and, on the application of greater pressure, was easily converted into a distinctly musical note.

This is an ordinary clinical picture of anæmia in an advanced stage, such as affords probability of the presence of the cephalic murmur. On auscultation of the cranium, the murmur could be determined in three positions. When the stethoscope was applied to the closed eyelid, a low murmur was easily distinguishable. In rhythm it was somewhat later than the apex-beat, and slightly followed the carotid pulse. It was accompanied by the dull continuous rumble caused by the muscular contraction of the orbicularis palpebrarum in its closed state, by the irregularly intermittent noise produced by the sympathetic movement of the eyelid when the opposite lid winked, and by the respiratory murmur propagated through the cranial bones. These three acoustic phenomena are pointed out by Tripiér as likely to mislead the unwary observer. The continuous muscular sound cannot be got rid of, but the irregular noise of winking can be stopped by placing a finger upon the opposite eyelid, and the respiratory murmur necessarily comes to an end when the breath is held. When the stethoscope was applied over that part of the occiput corresponding to the torcular Herophili, a systolic murmur was also heard, but less distinctly than that in the orbital region; and, lastly, on auscultation over the mastoid prominence a very faint murmur of systolic rhythm could be made out. No murmur could be detected over any other part of the head. The murmur was not perceptibly influenced by change of posture, but slight pressure on the carotid arteries diminished its intensity, and forcible compression of these vessels entirely abolished it.

Such is the usual condition, according to my experience, when the anæmia is tolerably well marked. In all cases the murmur is most distinct in the orbital region; in the other situations it is comparatively faint. My students at the dispensary can always hear the former with ease, but the latter can only be detected by those of them who have undergone considerable training in auscultation.

In cases of anæmia, it is not uncommon to find a continuous murmur over the part corresponding to the torcular Herophili; sometimes this murmur, like the venous hum in the neck, presents a systolic accentuation. Since reading Tripiér's earlier paper, I have not been able to determine the presence of this continuous hum over the occiput, and have only observed the faint systolic murmur as in the case above recorded. It is only in very severe cases that the occipital murmur is continuous.

If the murmur originated in the terminal parts of the internal carotid system, it should be found to wane in intensity with distance from that system. It is not so, however; as above remarked, the occipital is usually more distinct than the mastoid murmur.

The position of the greatest intensity of the murmur is of great importance. It is most clearly heard over the orbit, the mastoid eminence, and the occipital protuberance. This fact furnishes a key to the question. These three situations are closely related with the cavernous sinus, the torcular Herophili, and the lateral sinus; and I am of opinion that the murmur is produced by fluid veins within these sinuses: in other words, the murmur is of venous origin. It will at once be said that the murmur ought to be continuous, like the *bruit de diable*, if it arise from vibrations of the fluid contents of these venous channels. But, as in the case narrated, the venous hum is frequently found to have systolic augmentations of intensity. These are caused by the pressure of the large arteries upon the venous trunks, during the distension of the arterial walls, consequent upon the cardiac systole. This pressure creates additional waves in the contents of the veins, and the acoustic expression of these waves is increased intensity of sound. The internal carotid artery is in very intimate relationship with the contents of the cavernous sinus, being practically surrounded by the venous blood. When the anæmic condition is present, therefore, with its predisposition to the generation of intravenous ripples, the pulsations of the artery excite fluid veins in the blood contained within the sinus. In this, I think, we have a sufficient cause for the production of the orbital murmur. And similarly we may account for the occipital and mastoid murmurs. The internal jugular vein, at its origin and in its upper part, is so closely connected with the internal carotid artery, that the shock of the arterial pulsation is always communicated to it. Hence, in the anæmic state, fluid waves are transmitted upwards to the blood within the cranial sinuses, and cause a murmur in situations where the vibrations come to a focus.

It may pertinently be asked, Why is the murmur louder over the occiput than in the mastoid region? And why is it more distinctly heard over the eyeball than in either of these positions? The answer is not difficult to find. The structures lying between the cavernous sinus and the closed eyelid are of somewhat similar density, or to put the fact in different language, there is a continuity of soft tissues from the cavernous sinus, where the sound is generated, to the surface of the globe of the eye, where it is perceived. On the other hand, a murmur arising within

the torcular Herophili must cause vibrations in the osseous structure of the occiput, in order to give acoustic manifestations. Physical laws tell us that sound is better transmitted through media of similar density, than where it is propagated through media whose density differs considerably. This is the reason why the orbital or cavernous murmur is more distinct than the occipital. And in the same way the murmur arising at the bend of the lateral sinus has to pass through the temporal bone; but this is broken up by the mastoid cells containing air, so that there is a physical reason for the greater weakness of the vibrations in this position. From the occurrence of a continuous hum over the torcular Herophili, we should expect to find a similar murmur over the orbit and mastoid region. That there are continuous vibrations, I most firmly believe; but, except in cases of profound anæmia, these are too feeble to reach the ear, and only the systolic augmentation of the sound is heard. Further observations will probably prove that there is a continuous hum in very severe cases.

As regards the place occupied by the cephalic murmur, in the order of development of the physical signs of anæmia, it may be remarked that it is the latest to appear. As far as my experience goes, the following is the sequence of phenomena: venous hum over the cervical veins; accentuation of the second sound in the pulmonary area; systolic murmur over the left auricle, with impurity of the first sound at the apex; systolic murmur in the mitral and tricuspid areas; and, lastly, cephalic murmur.

INTESTINAL OBSTRUCTION EXISTING FOR NINE MONTHS, CURED BY COLOPUNCTURE.*

By JOHN MCGOWN, M.D., Millport.

I HAVE brought this case under your notice because it presented some peculiar features which I have not seen noticed in any of the recently published cases of intestinal obstruction; also on account of the remarkable change that took place in the condition of the patient immediately after the operation, and because the patient, being resident in my own house, was under my constant observation during the whole period of the disease. The patient in this case is a gentleman who has been resident with me for the last eighteen years. During all that time, he has enjoyed excellent health. His habits are very regular; and, being a gentleman of independent means, he has not been subjected to the mental or physical strain of most men who have reached forty-five years of age. The first symptom noticed was about the month of March 1879. At that time, he began to refuse his food, had slight diarrhoea, and the abdomen was somewhat tympanitic. He complained of no pain at this period, nor at any time during the whole course of the disease. The diarrhoea continued, more or less, during the nine months he was ill. Thinking that the illness was owing to some slight derangement of the stomach, I tried all the medicines usually given in such cases; still the diarrhoea continued, and the distension of the abdomen increased. He still complained of no pain. He had no vomiting, unless when forced to take more food than he liked. The constant diarrhoea, and taking little food, produced great emaciation. A remarkable feature of the case was that, about five minutes after he took any food, a loud click-clicking sound was heard; the sound was such as can be produced by a quart bottle full of fluid being laid on its side and allowed to empty itself in that way. The sound was produced by the fluid passing through the obstructed part, wherever that might be. The mechanical pressure of the gas on the kidneys and blood-vessels of the abdomen produced a whole train of peculiar symptoms. The legs became very cedematous three months after the disease was first noticed; and at the end of nine months they were greatly swollen, and the skin was blistered in several places, from which fluid oozed. The heart's action was very feeble; the pulse had gone down to 40 in the minute. No trace of albumen was found in the urine during the whole course of the disease. There was no difficulty of breathing unless he attempted to exert himself in any way. The great pressure on the bowels produced a very large inguinal hernia on the left side. This could be easily reduced; but no truss could keep it up, on account of the great pressure. About the month of June—the disease now going on for five months, and having failed to relieve the distension, which was now very great—I passed the tube of the stomach-pump up the descending colon for nearly two feet, and let off a large quantity of flatus. After the gas was let off, I injected a gallon of tepid water into the bowel through the long tube. I continued to do this every eight days for about two months; but latterly it required to be done every three or four days. I had great difficulty in introducing the tube at first, both on account of the unwillingness of the patient and from the contraction of the sphincter

* Read before the Glasgow Medico-Chirurgical Society.

ani; but latterly I introduced the rectal speculum first, and then passed the tube through it with the greatest ease to myself and the patient. During the month of August, I had the advice and assistance of several medical friends who were spending their holidays here. Dr. Kirk of Partick suggested that I should give extract of belladonna a fair trial, which I did, without any good effect. Opium had been given in large doses at an early stage of the disease, with a similar result.

I now sought the advice of Professor Gairdner of Glasgow, who came and saw the patient. He suggested my asking Dr. Cameron to see the case. Dr. Cameron and Dr. Grieve saw the case eight days after Dr. Gairdner. Dr. Cameron suggested puncturing the bowel; but, as I had been taught that that was a very dangerous operation, and one that should not be performed until all other things had failed, I did not consent to its being done. I was still able to partly relieve the distension with the long tube passed *per anum*.

In the BRITISH MEDICAL JOURNAL of September 27th, 1879, several cases of intestinal obstruction were published; and, as they had a direct bearing on my case, I read them very carefully. I was very much struck by what Dr. Goodhart said to his students in a lecture delivered at Guy's Hospital, when speaking about the operation of colopuncture. Here are his own words, taken from the JOURNAL just referred to. "You may, perhaps, think that some less hazardous means of relieving the distension than that of colotomy might be adopted; and another operation has been practised with that end in view, viz., paracentesis. The distension is due partly to gas and partly to fluid feces; and it has been thought that, by withdrawing the former, the severity of the case might be relieved. One of the distended coils has, therefore, been tapped by a fine trocar and cannula. But there can be no doubt that this is an exceedingly dangerous thing to do; and I do not, from what I have seen and from what others have told, feel in the least inclined to recommend it to your notice. The danger is this: that the distension is, in the majority of cases, but little relieved—that alone is an objection fatal to its adoption; and, the bowel remaining full, and its walls tightly stretched, fecal matter, which you remember I told you is always liquid, leaks out into the peritoneum after the withdrawal of the cannula from even the smallest puncture. I have myself seen the operation performed; and fecal matter came out by the cannula at once; no relief followed; and the patient died not long afterwards of acute peritonitis. So do anything rather than this. You are taught, and quite correctly so, that small wounds of the intestine are comparatively dangerless, because the mucous membrane becomes everted, and so closes the aperture; but this only applies to a contracted intestine; but we are dealing with an overfull one. All the coats are in such a case distended probably to their utmost, the rugæ obliterated, and there is nothing to evert; and the smallest hole, under such circumstances, becomes a vent; and a vent, however small, in such a position, is fatal."

I called Dr. Cameron's attention to the articles published in this number of the JOURNAL. After he had read them, he told me he would come and see the patient, and do whatever might be considered best under the circumstances. Notwithstanding Dr. Goodhart's teaching, colopuncture was agreed upon. The patient was placed on his back in bed, the position in which he always lay since his illness. No chloroform was given—wisely, I think, as you will hear shortly. Dr. Cameron thrust the trocar and cannula into the middle of the transverse colon. The gas blew off for a few minutes, and the bowel was about half emptied of it, when the bowel was strongly drawn to the left side by its own peristaltic action. The cannula was laid down on the walls of the abdomen, and liquid feces began to escape from the cannula. Dr. Cameron placed his thumb on the mouth of the cannula, and then injected a small quantity of tepid water through the cannula into the bowel. He now withdrew the cannula, and placed a small piece of adhesive plaster over the wound; and we left the patient in bed. We did not consider the operation very successful, as the gas was only partially liberated.

But now comes the wonderful part of the case. Three hours after the operation, the patient had a very copious discharge from the bowels of dark clayish liquid feces, followed by a second one hour after the first. Seven hours after the operation, a large quantity of gas was passed *per anum*; and by next morning the abdomen was quite flat, and the distension completely gone. The kidneys now began to act vigorously. The ordinary chamber-utensil was filled three times in sixteen hours, and at the end of three days all the oedema in the limbs had disappeared. The heart's action was now greatly increased; the pulse rose from 48 to 70 per minute. The patient has improved every day since the operation, and is gaining flesh rapidly. Wherever the strangulation existed, I am of opinion that the bowel liberated itself at the time of the operation. Had chloroform been given, the peristaltic

action of the bowel might have been reduced, and the operation might not have terminated so well. Had the operation been delayed much longer, the patient could not have lived many days. I look upon this case as another of the triumphs of surgery; and, should a similar case present itself to any of my medical brethren, I hope they will not hesitate to give their patient immediate relief and the chance of complete recovery by the operation of colopuncture.

This paper was read before the Glasgow Medico-Chirurgical Society on February 6th, 1880; and, from the discussion that followed, it was evident that no one suspected the true nature of the disease.

The history of this case since this paper was read is very interesting; and, for the benefit of the profession, I will briefly state the condition of the patient from that date till the present time. Colopuncture was performed on October 30th, 1879. He remained quite well till the month of September 1880. At that time, he took a rather long walk over a hill. The day following, I heard the click-clicking sound which was often heard in his previous illness. All the symptoms previously described began to show themselves. I did not allow the distension to become so great as it was at the time of the operation. I passed the long tube *per anum* at the end of eight days, and let off a large quantity of gas. From that date till the present, I have been under the necessity of letting off the gas every eight days, either by passing the long tube or performing colopuncture. I have punctured three times since the month of November 1880. At the beginning of the year 1881, I began to pass a rectum-bougie every second day. I had to use the smallest size (about the size of the ordinary stomach-pump tube). I had an idea that the cause of obstruction might be at the upper part of the rectum. It was almost impossible to get the finger introduced into the rectum, on account of the violent contraction of the sphincter ani. I introduced the rectal-speculum, and distended the sphincter ani as much as I could. I inserted my finger as far as I could, and thought I found something like a fleshy mass at the upper part of the rectum. I diagnosed the case as one of intussusception. I now adopted a somewhat novel plan to cure my patient, and the result was most successful. I got the ileo-cæcal portion of the bowel of a sheep. To a portion of it six inches long, I inserted a small ivory tube three inches long; to the one end I tied the intestine of the sheep; to the other I tied an elastic tube one foot long; to the end of the elastic tube I tied a small stopcock. I introduced the long tube, and let off the gas. I now put in the intestine of the sheep through the speculum. As soon as it was completely within the cavity of the rectum, I blew it full of air, and turned the stopcock. This at once pushed the prolapsed bowel up, and I could feel the distended bag taking the direction of the descending colon. I allowed the distended bag to remain in for half an hour; then opened the stopcock, and cautiously withdrew the bag from the rectum. Next morning, all the distension was gone, and the click-clicking sound was heard no more. The following day, the patient had a very natural motion of the bowels, the first of the kind since the month of September last. He is now quite well. It is now easy to understand what took place at the time of the first operation of colopuncture. The violent peristaltic action of the bowel withdrew the intussuscepted portion, and consequently got rid of the obstruction.

DUPUYTREN'S CONTRACTION OF THE FINGERS IN WOMEN.

By WILLIAM ADAMS, F.R.C.S.,

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DUPUYTREN'S contraction of the fingers is, according to the testimony of all surgical authorities, of extremely rare occurrence in the female; and the communication of Dr. Carter of Leamington, published in the BRITISH MEDICAL JOURNAL of December 24th, 1881, is therefore of great interest, as he records two cases of this affection occurring in the female; one, now under his own observation, in a lady aged 88; and the other a sister of this lady, said to have been similarly affected, who died at the age of 70.

From Dr. Carter's description of the cases now under his observation, more especially from his remark that "there is much puckering of the skin of the palm", I have no doubt that the case he records is a genuine example of Dupuytren's contraction; i.e., a contraction described by Dupuytren as essentially depending upon a thickened condition of the palmar fascia and its digital prolongation, by which the fingers are drawn towards the palm of the hand, and contracted independently of the flexor tendons.

In all probability, the second case referred to by Dr. Carter may