Femoral aneurism, ligature of the external iliac artery.

C

ORAL ANEURISM. LIGATURE OF THE EXTERNAL ILIAC ARTERY.

WEST INDIAN Negro, named F. W., aged 34 years, was
ted into the Medical College Hospital on the 10th of
nber, 1869, with a femoral aneurism.
was a tall, well-made, active, muscular, and healthy-look-
an. A native of Barbadoes, the earlier part of whose
ad been spent at sea; he has been several years in
and served for seven years in the Lahore Light Horse,
uently as a rough rider, and last of all, as a barman in
the taverns in the Lall Bazar.
gives the following history of his case. About three years
sprained his toes in falling from his horse, but he does
ttribute his present disease to that accident. Six or
months ago, he and another man were lifting a weight
out 200lbs., when he felt something give way in his
just about the site of the tumour, but no
was taken of it and the sensation passed away. About
weeks ago, he observed a slight swelling, and he admits
or, perhaps, three weeks before that, he had felt a sense
asiness in the spot. This swelling gradually increased
e could feel it pulsate, and about eight days before
sion, he began to feel numbness in the limb. There
een more or less pain from the commencement of the
ng, but it increased to such an extent and the limb
e so painful, accompanied with fever, that he was
ed to bed; at last he applied for relief at the hospital.
had been poulticing the swelling and taking medicines,
he said, to no purpose. On admission he was weak and
h, the bowels were confined. The aneurismal tumour
ated in the middle third of the anterior aspect of the

left thigh. It is ovoid, fusiform, and its apex must be within half an inch of the profunda. The diameter of the tumour is about that of a fowls-egg, indeed the size and shape of it is very much what would be produced by placing a body of the size of an egg under the integument. The pulsations were very strong, and there was a loud bruit synchronous with the pulsation. It was very tender to the touch, and from his description is evidently increasing rapidly. Pressure on the femoral above the tumour completely commanded the pulsation.

He was put to bed, and perfect rest enjoined. The limb was bandaged and some aperient medicine ordered. A belladona plaster relieved the pain in the tumour, and a sedative draught gave him rest at night.

He was restless and feverish during the first two or three days after admission; but simple treatment and rest relieved him. The pain and swelling in the leg abated, and in all respects he was much better.

During the first three days, the tumour diminished in size and impulse.

On the 15th, I found him worse—the tumour had increased considerably without any apparent reason, for he had not left his bed. I decided, in consultation with my colleagues, to place a ligature on the external iliac artery, as the disease extended too high up the thigh to give any reasonable hope of success from ligature of the superficial femoral, and as to the common femoral, I prefer the ligature of the external iliac as a safer operation. Accordingly, at 8-30 A. M., of September 15th, the artery was tied, in the following manner, under the influence of chloroform.

At the junction of the inner and middle thirds of a line drawn from the anterior superior spine of the ilium to the symphysis pubis, and about half an inch above poupart's ligament, I commenced an incision which extended for about four inches parallel to Pouparts, ligament, slightly curved and terminating a little above and about two inches from the anterior superior spine of the ilium. The first incision divided the skin and part of the superficial fascia; having completed the division of the fascia, I next divided to the same extent the aponeurosis of the external

oblique. The superficial epigastric vein was divided with the fascia, and required a ligature, but no arterial branch was wounded. The internal oblique and transversalis, and the fascia transversalis having been carefully divided the peritoneum was next carefully separated with the intestines. It bulged forwards but was kept out of the way by Professor Partridge, who also pressed the spermatic cord aside and kept the wound dilated with his finger and a copper spatula. The contents of the pelvis were pushed aside until the artery came into view, lying on the psoas muscle.

The internal epigastric artery came plainly into view; it was very large, being quite as big as an ordinary quill. Dividing the sheath, and being very careful not to include anything but the artery in the ligature, I passed the aneurism needle from the inner side of the vessel, and tied the ligature firmly leaving both ends to hang out of the wound. Pulsation ceased in the tumour, which appeared immediately to shrink in size; in a few minutes later, it increased again to its original size, but without pulsation. Not a drop of blood was lost after the superficial epigastric vein was tied. The operation was almost as bloodless as though it had been done on the dead body, and I confess I was surprised at the ease with which the various steps of it were accomplished. The peritoneum separated more readily than it does in the dead subject, and the artery being distended with blood, looked larger. The iliac vein was not the least in the way: the sheath was most readily divided and the ligature easily passed. The day was dull and cloudy, and the light consequently not very good.

The lips of the wound were next brought together with wire sutures, and it was dressed with the carbolic oil dressing. It was remarked by all that before he was removed from the table, the temperature of the limb had fallen considerably. About ten minutes after being removed into his ward, he had quite recovered from the effects of the chloroform, and was complaining of pain in the left side of the scrotum and left testicle, as well as in the left iliac region shooting down the left thigh. I fear the genital branch of the genito-crural nerve has been included in the ligature.

3-30 P. M. Has had considerable pain in the scrotum, all down the inner side of the left thigh and leg, and up the left

side of the trunk; pulse 100. He is restless and uneasy. Has had two ½-drachm doses of Liq. Opii. Sed., which have given some relief. The limb has been wrapped in cotton and flannel. To the touch it feels now quite as warm as the sound limb, but the thermometer makes it two degrees cooler 95° to 97°. In the axilla it is 100°. Repeat the opiate with saline draught at night.

16th 8 A. M. He is better; had some good sleep; and the pain in the scrotum and thigh is much less. But below the knee he has a sense of great pain, although when touched there, it feels benumbed.

He was feverish during the night, and now complains of griping pains. The wound looks well, but from about the ligature a quantity of sero-sanguinolent fluid ran out. This, no doubt, is from the sub-peritoneal areolar tissue.

He has had altogether since the operation 30 drops of Liq. Opii. at 10 A. M., 25 drops at 1 P. M., 2 grains of Opium at 4 P. M., 2 grains at 7 P. M. The temperature of the limb has been as follows:

4 P. M. of 15th—Axilla	... ...	101°4
Right ham	... ...	100°2
Left ham	... ...	97°8
10 P. M. of Do.—Axilla	... ...	102°0
Right ham	... ...	101°6
Left ham	... ...	100°6
3 A. M. of 16th—Axilla	... ...	101°8
Right ham	.. ..	99°6
Left ham	.. ..	98°8
9 A. M. „ —Axilla	.. ..	101°9
Right ham	.. ..	101°
Left ham	... ...	99°

The foot, as well as the leg and thigh, feels warm. There is some tenderness about the wound. The bowels are to be relieved by an enema of tepid water, soap and oil.

The tumour is perfectly quiet and free from pulsation. It is apparently smaller than it was.

17*th*.—He is doing well; had a restless night, having been disturbed by starting pains about the wound. Pain in the foot and toes, and what he calls a sniving pain across the shin bone. His pulse is now 112. His tongue coated.

Temperature in

Axilla	100°8
Right ham	98°2
Left ham	98°

There is slight tympanites; the enema acted freely yesterday. No pain in the thigh now; but there is still numbness on left foot.

Yesterday evening at 7 P. M., his temperature was in

Axilla	103°
Right ham	101°3
Left ham	100°

The edges of the wound look puffed and swollen. There is rather a profuse sero-purulent discharge from about the ligature. Washed out the wound, especially about the ligature with a solution of carbolic acid ʒi to water *O*i. He has had no opium since yesterday. Has taken beef tea, milk and sago. Let him have a dose of castor oil. It was thought that faint pulsations could be felt in the left posterior tibial artery yesterday evening. The pain due to the genito-crural nerve has all passed away, but he complains of a pain in the loins and also in the stomach.

September 18*th*, 8-30 A. M. He is doing well. Pulse 92. No fever. Perspired freely last night. Tongue still coated; bowels acted freely after the oil. Has some appetite.

Temperature in	Axilla	99°
	Left ham	98°
	Right ham	97°
	Left toes	94°5
	Right toes	97°8

The only pain now is in the leg and ankle. The temperature at 4 P M., yesterday, was

Axilla	102°
Left ham	99°1
Right ham	99°4
Left toes	93°
Right toes	95°8

The foot and leg are enveloped in cotton and flannel. The pulsation of the posterior tibial is fainter to-day. About ʒii of thin purulent discharge came from about the ligature to-day. Washed out the cavity with the carbolic acid solution. There is neither pain nor tenderness in the tumour, which is quite quiescent.

September 19th.—He looks well; says that his sleep was disturbed by starting pains in the wound. There is a tolerably free thin purulent discharge from about the ligature. The cavity was again washed out with the carbolic acid solution.

The ligature on the epigastric vein came away. The wound is uniting, excepting about the ligature. His pulse is now 92. Tongue still coated; bowels acted freely. Takes his food fairly. Pain nearly diminished; numbness in foot less; says, that the general feeling of the limb is still one of numbness, but that this is decreasing.

Temperature at 4 P. M. yesterday.			This Morning.		
Axilla	...	100°2	Axilla	..	99°
Left ham	...	97°6	Left ham	..	97°
Right ham	...	97°8	Right ham	..	97°
Left toes	...	94°2	Left toes	..	91°8
Right do.	...	97°2	Right toes	..	94°4

He may have a mutton chop and some wine now.

September 20th.—He looks well; bowels moved twice yesterday; tongue still coated; no fever yesterday or last night. Temperature at 5 A. M. to-day, was—

Axilla ...	..	..	...	99°8
Left ham	...	..	...	97°2
Right ham	..	..	...	97°4
Right toes	..	..	..	96°
Left toes	...	..	..	96°

at 4 P. M. yesterday, it was—

Axilla ..	...	...	..	100°2
Left ham ..	..	...	..	97°
Right ham	...	..	..	97°8
Left toes	..	..	..	95°
Right toes.	..	...	...	95°2

His pulse this morning is 96. Still some pain in the ankle and shin. Has occasional starting pain in the wound. About three drachms of pus came from the wound to-day. The aneurismal tumour is becoming smaller and more consolidated, no tenderness on pressure.

Takes his food fairly.

May have solid food and two measures of Port Wine daily.

September 21*st*.—Pulse 92. Tongue still rather coated. Had very little sleep last night, notwithstanding three one-grain of opium-pills. Pain in the leg diminishing. Toes still feel somewhat benumbed.

Temperature, 4 P. M. yesterday.		7 A. M. to-day.
Axilla	99°8	99°2
Left ham ..	97°	96°9
Right ham ..	97°5	96°5
Left toes	96°	94°6
Right toes ..	96°6	94°8

The sutures are separating and the wound is granulating healthily. He takes his food well and is in good spirits.

22*nd*.—Is doing well. Bowels open. Discharge healthy. Pulse 92. Says both legs feel much the same now, but there is still some numbness in the left foot.

Temperature at 7 A. M.		At 4 P. M. yesterday.
Axilla	98°4	97°7
Left ham	96°8	96°
Right ham	96°8	95°7
Right toes	94°	94°3
Left toes	94°	94°4

There can be no doubt that the anastimotic circulation is established.

The aneurismal tumour is gradually shrinking.

23*rd September*.—Does not look quite so well to-day. Pulse 96. Complains of pain in the tumour and along the course of the femoral artery and also in the left testicle. The discharge is healthy and decreasing in quantity. I found that notwithstanding the strictest prohibition, he has been getting out of bed to go to the night chair.

Temperature at 4 P. M.		This morning.
Axilla	98°1	98°4
Left ham	97°1	95°4

Right ham	96°1	..	...	... 95°
Left toes	96°	...	...	.. 93°
Right toes	95°	...	...	... 92°

He says that the left leg now feels to him warmer than the right. There is still some numbness in the foot and ankle, and along the shin.

He has been cautioned not to get out of bed again.

He had some brandy yesterday in addition to his wine. This did not agree with him and is prohibited.

24*th*.—Tongue clean slept well; pulse 88; wound healthy. Still has pain in the tumour and along the course of the femoral artery, but rather less than it was. He had no opium either yesterday or to-day.

Temperature at 4 P. M.				This morning.
Axilla ..	99°4	..	...	.. 99°
Left ham ..	97°4	...	..	.. 96°4
Right ham ..	97°4	...	...	.. 97°4
Left toes ...	93°5	...	..	... 91°
Right toes ...	93°6	..	..	... 89°

He says he has an odd sensation as though the toe nails of his left foot were loose.

September 25*th*.—Pulse 96, but no fever. Wound looks very healthy and the discharge very slight. There is less numbness in the foot. The tumour and the femoral artery are less painful than they were. Temperature the same as yesterday. He says he feels very well.

September 26*th*.—Feels well; slept well; tongue clean; bowels open. Pulse 86.

Very little pain in the wound. The leg feels better, but is still rather numb about the foot

Temperature at 4 P. M.				This morning.
Axilla	98°	..	..	.. 98°4
Left ham	96°4	...	..	... 96°4
Right ham	94°8	...	..	... 95°3
Left toes	96°	...	...	.. 91°
Right toes	94°	...	...	.. 87°6

Thus the affected limb keeps at a higher temperature now than the sound one.

September 27th.—Looks well; tongue clean; bowels regular; pulse 88; wound healthy; discharge diminishing. There is still some numbness in the foot and toes. There is very slight pain in the tumour, which is gradually shrinking in size.

Temperature at 4 P. M. yesterday.		This morning.
Axilla	98°8	97°8
Left ham	97°2	96°4
Right ham	96°8	95°
Left toes	93°8	91°4
Right toes	93°4	90 5

The affected limb thus maintains a higher temperature than the other. The cotton packing of the foot and limb may now be discontinued. The flannel bandage may be continued as a support to the limb.

28th September.—Doing well, still some numbness in the foot; wound looks healthy; no pulsation can be felt in either tibial.

Temperature at 4 P. M. yesterday.		This morning.
Axilla	98°	98°6
Left ham	96°1	96°5
Right ham	96°1	96°2
Left toes	91°7	92°
Right toes	91°2	91°3

29th.—Says he has more pain in the foot and toes and shin of the affected limb, and that it is of a burning character, otherwise all seems to be going on as well as usual.

Temperature at 4 P. M.		This morning.
Axilla	99 2	98°6
Left ham	97°2	96°6
Right ham	97°1	96°2
Left toes	95°	93°
Right toes	95°6	92°4

He attributes the pain in the leg and foot to removal of the cotton. Let it be re-applied.

30th September.—Tongue clean; pulse 92. Leg feels much the same as yesterday; bowels open; slept well; tumour still slightly painful. The ligature on the iliac artery came away

to day, it was loose in the wound. It separated therefore on the fifteenth day.

Temperature at 4 P. M.		This morning.
Axilla	99°6	98°2
Left ham	98°5	96°3
Right ham	97°7	96°4
Left toes	96°7	95°
Right toes	95°	94°4

The temperature is now nearly equalized in both limbs.

1*st October*.—He is doing well, the wound is rapidly healing, and the discharge diminishing. I may remark that the healing of the wound has been somewhat delayed by the skin having ulcerated at the points of suture.

It is now rapidly closing in with healthy granulations.

Temperature at 4 P. M.		This morning.
Axilla	99°2	98°
Left ham	98°2	96°5
Right ham	97°2	96°
Left toes	96°4	95°
Right toes	95°4	96°4

The affected limb is still a degree warmer than the other. There is still a little numbness in the toes, instep, and foot. Tumour still slightly painful. Palse 88.

2*nd October*.—Pulse 88. Did not sleep well; suffered from griping pains in the bowels, and pain in the wound from 6 P. M. to 4 A. M. The leg, he says, "felt as though it were on fire." This was relieved when the bandage and cotton were removed. The wound looks well, but not so florid as yesterday. The discharge of a dirty yellow color.

Bowels acted twice in the night. He had a sedative draught. The pain has now passed off, but there is still some in the leg and foot.

Temperature at 4 P. M.		This morning.
Axilla	99°8	98°2
Left ham	98°4	95°6
Right ham	98°6	96°2
Left toes	94°8	90°6
Right toes	95°	92°

The temperature of the affected has fallen again below that of the sound limb. His tongue is foul, and bowels probably out of order. A dose of Ol. Ricini ordered.

3rd October.—He feels better; slept well. Pulse 88.

Only slight pains with numbness in the foot. No pain in the tumour which is certainly much smaller.

Temperature at 4 P. M.		This morning
Axilla	98°4	97°8
Left ham	96°	95°4
Right ham	96°1	96°5
Left toes	93°4	86°8
Right toes	94°	87°

4th October.—Doing well; slept well; no pain. Pulse 88. Foot still rather numb. The wound looks very healthy, it is rapidly closing in.

Temperature at 4 P. M. yesterday.		This morning.
Axilla	99°	99°
Left ham	96°6	95°7
Right ham	96°8	95°7
Left toes	91°8	90°
Right toes	92°	88°

The temperature of the limbs is again nearly equalized.

5th October.—Doing well; slept well; tongue cleaning. No pain in the leg; still some numbness in the toes.

No pain in the tumour which has not changed during the last two days.

Temperature at 4 P. M. yesterday		This morning.
Axilla	99°5	98°4
Left ham	98°	93°
Right ham	98°2	92°4
Left toes	95°	91°1
Right toes	95°3	90°3

6th October.—Tongue cleaning, no pain on the limb; still some numbness in the toes. No pain in the tumour or in the wound.

It is three weeks to-day, since the operation was performed.

7th October.—He is doing well; slept well; no pain; but some

numbness in the toes, and a feeling of soreness across the instep. The wound is healing rapidly.

Temperature at 4 P. M.		To-day.
Axilla	99°4	98°2
Left ham	96°8	94°4
Right ham	97°	94°5
Left toes	95°	87°8
Right toes	96°5	89°2

8th October.—The night was very stormy and wet, the weather has affected him, and he has much pain in consequence. Tongue clean. Pulse 94.

Temperature at 4. P. M.		This morning.
Axilla	98°4	98°6
Left ham	97°2	96°5
Right ham	97°6	96°2
Left toes	93°4	93°
Right toes	93°8	93°4

The temperature of the limbs is thus about equal. The wound closing rapidly.

10th October.—Doing well; no pain; still some numbness in the toes.

Temperature this morning.	
Axilla	99°
Left ham	94°4
Right ham	93°
Left toes	91°8
Right toes	92°5

Pulse 96. Eats and sleeps well.

11th October.—Doing very well. Sat up in a chair, and walked a little yesterday; slept well. Pulse 84. Had pain in the testicle after walking.

Temperature this morning.	
Axilla	99°2
Left ham	95°6
Right ham	95°8
Left toes	91°6
Right toes	91°6

The temperature of the limbs is now equalized. Wound all but healed.

12*th October*.—Walked into the next ward. Pulse 88.

Temperature.

Axilla	98°
Left ham	96°
Right ham	96°4
Left toes	91°
Right toes	91°4

Still some numbness in the toes.

15*th October*.—I have not seen him for two days. He has been doing well; general health very good. The temperature of the limbs equal. He walks about freely. The tumour has almost disappeared.

21*st October*.—Temperature of the limbs equal, he walks with ease. There is a point of the wound still unhealed, but otherwise he is quite well, and is very anxious to leave the hospital.

24*th October*.—He is very well, walks about the ward freely. His strength is rapidly returning. There is still a vestige of the tumour remaining, but it gives him no pain. He says that in walking there is still a little numbness in the toes, but he feels quite well, and fit for his work.

26*th October*.—We could not persuade him to remain any longer.

He left yesterday, apparently quite cured: no pulsation could be felt in either of the tibials of the affected limb; some thickening only indicates the site of the former aneurismal tumour. The temperature, size, and strength of the legs are equal. There is no tendency at present to hernia at the seat of the wound.

He was admitted on the 10th September.
The artery was ligatured, 15th ,,
The ligature came away 30th ,,
Discharged cured—25th October.

He was brought to the Hospital on the night of the 25th November, intoxicated and cut and bruised about the face from fighting. It was observed that the temperature of the legs was equal, and that he seemed to have perfectly recovered from the aneurism; there was still some thickening observed

when the thigh was everted, with the knee flexed; and there was a small sinus at the upper extremity of the wound. There was no pulsation in the site of the aneurism nor in the tibial arteries of that limb.

He had been drinking for some days, but otherwise was well and strong.

J. FAYRER, M. D.

Calcutta, 3rd December, 1869.