 1897.

THREE CASES OF LOBAR PNEUMONIA APPARENTLY DUE TO INFECTION.

By A. DOUGLAS HEATH, M.D.LOND., L.R.C.P.,
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HAVING regard to the increasing interest that cases of infective pneumonia have excited of late years, I have thought that three cases which came under my notice a few months ago might be worth recording, as infection from one patient to the other seemed clearly established. All three cases occurred in the same house, and there had been no previous illness such as influenza on which the pneumonia might have been superimposed. The patients were stricken down within a short time of each other. As far as one could tell, the onset of the pneumonia in the second case was four days after the onset in the first; and the rigor, which was the first symptom in the third case, occurred two days later. In any case, therefore, if they derived the disease from the first case, the incubation periods in the two patients subsequently attacked could not have been longer than six days. Until they were prostrated by the disease, two of the patients had nursed the one first taken ill. The midden system is in vogue in the district, and these are situated outside the houses in a small garden. Although I made inquiries, I was unable to hear of any cases of pneumonia at that time in the vicinity of the

Table of Cases examined by Professor Wright and Surgeon-Captain F. Smith.

No. of Case.	Station from which Invalided.	Regiment.	Whether Served previously in the Mediterranean.	Whether had Suffered from Fever while on Service in Mediterranean.	Highest Dilution in which Serosedimentation Effect was Obtained upon the Micrococcus Melitensis of Bruce.	Remarks.
1	Sabathu	Black Watch	No	—	1 in 150	Higher dilutions not tried in this case.
2	“	“	No	—	1 in 10	
3	Nowshera	Argyll and Sutherland Highlanders	No	—	1 in 200	
4	Meean-Meer	Somerset Light Infantry	Yes, in 1893	Yes	1 in 1,000	All these served in Sabathu before going to Meean-Meer.
5	“	“	“	No	1 in 200	
6	“	“	No	—	1 in 1,000	
7	“	“	Yes, in 1893	No	1 in 200	
8	“	“	“	No	1 in 300	
9	“	“	“	No	1 in 150	
10*	“	“	Yes, in 1892	No	1 in 150	

This patient had enteric fever in Madras before he went to Sabathu.

house in which the cases occurred. Two little girls and the husband of the second patient escaped the disease.

The first patient attacked was an old lady, aged 72, who had been feeble for some years, but had otherwise enjoyed good health up to the time of this illness. She had been confined to her room for some months previously owing to her inability to get about with comfort, and spent the greater part of her time in bed. Her illness was at first obscure; the breathing became a little quicker than normal, and occasionally she had a little cough, but she was not otherwise affected, and her illness was throughout distinguished by an absence of pyrexia and of abnormal physical signs. The pulse beats were regular in force and rhythm, but small and weak, though not unduly so for a person of such advanced years. The frequency varied between 70 and 80. The first sign noticed of any diagnostic value was the brown colour of the sputum, it was also scanty and rather viscid. The patient had at first a little muttering delirium, but for the last three or four days of her life she was completely comatose. Her illness lasted in all ten days, and the end was foreshadowed by gradually-increasing coldness of the extremities and mucous *râles* in the chest.

The second patient was her daughter, aged 41. In consequence of privation from pecuniary loss and domestic troubles she was exceedingly emaciated and weak, and was seemingly as bad a subject for any illness as one could possibly imagine. She had been nursing her mother for four days, when she was suddenly taken ill herself, and evidently had a slight rigor. When I examined her a couple of days later she had marked signs of consolidation at the base of the left lower lobe of the lung. The respirations numbered 40 per minute, and the pulse beats varied between 115 and 120 per minute. The temperature taken in the mouth was 103.8° F. There was a little feeble cough at times, and the expectoration was quite typical of pneumonia. No pain was complained of, and I could not detect any signs of pleurisy. The tongue was furred and dry, and the teeth and gums were becoming coated with sordes. There had been up to this time no delirium. The patient remained in this condition, the temperature varying between 103° F. and 104° F., until on what appeared to be the seventh day of her illness a further rise of temperature to 105° F. (mouth temperature) took place. The respirations and pulse beats became even more rapid, and delirium also supervened. An increase in consolidation upwards could also be detected in the left lung behind.

During the next twenty-four hours the temperature taken in the mouth varied between 105° F. and 105.5° F., and cold sponging only reduced it very temporarily. At the end of this time, on what would therefore seem to be the end of the eighth day of the illness, the axillary temperature suddenly rose to 108.6° F., the patient became deeply comatose, and was apparently moribund, with the heart beating so rapidly that the pulse beats were almost uncountable, and the respirations coming in deep gasps at long intervals. Coarse *râles* could be heard over the whole of the front of the chest. The very high axillary temperatures above noted were taken by two different thermometers, two or three times, and I took care to have them tested afterwards, so that I have no doubt that the readings they gave were correct.

I had the patient at once rubbed with lumps of ice over the body and limbs, whilst ice was packed round the back and a large lump placed over the præcordial area. Strychnine and brandy were also injected hypodermically, and brandy injected into the rectum. The temperature fell rapidly to 103.5° F., but soon rose again to 105° F.; the same measures were again adopted, and it fell to 101.6°. With this further fall the breathing and pulse improved rapidly, and the patient began to move her eyes about, and shortly afterwards to recognise those about her. As soon as she was able to swallow milk and brandy were given her, she was rubbed thoroughly dry, and hot bottles put round her. She made an uninterrupted recovery.

The third patient was a female servant in the same house, aged 20, a well-nourished and strong-looking girl. She had been helping to nurse the first and second patients, and was taken ill two days after the latter. In her case she presented the typical appearance of a young and robust subject with pneumonia, having flushed cheeks, a hot dry skin, furred tongue, and rapid breathing. Marked signs of con-

solidation could be detected in the lower lobe of the right lung. The temperature rose suddenly, with a rigor, to 103.2° F., and remained between 103° F. and 104° F. for six days, when it fell by crisis. The sputum was of a rusty-brown colour, and, as in the other cases, scanty and viscid. This patient also made a very good recovery. I made examinations of the sputum in each of these three cases, and found large numbers of diplococci in each specimen, as well as micrococci and large putrefactive bacilli.

REMARKS.

These three cases of pneumonia all occurring in one house where there had been no previous illness can, I think, be best accounted for by the theory of infection from one to the other, although of course it is possible that they were all due to a common source of infection carried by means of the air. Against this latter theory are the facts that pneumonia was not prevalent in the district at the time, the persons in the house attacked by the disease were those in closest contact with the one first taken ill, and curiously enough the old lady who was first affected had not been out of doors for some weeks. The pneumonia in two of the cases certainly ran a course similar to that of lobar pneumonia, and the difference in the severity of the disease in all three cases can be most probably best explained by the ages of the patients and their different powers of resistance.

I could not detect any pleurisy in either of the cases, either early or late. The finding of diplococci in the sputum of each patient seemed to point to their being the specific cause. The brown colour of the sputum and its thick jelly-like consistency were the first signs of any diagnostic value in the first patient attacked; and the case is another example of how difficult it is to detect pneumonia in the aged when physical signs give no clue and the temperature is not raised.

The second case is interesting as furnishing yet another successful instance of the use of ice in rapidly reducing temperature in hyperpyrexia, whilst also perhaps tending to reduce the area of consolidation in pneumonia when applied over the affected lung. The case also shows how guarded the prognosis in pneumonia should be, and that even under the most adverse conditions patients apparently moribund may suddenly take a turn for the better. In connection with the use of ice in rapidly reducing temperature in hyperpyrexia when heart failure is imminent, I may say that I prefer constant friction with pieces of ice, and this not only applied to the body but also to the limbs, which can easily be done if there are several assistants. I think by this method the shock caused by the application of cold is lessened, and the contraction of the peripheral vessels which results is not so prolonged, periods of contraction of the arterioles alternating with periods of relaxation, and in this way the tendency of the blood to collect in the deep venous sinuses and on the right side of the heart is to some extent prevented, and the systemic circulation thereby rendered more efficient.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

ACUTE TONSILLO-GLOSSITIS FOLLOWED BY TUBERCULOUS MENINGITIS SIMULATING HYSTERIA.

E. C., aged 40, a child's nurse, seen on January 17th, 1897, gave a history of tubercle in the family, but had herself been healthy. She had been taken ill suddenly with great difficulty in swallowing and breathing. The tonsils were acutely inflamed, and studded with spots of follicular secretion, but there was no membrane. The tongue was thickly coated, but not swollen; the glands below and behind the jaw were enlarged and tender. The mental condition was normal. On attempting to swallow liquid great difficulty and pain was experienced. There was pain in the back and limbs, but no pain in the head or chest. There was no cough, no vomiting, and the sight was normal. The pulse was 120, and the temperature 100°.

On January 18th the tongue suddenly became acutely inflamed and cedematous, the breathing being entirely nasal.