displacement or transposition of the other viscera. The abdominal aorta can be distinctly felt beating slightly to the left of the vertebral column, and the distribution of the other great vessels is normal. The radial pulses are equal in volume and force.

The boy's height is 4 feet 5 inches, and he weighs 5 stone. His general nutrition is very fair, and his colour is good. On exertion there is no shortness of breath and no suspicion of cyanosis.

The boy's mother states that he has never been ill, and not specially subject to coughs or colds. The patient's own explanation of the displacement of his heart is comical enough. When asked when and how his heart had gone to the right side, he replied, "Please, sir, my sister gied me a lickin' last week and knocked it over there." The history of this case is thus entirely negative, and therefore the more interesting and remarkable. There is nothing to lead one to believe that he ever suffered from pleurisy with effusion or any other form of thoracic disease.

He was born at the full time, and was a strong healthy child. The mother states that the labour from first to last was quite natural. She has had twelve children, but none of them had presented any abnormality. She had twins only once immediately after the birth of the boy whose case is the subject of this paper.

Numerous cases of cardiac abnormality and displacement have been recorded by various observers. Of those described, some are well known though uncommon, while others are of extremely rare occurrence.

Ectopia cordis, or extrusion of the heart through the chest wall, is not infrequently met with. Jones,² Daniell,³ Charpentier⁴ and others have recorded instances. The child in these cases may present no other abnormality, and be otherwise well developed, but it does not survive long.

Double heart is known, though it is an abnormality rarely met with. Two hearts have been found in the fetal chest due to the admixture of the two germs. For example, a case in which three ventricles were supposed to exist is recorded by Chemineau, and a second appendix has been noted in connection with the left ventricle by De Haen.

In an interesting paper on Double Monsters and the Development of the Tongue,⁵ Professor Cleland narrates the case of a kitten with double heart and double organs from fissiparous division, and, when he saw the case of the boy here described, he suggested that the cardiac displacement might be produced in a similar way from fusion of a double heart. But the history of the birth of this boy along with the physical examination of the organs rather negatives this view.

The case of which this paper is the subject is one of dextrocardia without obvious cause. There is no history of previous illness. The chest is well developed and symmetrical, and any physical signs which could account for the displacement are entirely absent. The diminished or enfeebled respiratory murmur over the entire right lung seems to me to be more due to pressure of the heart on the right bronchus than to any impairment of movement or want of development of the right lung. The exaggerated respiratory murmur of the left side is probably due to a slight compensatory emphysema. The liver, the spleen, and other viscera are in their normal position. The birth was apparently quite natural, so that probably this is not one of those rare cases of double heart arising from a fused germ or as an accompaniment of an acephalic monster. It seems rather to be one of those instances where the heart itself has probably in fetal life undergone displacement without coincident change in the position of the other viscera. In this respect the case appears to me to be of special interest.

A more easily explained and more common displacement of the apparently normal heart is a complete transposition of this organ along with a similar change in the position of the other viscera. In these the heart is found beating in the right mammary region and quite absent from the left, the spleen, the liver, and the other viscera being also transposed. The late Allen Thomson⁶ has shown from his own observa-

tion and from that of Professor von Baer, of Königsberg, that this kind of transposition permits of explanation from embryological development.

But displacements caused by disease of the lungs and pleuræ are by far the most common. Large pleuritic effusions on the left side may drive the heart right across the chest so that its apex beat may be seen about the right nipple. While in this position adhesions may form, and when the pleuritic effusion becomes absorbed the heart remains anchored in its abnormal situation. Similarly, congenital or acquired atelectasis may displace the heart. In such cases great compensatory enlargement of the sound lung takes place, which pushes the heart before it towards the collapsed side.

Displacements from disease are either (1) vertical or (2) lateral.

In the vertical displacements the heart may be lowered, due to depression of the diaphragm from emphysema, bronchitis, asthma, collapse of the stomach and intestines. In aneurysm of the aorta the heart is usually depressed without lowering of the diaphragm, while abdominal enlargements, such as acute tympanites and tumours, raise the heart.

Of the lateral displacements the commonest are those due to pleuritic effusion and pneumothorax, which tend to displace the heart to the opposite side to that which is affected. Contraction of the lung—cirrhosis and atelectasis—tend, on the other hand, to displace the heart towards the affected side.

In the above case no sign of atelectasis exists, and there is no history of a former pleurisy with effusion to explain the cardiac displacement. Probably it has been produced *in utero* by some temporary arrest in the development of the right lung. The growth of the left lung would push the heart over to the right side, and it may have been permanently retained in that abnormal position by the development of adhesions, even after the right lung had resumed its growth and become functionally active.

TWO CASES OF BLOOD POISONING IN WHICH ANTISTREPTOCOCCIC SERUM WAS USED.

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As cases in which this serum has been used have not as yet been very numerous, the two given below may be thought worthy of recording.

J. M., aged 56, a labourer was admitted on March 18th into the Hampstead Infirmary suffering from an injury to his right leg. He stated that three days previously, while on duty as a night watchman, he hit his right shin against a pile of timber in the dark. He went to work on March 17th and 18th, but had to give up work on the evening of March 18th, and was admitted into the infirmary.

Condition on Admission.—The right leg was very inflamed from ankle to knee, and the temperature was 103.2° F. There was a small lacerated wound about the size of a shilling over the crest of the tibia about 3 inches below the knee. He complained of great pain over the leg. The temperature that evening was 104.4 F. Simple boracic fomentations were applied.

On March 19th, the redness had spread above the knee, and three incisions were made in the most boggy parts. The temperature fell, but rose again to 103° in the evening. On March 20th the inflammation had spread to the back of the thigh. On March 21st his condition was much about the same. He had two injections of morphine on account of the great pain. On March 22nd the leg, though discharging freely, looked very bad. The temperature varied between 101 and 102°, and on March 23rd a fresh incision was made, and much pus let out.

On March 24th the condition of the leg looked very critical, the inflammation was rapidly extending, and it was feared amputation might be necessary. In the evening, the temperature being 101.4°, 20 c.cm. of antistreptococcic serum

² S. Jones, *Ectopia Cordis*, *Trans. Path. Soc. London*, 1855, vi, 98 to 106.

³ Edw. Daniell, *BRITISH MEDICAL JOURNAL*, 1860, p. 776.

⁴ Charpentier, *Ectopie Cardiaque Thoracique*, *Union Méd.*, Paris, 1883, 3 to 5, xxxvi, 654.

⁵ *Journal of Anatomy and Physiology*, 1874, vol. vii, p. 250.

⁶ *Glasgow Medical Journal*, July, 1853.

(obtained from the British Institute of Preventive Medicine) were injected with due antiseptic precautions from a sterilised syringe, 10 c.cm. under each shoulder blade. The patient complained of no pain. The temperature fell next morning to 100.8°, and on the morning of March 26th it was 98°. The patient felt much easier. Further incisions to let out pus were made on March 25th, 27th, and 30th; but the improvement in the general state of health continued, the temperature being subnormal till the evening of March 30th. On April 8th, owing to a fresh spread of the inflammation and a rise in the temperature, 16 c.cm. of the serum were again injected with the same precautions as before, and as there was some pocketing of the pus fresh incisions were made and drainage tubes put through.

From this date the man made an uninterrupted recovery, the temperature falling to normal, and the incisions healing readily with no further spread of inflammation. The incisions were treated first with boracic fomentations, and finally with cyanide gauze, iodoform being freely used.

The second case was that of a nurse, L. V., aged 23, who while washing the instruments used in dressing Case 1 pricked her right thumb with a pair of sharp-pointed forceps, not deep enough to draw blood. She washed her thumb with dilute carbolic lotion (1 in 40) at the time, but two days after (April 2nd), when she came under notice, she had a small whitlow at the place where the thumb was pricked. This was incised and a boracic fomentation put on. At night her temperature was 101.2°.

As the inflammation had spread two fresh incisions were made under gas on April 3rd, and a small quantity of pus let out; and on April 6th, the temperature still remaining up, two more incisions were made and more pus let out. Quinine and iron were being taken internally. On April 8th it was noted that the temperature was still raised at night, the fever

assuming the remittent type. The arm was immersed in a warm boracic bath for some hours daily. The glands in the axilla were enlarged. Port wine (4 ounces) was given daily, and Valentine's meat juice. On April 12th the wrist was swollen and painful. It was painted with belladonna and glycerine, and on the following day with tincture of iodine. On April 18th lint soaked in iced lead lotion was placed on wrist and kept wet.

On April 19th, at 3 P.M., the patient was placed under A.C.E. and the hand thoroughly examined. The interphalangeal joint of the thumb was disorganised, the cartilages being largely destroyed; it was washed out and freely drained. Incisions were made on each side of the thumb and drainage tubes put through. A hypodermic needle inserted into the large flexor bursa drew off pus, so this was opened, a large quantity of pus drawn off, and thoroughly washed out; drainage tubes were inserted, and the hand dressed with cyanide gauze. The operation lasted an hour.

Though improved by the operation, her general condition on April 23rd was not very good, and as the temperature was 100° in the afternoon, 15 c.cm. of antistreptococcic serum were injected beneath the shoulder blades. The temperature then gradually declined to normal.

On May 3rd she was put under gas and ether, as the bursal cavity was not draining well, and fresh counter-openings were made. On May 8th she went out for a drive, and on May 11th went to the seaside convalescent.

As regards the influence of the serum on the two cases, in the first case each injection seemed to be followed by markedly good results, especially the second injection, from the time of giving which the man seemed rapidly to improve; and the inflammation, which had been spreading steadily before, was arrested. In the second case the influence of the serum was more doubtful. It would probably have been

wiser to have injected it three weeks earlier as soon as the nature of the case was ascertained.

The two charts are given at page 1316, and we owe many thanks to Miss Girdlestone, the superintendent of the nurses, for the kind help she has given in preparing the charts and notes.

MEMORANDA:

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

TWO CASES SHOWING IRREGULARITY OF TEMPERATURE IN ACUTE ENTERITIS.

On April 4th, 1895, W. B., aged 10, complained of frontal headache, pains in the back, and acute diarrhoea. His bowels were moved seven times between 1 and 12 A.M., and eight times from 12 A.M. to midnight. His temperature at 10 A.M. was 100.6°, and at 9 P.M. 102.6°. The next day his morning temperature was 100.4°, evening 101.4°, and his bowels during the day were moved fourteen times. Next morning his temperature had fallen to normal, and in the evening was 98.8°, and the bowels were moved five times. The following morn-

ing the temperature was 98.6°, but the same evening suddenly ran up to 103.8°, the bowels being moved five times. Next morning his temperature was 99°, and in the evening 97.6, the bowels being moved six times. From this day onward the temperature remained subnormal, going down to 96.6° on the 14th of the month, and gradually rising to normal twelve days after the onset of the attack.

The mother of this boy, aged 47, complained of similar symptoms, and on April 5th her morning temperature was 102.4°, evening temperature 102°, and the bowels were moved thirteen times. The next morning her temperature was 100°, but the same evening at 8.30 p.m. was 104.8°, and her bowels moved eleven times. The following morning the temperature fell to 99°, and in the evening to normal, and the bowels were moved eight times. The next day the temperature was only 98°, and the bowels moved four times; the following day 99°, and the bowels moved six times; the day after in the morning 97.6°, which by evening had gone up to 101.8°, and the bowels moved three times. Next day it fell to 98° and then to 97°, remaining subnormal between 97° to 98° until eleven days after the onset, when it returned to normal.

In these cases nothing of an unusual character had been taken in regard to food, and the symptoms at first all pointed to an attack of influenza. The motions soon became thin and watery, containing mucus and undigested food, but no blood.

Slight pain occurred at intervals, but it was never very pronounced. There was no vomiting. The tongue was only slightly furred. There was great thirst and some delirium when the temperature became high. No doubt the condition was attributable to the action of micro-organisms, and the high temperature to the absorption of toxins.

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LARGE SIZE OF OVARIAN CYSTS.

In the EPILOGUE of the BRITISH MEDICAL JOURNAL of September 5th, par. 201, you quote as a rarity the case of M. Fournel, in which a multilocular ovarian tumour contained 46 pints of fluid. A still larger tumour was removed by me at the Crewkerne Hospital on June 29th last. The patient was an old-looking woman in her 67th year, of short stature; and as her general emaciation was extreme and abdominal distension enormous, the girth at the umbilicus being just under 50 inches, she presented an extraordinary appearance. This also was a multilocular tumour, springing from the left ovary, and dated back eighteen months at the longest. The loculi contained altogether just over 56 pints of fluid, while the solid tumour substance, left after the fluid had drained away, weighed 9 lbs. The right ovary was also cystic, of the size of a hen's egg, and the uterus about the size of the egg of a duck. The operation was quite simple and easy, the patient had an uninterrupted convalescence, her general health rapidly improved, and there is at present a firm cicatrix showing no inclination to yield.

Perhaps these enormous tumours are common in country districts, remote from the surgical zeal of our large medical centres.

Crewkerne.

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MALARIA AT ADEN.

I SEE that several writers in the BRITISH MEDICAL JOURNAL have lately broached the subject of malaria in Aden. I thought it might interest many readers to see the statistics (for malarial fevers) of the Civil Hospital since 1885; they concern the civil native population alone. Undoubtedly it is a remarkable fact that the number of cases of malarial fevers has increased enormously of late years amongst natives and Europeans alike. In different health reports several causes and theories have been discussed:

1. That of late years more rain has fallen in Aden than fell in former years, and that the fever increases with a larger rainfall. (Unfortunately I cannot obtain reliable information about the rainfall prior to 1885.)
2. That the dredging operations carried on in the harbour may have something to do with the increase, for Surgeon-Major Peterkin ascertained that the men working in the dredgers suffered considerably from ague.