slight pulsation present suggested the possibility of aneurysm, but this diagnosis appeared so unlikely that it was dismissed; it was supposed that the pulsation was conducted from the base of the heart uncovered by retracted lung. There was also some difficulty in determining the source of the haemorrhage, but this seemed explicable by ascribing the haematemesis and melaena to blood swallowed from the lung. Indeed, the symptoms of pain after food and haematemesis had resulted in the case being sent in as carcinoma of the stomach.

I am indebted to Dr. G. A. Sutherland, under whose care both these cases were, for permission to publish these notes.

THE RADICAL CURE OF HAEMORRHOIDS: MODIFIED WHITEHEAD OPERATION.

BY

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I WISH to invite again¹ the attention of surgeons to a very simple method of performing the only operation for the cure of haemorrhoids which, in my opinion, is worthy of the term "radical." And it affords me intense gratification to be able to state that in 1904 the distinguished originator of the procedure honoured me with his approval of my humble modification²—namely, that primary dilatation of the external sphincter entailed an unnecessary magnification of perspective which might readily induce anatomical obfuscation with disastrous operative results.

Method.

1. Limit primary dilatation to the insertion of the right index finger in quest of concomitant polypi, ulcer, stricture, etc.

2. Apply a pressure forceps at junction of skin and mucous membrane to each of the four cardinal points of the anal circle.

3. With adjoining pairs of forceps held in opposing traction make a rapid discission with a large straight blunt-pointed scissors from "point" to "point" until the skin is completely detached from mucous layer.

4. Apply another pressure forceps to the cut edge of the latter between each of the four forceps originally placed. This makes the operator master of the situation.

5. Grasp the eight forceps in the palm of the left hand, insert the left index finger into the rectum, and then cut lightly all around with scissors until the external sphincter appears well in view.

It is absolutely essential at this juncture to define this muscle and keep it constantly in sight and pushed upwards, always remembering that all cutting must be done below and external to it.

6. Continue snipping round with scissors until the "White-head's slit"¹ (submucosa) is exposed; then bear Cunningham's *Anatomy* in mind: "The submucous coat is composed of loose areolar tissue, which allows of free movement of the mucous layer on the muscular coat, and which also admits, under certain abnormal conditions, of a prolapse of the mucous membrane through the anal orifice. . . . The haemorrhoidal plexus of veins is contained in this layer."

7. With the left index finger still retained in the rectum as guide, and the eight forceps in the left palm making traction, continue severance of the attachments to the muscular coat until the haemorrhoidal cylinder can be peeled out of its bed by a few strokes of the back of scissors or other blunt dissector.

8. Then make a vertical slit in the protruded cuff up to the level of the "supra-Morgagnian"¹ circle; commence a continuous Triollet catgut suture at the apex of the slit, drawing the "red" mucous membrane into accurate apposition with the skin; then proceed, cutting transversely, half-inch by half-inch, at the level just mentioned; carry on, *pari passu*, the continuous suture; stop and forceps every spurting vessel and ligate same at once, so that at the last snip of the scissors nothing remains to be done except to complete the few final loops of the suture.

Abjure the employment of what is fatuously styled by claspers "a continuous haemostatic suture,"³ and of what is called by tinkers a soldering iron, in any part of the intestinal tract.

9. Having introduced a morphine suppository and a slender roll of dry gauze into the rectum, apply a dry gauze dressing and change same daily.

10. On the fifth morning give the patient one ounce of castor oil, sponge the part after each evacuation with warm permanganate lotion, add a warm permanganate sitz bath daily, and reapply a dry dressing.

11. On the seventh morning instruct the nurse to insert the right index finger (anointed) into the canal, and to educate the patient to do the same daily for two months. Do not forget, before he departs, to prescribe a pot of zinc and boracic ointment for this purpose. If any tags are in evidence on the ninth day apply a little eucaine and snip them off with scissors.

I have nothing further to state beyond the fact that not once in every fifty operations do I hear of any contraction or any other complication following this method. All the patients are discharged cured by the fourteenth day, and the time⁴ occupied in the actual operation varies from five to ten minutes.⁵

REFERENCES.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

AN AORTIC MURMUR.

As early as 1910 I noticed an aortic systolic murmur in apparently healthy persons. I observed it first in my own case, and after that in many infirmity patients, and later in many recruits and serving soldiers.

I was encouraged by Dr. James of Edinburgh to investigate the murmur, and, as mentioned by me in a letter to the *JOURNAL* recently, I had satisfied myself as to its cause and written an account of it before the war. It is heard over the aortic area, is systolic, and has generally the characteristics of an aortic stenotic bruit. The probable explanation was arrived at by a study of the flow of water in a rubber tube with a Higginson's syringe for the propelling force. If the tube be auscultated, the flow of water being kept up by the pressure of the foot on the ball of the syringe, a bruit can be produced by applying pressure to the tube. It is produced either by proximal or distal pressure, but is more audible in the former—that is to say, the sound is propagated against as well as with the flow of the water.

From this experiment I conclude that pressure on an artery such as the carotid produces a bruit which will be propagated both with and against the blood flow.

If the aortic area be auscultated and pressure be made with the finger so as partially to occlude the subclavian artery above the clavicle, a distinct systolic bruit is heard. In the actual patients it was sometimes present and at other times absent. It was found that the drawing aside by the patient of his clothing to permit of auscultation brought the sound into existence, and that with the arms by the side it could not be heard.

The subclavian artery passes over the first rib and under the clavicle, but is separated from the latter by the subclavius muscle, the action of which is to approximate the rib to the clavicle. Other muscles perform the same action—namely, the scalenus anticus, the deltoid, the pectoralis major, and also the pectoralis minor.

It would therefore appear that the artery can be, and is, very easily compressed by muscular action, and that when so compressed a bruit can be heard. Many persons by contracting their muscles can obliterate the radial pulse. The bruit can be obtained in almost any person. I have heard it in children, young adults, and elderly persons, and think it would be obtained in anyone provided the artery wall was compressible and the compressing machine in working order. The bruit would not be heard in a patient who was stripped to the waist and had his arms by his side.

While I do not think the bruit is of clinical importance, as it often occurs in medical examination for life assurance, I think it warrants an explanation.

My conclusions are: (1) That an aortic systolic bruit is very frequently heard over the aortic cartilage in the absence of any diseased condition. (2) That a large proportion of such bruits are due to the position of the arms at the time of examination, or rather the state of contraction of the muscles