A CASE OF THROMBO-ANGIITIS OBLITERANS TREATED BY FEMORAL PERI-ARTERIAL SYMPATHECTOMY

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PERI-ARTERIAL sympathectomy for the treatment of thrombo-angiitis obliterans has to a large extent given place to the more severe operation of paravertebral ganglionectomy. The reason for this change is attributed to the uncertainty of or only temporary relief obtained by the minor operation. This is due to various causes of which two have been stressed. It has been proved by Stopford that the chief branches of the paravertebral ganglionic chains join the peripheral nerves and that they enter into the formation of the sympathetic sheath around the arteries at various levels along the course of the arteries. Thus peri-arterial decortication at any particular spot might miss the sympathetic fibres which are to be finally distributed to the terminal branches. Lambert Rogers demonstrated that the good effects produced by peri-arterial neurectomy are not permanent but last at the most five weeks. But there might still be cases where the vascular condition is of a minor degree and in which the lesser operation, if properly done, might afford permanent relief.

The following case has been described as an illustration. A point of interest to note is that the patient is a Chinese amongst whom the disease must be extremely rare, as I could not find any previous record by authorities I have consulted.

The patient, a Chinese male, aged 23, of Taungyi, Southern Shan States, Burma, was admitted into the Civil Hospital, Bhamo, on 3rd January, 1935, with the following complaints:—

Chronic progressive ulceration of the first, second, and big toes—in this order—of the left foot, duration about seven weeks. Severe pain in the toes, left foot and leg preventing sleep at night.

On 11th November, 1934, the first toe of the left foot was struck on the dorsum by a small stone, the size of a walnut, causing a small wound which bled a little at the time. There was no suppuration but the wound showed no tendency to heal. On the other hand the tip of the toe became black and the patient suffered from throbbing pain. He then undertook a seven days' journey to China on a pony. After the second day the whole foot became red and swollen up to the ankle and was so painful that he could not use the foot. The inguinal glands also became enlarged and painful. The condition did not show any improvement in spite of treatment by Chinese medicines. On the 12th or 13th December the toe received an accidental knock and the condition became much worse. A few days afterwards signs of gangrene appeared, *e.g.*, the toe became black, was becoming dried up, with a sharp margin, and the pain was unbearable. The winter in Tengyueh (China) was very cold at night and very hot during the day. The cold made the pain worse and he could get no sleep at all. After a few days (20th December) a similar condition began to develop in the tip of the second toe. The condition progressed in both toes and on the 26th the big toe showed similar signs at the tip. He left China on the latter date and reached Bhamo on the 3rd January, 1935, when he came direct to the hospital for admission.

Personal history.—The patient was sensitive to cold. He is a teetotaller, smokes four or five cigarettes a day, and denies history of venereal disease. He has been married seven months.

Family history.—Father died when patient was 15; mother died when patient was two years of age. He has three sisters all of whom are healthy. There was no similar trouble in the family.

Condition on admission.—The patient looked worn out, there was no temperature and physical examination, apart from the local condition, was negative. The left foot was swollen and discoloured with a reddish-brown hue. The first toe showed signs of dry gangrene, the tip was shrivelled up, the whole toe was black and there was a line of demarcation a little below the metatarso-phalangeal joint. This line had cut through the skin and showed signs of sepsis. The terminal phalanx of the second toe was also in a similar condition though less advanced. There was a line of demarcation but the skin was intact. The big toe was black up to about the base of the nail where discoloration stopped with a sharp margin. All the parts were tender. There was no pulsation in the left dorsalis pedis artery and the left posterior tibial artery was hard and cord-like with very feeble pulsation behind the medial malleolus.

Treatment and further progress.—The part was kept dry by repeated application of methylated spirit over a dry dressing. Hot dry salt fomentation was applied to the foot.

The line of demarcation became more defined and dry and the first toe was amputated by disarticulating the metatarso-phalangeal joint on 7th January. The patient had to be given morphia every night because of the pain, but bromides had to be continued after the operation. The operation wound was slow in healing on account of the thickened and scaly condition of the skin. The second toe and the big toe showed signs of the progress of the disease and the pain in the second toe was also becoming worse. It was decided to try peri-arterial sympathectomy before doing anything further. Left femoral peri-arterial sympathectomy was performed under spinal anæsthesia on 19th January. The femoral artery appeared to be much smaller than usual, being only about the size of a normal radial artery. After giving off the profunda branch it became much attenuated. About two inches of the peri-arterial sheath was stripped off including as much of it as possible from the deep branch also. Within five days of the operation the patient complained that his left leg felt hot and that this was noticeable by him when he touched one leg with the other. The left leg and about three-quarters of the left thigh assumed a dusky colour from the second day. There was no noticeable difference in the temperature in the two limbs when taken with the thermometer in the popliteal space. Pain was relieved within a few days. Pulsation was felt in the posterior tibial and the dorsalis pedis arteries from the 24th January. The condition of the second and big toes improved steadily. By the 26th January there was no pain at all; the foot appeared normal except for the condition of the toes. It was noticed that the line of demarcation in the second and big toes had gradually receded towards the tips. Though it was thought that amputation of the terminal phalanx of the second toe might be necessary it was decided to wait a little longer. The subsequent improvement was so great that it was only necessary to remove the tip of the second toe on 23rd February which had by then dried up completely. The black area on the big toe also became smaller and only the skin and a little subcutaneous tissue were clipped off. The patient was discharged on 21st March but attended the outpatient department regularly. On enquiry at the time of writing (26th August, 1935) it was reported that the cure has so far been permanent.

REFERENCES

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