patients were under 10 years of age, and were playmates, their playground being the lobbies and stairs. The view that the waterclosets may have served as a source of infection is negatived by the fact that none of the adults (twenty-eight in number) resident in those three flats were attacked, and it is not thought that the situation of the houses in respect of their water supply, some being placed on different sides of the stair, was a factor in the causation. The evidence points strongly to personal infection during play, and, this method of spread of enteric fever being comparatively rare, it was deemed worthy to place these cases on record.

SUCCESSFUL AMPUTATION OF THE LEG AT 94 YEARS, WITH AN ACCOUNT OF A NEW OPERATION.

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It is not often that a simple amputation of the leg presents features which call for a special report, but the age of my patient and the excellent result are sufficiently interesting, I believe, to justify a publication of this case.

I shall take this opportunity, also, to describe an operation which seems to have elements of utility. I always perform it where great rapidity is desirable, and the leg is spare enough to permit of it.

The left hand seizes the outer side of the leg at the point of section of bone, thumb to the front. The skin over the tibial surface is drawn forcibly outwards, the point of the knife is made to enter at the edge of the tibia, graze the fibula, and emerge as far inwards as possible on the back of the leg, and a flap is then cut downwards.

On releasing the leg the front of the incision flies inwards, so that it is now possible to enter the knife and clear the tibia to reach the point of exit behind, and cut the internal flap, which should equal the external.

With the catlin a semilunar periosteal flap is cut from the front of the tibia, and quickly stripped upwards, the bones cleared, and the saw entered first obliquely, then straight, in the usual way, so as to take off the front corner of the tibia. This point of bone is in the anterior angle of the wound, but being covered by the periosteal flap never becomes adherent.

Two acupressure pins (devised by Dr. W. J. Branch and catalogued by Arnold and Sons) are inserted between the bones crosswise, so that the anterior and posterior tibial arteries lie in the opposite angles. A stout silk is now wound by figures-of-8 so as to close the pins together and compress the arteries. The pins are slightly withdrawn from their cannulae, so that the points are hidden, and the tourniquet removed. Two sural vessels in the heads of the gastrocnemius usually require ligature, and nothing remains but to suture, leaving the heads of the pins and the end of their silk protruding from the anterior angle of the wound. The pins are removed about three or four days after, and the silk, then loose, easily comes away.

In this way I have removed a leg in twenty-one minutes, including chloroform and bandaging. The actual amputation takes two minutes.

In all amputations at the seat of election I cut equal lateral flaps, usually by a racquet-shaped incision. Lately I modified this by making the incision from a shallow curve upwards on the back of the leg, so as to give a rounded stump when the flaps are brought together, instead of the prominent nose formed by the simple racquet incision. I always make the periosteal flap. My patients can only obtain common peg legs, and the position of the scar on the face of the stump is of no account. But the resulting stump is usually so good that I believe it would suit any form of artificial leg. I have amputated at the seat of election fifty-one times in the last four years.

CASE.

F. L., a negro, aged 94 years. The age of a West Indian negro is often a doubtful quantity, but in the present instance it was fixed by the fact that she was born one month before the volcanic eruption of 1812.

The patient is quite deaf and nearly blind, but physically strong and active. She used to live alone and do all her own shopping and cooking. On February 1st, 1906, she was knocked down by a cart and sustained a compound fracture of the lower

third of the leg. I was informed of this by telephone, and by the time the patient arrived all preparations were complete. She was at once placed on the chloroform table, and the skin prepared with lysol soap and ether and packed with sublamin.

The leg was removed by double transfixion as detailed above. Pins were not used. There was great tendency to ooze, though there was no atheroma of vessels, and no less than seven ligatures were used (sterilized silk). Dry sterile swabs were used and the wound flushed with sterile normal saline. The wound was closed accurately with silk and dressed with plain sterile gauze. Chloroform was begun at 1.02 p.m. and the operation at 1.11 p.m.; amputation was completed at 1.14 p.m., and bandaging at 1.32 p.m. The whole operation therefore took thirty minutes, and the patient was in bed an hour after the accident.

Owing to continued oozing the stump was reopened the same night under chloroform. Clots were cleared out, but no bleeding point was found.

There was no shock. The wound healed aseptically. A small spot of gangrene appeared on the skin of the knee over the inner side of the tibia. This formed an ulcer as big as a shilling, which, however, did not affect the progress of the recovery.

The patient was discharged well on March 6th, 1906, thirty-four days after her accident.

MEMORANDA: MEDICAL, SURGICAL, OBSTETRICAL.

THE BEHAVIOUR OF ETHYL CHLORIDE.

THE following case may help to throw a little more light on the behaviour of ethyl chloride as a general anaesthetic. The patient was a male, aged 38 years, heavily built and well developed, 42 in. round the chest in the nipple line, and weighing 14 st. There was a small tidal wave, but otherwise he was healthy.

In February, 1905, he had a large perirectal abscess evacuated under ethyl chloride and chloroform. The ethyl chloride was given in a single dose of 3 c.cm. in a Swan's inhaler without admission of air. No difficulty was experienced, the whole time taken being twenty minutes.

In the following April the resulting fistula was to be operated on. The patient was prepared in the usual way. Ethyl chloride was given as before, but without getting the patient under its influence, whereupon 3 c.cm. more was sprayed into the bag, making 6 c.cm. in all.

The patient was coughing, but not struggling. When the conjunctival reflex was absent the inhaler was removed and a Skinner's mask applied. The patient suddenly stopped breathing (about half a drachm of chloroform had been dropped on the mask). His tongue was pulled out, and his larynx examined with a finger. There was no jaw spasm or cyanosis and the pulse at the most was 80 per minute and full. The chest was fixed, and the pupils, at first widely dilated, settled down to midway dilatation. At first there was no discolorment, but afterwards he became cyanosed. There was remarkable rigidity of the body and limbs, so much so that Sylvester's method of artificial respiration was impossible, the abdominal wall was as rigid as a board. The method employed was to put the patient on the floor, and fall on his thorax with outstretched hands, together with rhythmical tongue traction. For ten minutes this was practised, his pulse remaining remarkably good. He then began to breathe automatically. During the actual performance of the artificial respiration, very little air, if any, could be forced into the lungs owing to the rigidity of the chest wall.

On returning him to the table he again stopped breathing. The previous treatment was again commenced. He was now becoming cyanosed. There was no twitching nor movement of the eyes. Liq. strychninae hydrochlor. mxx was then given in two doses at five-minute intervals, and in fifteen minutes the patient began to make spasmodic efforts to breathe. He was very deeply cyanosed, almost black in colour; his pulse was still to be counted at the wrist, being about 140. A capsule of amyl nitrite was inhaled as soon as natural breathing began.

He was left lying on the floor wrapped in hot blankets, and in twenty minutes he expressed himself rather sore about the ribs and tongue, but otherwise well. The only other after-effect was severe headache, which the large dose of strychnine would account for. The operation