REPORT OF A CASE OF CENTRAL COLOUR DEFECT, WITH REMARKS.

RECENT PROPOSED TESTS FOR COLOUR BLINDNESS.

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THE dangers resulting from colour blindness among marine and railway officials have within the past few years attracted the attention not only of the medical profession but also of the general public. In 1890 the Royal Society appointed a committee to investigate the subject of colour blindness, and last year the Council of the British Medical Association appointed a committee "to promote the efficient control of railway servants' eyesight." The reports of both these committees have now been drawn up. Their recommendations are highly practical, and if adopted by railway companies and the Board of Trade are calculated to do good.

According to the recommendations of the British Medical Association, "candidates for the posts of engine cleaner, fireman, driver, signalman, and pointsman," would be considered suitable as to colour perception if they possessed normal colour sense in each eye, and unrestricted fields of vision. "The tests for colour sense should be that of Holmgren, carried out in strict accordance with his directions. After this test has been passed the candidate should be required to recognise and name promptly the colours used in signalling." By this method the colour sense is estimated only qualitatively, not quantitatively.

Now a candidate may arrange the Holmgren tests with perfect accuracy, and recognise and name promptly the colours used in signalling, yet, though possessing perfect distant vision, he may be quite unable to tell the difference between a red and green signal at the distance of a few hundred yards, even in a clear atmosphere.

The following case, which has recently come under my notice, is an example of this:—

Miss C., a young intelligent lady, was brought to me by my friend Mr. Murray, to be examined with reference to vision and colour perception. She gave the following history: Up till recently she was not aware of having any colour defect. Her attention was first drawn to it in rather a peculiar way. Some friends calling commented upon the redness of certain plums on a tree about fifty yards from her drawing-room window. She was unable to see the plums, as the tree appeared to her quite green. On approaching it, however, the redness of the plums became distinctly perceptible. Her friends told her she must be colour blind, but that seemed scarcely possible, as she was an accomplished colourist on china. The next time she noticed this peculiar defect was while walking with a friend. Her friend remarked that a lady some distance away was wearing a red cloak. She maintained that it was of a dark colour, and only discovered her mistake when she came closer. A few days after I saw her in my consulting room. I found her eyes were normal in every way. Vision, right and left, normal (?). Field of vision normal for white, blue, red, and green. No night blindness. On testing her for colours she had no difficulty in recognising even the faintest shades of difference. She arranged the Holmgren skeins of wool with the greatest ease and accuracy. I then held up before her small discs of red and green colours, 3 millimetres in diameter, which she recognised with some slight difficulty. When the discs were reduced to 1 millimetre she failed entirely to recognise the colour, even after having carefully examined them in her own hands. Again taking two discs of red and green of slightly larger diameter than the first, and holding them about 5 metres away, she could not distinguish the one from the other. On testing her with larger discs, and holding them to begin with at such a distance as to subtend the same angle as in the former cases, she had the same difficulty. I then suggested to Mr. Murray that it would be very interesting to find out if Miss C. could recognise the railway signals red and green at night. We accordingly went to a railway station in the evening, where there were over thirty red, green, and white lights at the distance of about 300 yards. She saw them all quite clearly, but recognised no colour, though some appeared brighter than others. On going closer to them she had no difficulty in recognising the different lights and naming the colours.

The recommendations of the Royal Society's Committee, as reported in the BRITISH MEDICAL JOURNAL of May 7th, do not materially differ from those of the British Medical Association Committee, and mention no test that would detect such a case as that I have recorded. I would therefore suggest that either Donders's or Netteship's apparatus be employed in addition to those recommended. These tests would also be more effectual in the initial stages of toxic amblyopia, as the skeins of Holmgren are too large to detect a small central scotoma for red or green.

A HYGIENIC exhibition will be held in St. Petersburg in the spring of 1893, under the protectorship of the Grand Duke Paul Alexandrovitch.

MEMORANDA:

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

A CASE BENEFITED BY ADMINISTRATION OF OXYGEN DURING ANÆSTHESIA.

I AM indebted to the kindness of Dr. Frederick Taylor, under whose care this patient was admitted, for permission to publish this note.

J. S., aged 26, was admitted into Guy's Hospital on February 1st, 1892, with the left side of the chest full of purulent fluid; large quantities of non-purulent fluid had been aspirated on several occasions during the previous eight months. A few days after admission he was put under A.C.E. mixture; an opening was made by Mr. Jacobson, and a small piece of rib resected. As soon as he was under the anæsthetic he was rolled on to his right side, but as he became black in the face from interference with respiration he had to be turned on to his back, and the operation was finished from below, much to the inconvenience of the surgeon. Three months later it was found that the lung had not expanded at all, and that there were few or no adhesions between it and the chest wall; it was decided to resect several ribs to allow the chest wall to fall in.

Remembering how badly he had taken the anæsthetic during the first operation, we began to think how the risk during the more severe ordeal which was to follow might be diminished. Though not absolutely necessary, it was very important to turn him on his sound side, and it seemed that if the percentage of oxygen in the respired air could be increased the limited movements of the right chest would be sufficient for the time being.

On May 22nd A.C.E. mixture was given on a cone. It was not long before he stopped breathing on several occasions, and it seemed probable that the operation might have to be discontinued. The tube from the oxygen bottle was introduced under the cone, and a gentle stream turned on. He very soon got right, and the operation, which lasted about forty-five minutes, was finished without further anxiety, the respiration and pulse remaining good.

I have been able to try it in this one case so far, but in cases such as the above the administration of oxygen with the anæsthetic seems especially suitable and likely to be of service.

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DEATH UNDER CHLOROFORM.

On May 31st a man, aged 52, was admitted to the Queen's Hospital, Birmingham, under the care of Mr. Jordan Lloyd. For the past three months he had been suffering from severe pain in the right lumbar region which had incapacitated him from work. The pain was constant and of a gnawing character, was worse when at rest, and rarely shooting down to the inner side of the thigh or into the scrotum. There was scalding pain along the urethra during and after micturition. No history of venereal disease could be obtained. Ten weeks before admission he had noticed a considerable quantity of blood in his urine which lasted about a week. Micturition at this time was very frequent and painful. On admission, urine was 1020 in specific gravity, acid in reaction, contained a very faint haze of albumen, some pus cells but no blood. No abdominal tumour could be seen or felt, but there was acute tenderness both back and front on the right side. The heart sounds were feeble but unaccompanied by any murmur; the apex beat was displaced outwards. Moist râles were heard over both lungs; at the left base were dry crackling sounds which were ascribed to old pleurisy.

On June 11th the patient was placed on the table for an exploratory operation on the right kidney. Chloroform from a bottle out of which three patients had been safely anæsthetised the preceding day, was administered by the house-surgeon on a double fold of lint. For three minutes the man took the anæsthetic well, but then began to struggle, requiring the assistance of three dressers to hold him on the table. The struggling lasted two or three minutes and then ceased; the man breathed well for about another minute and was