so conveyed. In only one case of the nine I have seen did the coroner deem a post-mortem necessary. Since January, 1880, there have been ten men executed, and three have committed suicide by hanging in Her Majesty's Prison at Galway. I have been present at the execution of six of these men, and saw the bodies of the suicides within a few minutes of their being discovered.

In eight of the executions Marwood was the hangman, and although he discharged his duty with celerity and death was instantaneous, yet it seemed to me that the time must have appeared terribly long to the criminal from the commencement of the preparations until the bolt was drawn. My observations have also convinced me that in no case should one executioner attempt to hang more than one person at a time; for not only is it likely that an accident may result—as actually did happen in one case—and the death of the criminal be prolonged, but the mental strain and agony of the miserable criminal waiting on the drop until the others are prepared must be something awful. To me, standing looking on, the time seemed interminable, although the work was done rapidly and did not occupy more than a minute or two. What must it have been to the unfortunate creature on the brink of eternity! This will be fully understood from a description of the process. The prisoner's arms are pinioned in the condemned cell. A belt is buckled round the waist; to this belt are attached two straps, which, when the belt is in its place, are about an inch or two in front of and above the anterior superior spine of the ilium. The arms are fastened to the side of the belt by these straps, so that the fingers can barely cross in front, and the elbows project somewhat behind. The pinioning being effected, the prisoner is marched to the scaffold and placed on the drop, immediately under the ring in the cross-beam, to which the rope is attached; the legs are then fastened together by means of a strap placed between the knees and the ankles. Next, the noose is placed round the neck, drawn firmly round the throat, and kept in position by a washer or ring. The white cap is then put on, and the executioner, stepping back, pulls the bolt. Now, it is evident that, no matter how dexterous and practised the executioner may be, the strapping the legs, adjusting the rope, and putting on the cap must take time; and if the prisoner is left standing while the same thing is being done to one or two others, his suffering must be very terrible. What it actually is I suppose no one can conceive; but in one case, although a single execution, and done very quickly, the man fainted, and was actually falling sideways when the bolt was drawn.

In Marwood's executions he used the long drop, and placed the knot under the chin. The rope hung down behind the prisoner's back from the ring in the cross-beam, and looped up from below the waist to its attachment under the chin. Thus it will be seen that the length of the drop was something more than the prisoner's height. This arrangement worked well if the prisoner was steady; but if restless, then there was the danger of what actually happened once—of the loop of the rope catching the convict's elbow as the body fell, and so preventing death being instantaneous. The first man I saw hung was executed in Jan. 1880. He was a tall, powerfully-built fellow, and met his death with great fortitude. One hour and a half after the execution, assisted by Dr. Pye, professor of anatomy, I made a post-mortem. Fæces had not been passed, but there had been an emission of seminal fluid. On dissecting the neck, we found most of the tissues torn through, the body of the third cervical vertebra was broken diagonally across and separated for at least two inches and a half to three inches from the remaining portion, the spinal cord was torn through, and in fact the head was retained in connexion with the trunk merely by the skin, which was not even abraded, a few muscular shreds, and the vessels on the right side. The trachea and œsophagus, the carotid artery and jugular vein on the left side, were torn through, and the tissues were emphysematous. On opening the thorax, nothing particularly abnormal was discovered in the lungs; they were slightly congested, but not to a very appreciable extent; the left heart was empty and firmly contracted, but on the right side both auricle and ventricle were full of frothy blood, the air escaping from the ruptured trachea having been evidently sucked down through the jugular vein.

The next execution I witnessed was in January, 1883. The prisoner walked with tolerable firmness to the scaffold, but appeared to faint on it, for just as the bolt was pulled he fell sideways towards the left; the drop too was evi-

dently a very long one, as the loop of the rope was below the level of his knees. To ascertain roughly the lesions producing death did not need a post-mortem, as all the tissues, save about from one and a quarter to two inches of skin on the right side of the neck, were entirely severed. In fact, had it not been for that small portion of skin he would have been completely decapitated. I attribute this result to an excessively long drop, to a thin neck, and to a rotary motion being imparted by the man's fainting, so that the pull on the body falling did not act in the line of the long axis of the neck, but partly laterally. The next two men were executed two days after. The coroner did not deem a post-mortem examination necessary, but, from an external examination, I have no doubt that the bones of the vertebræ were separated in each case. In the first case I have recorded there was actual fracture of the body of the third cervical vertebra; in the second case the separation took place between the bodies of the second and third cervical vertebra; and, as far as I could judge in the last two, luxation was about the same place; the ends of the bodies of the vertebræ could be distinctly felt separated from each other by at least two inches and a half.

If I recollect rightly, the evidence in the Dublin executions was to the effect that in all cases the vertebral bones were torn apart and the spinal cord severed. In the four cases which occurred while I was absent from Galway no post-mortem was made, but the gentlemen who discharged my duty have informed me that they had no doubt as to separation of the bones in three. In the fourth, the case in which the rope caught under the elbow, the doctor's evidence at the inquest was that there was no dislocation or fracture of the neck, and that death resulted from strangulation.

(To be continued.)

A CASE OF HIGH AMPUTATION FOR GANGRENE OF THE FOOT; OBSTRUCTION OF THE POPLITEAL ARTERY BY HYDATID CYSTS.

By H. MALLINS, A.B., M.B., M.Ch.

JOHN T—, aged seventy-four, a labourer, always enjoyed good health until about seven years ago, when, owing to some slight injury, an ulcer formed on the anterior aspect of the middle third of the left leg. This ulcer seemed always to have been extremely painful, and for its relief, according to his account, every remedy, orthodox and unorthodox, had been tried without avail. At the end of last summer, the pain having become more severe, owing to a sloughing tendency which the ulcer began to exhibit, he was admitted into the Norwich Hospital, where he remained several weeks. Under the treatment adopted great improvement followed, and at the time of his discharge the ulcer was all but healed. A few weeks later, however, the whole foot of the affected side began to show signs of disease, the ankle became œdematous, and several of the metatarso-phalangeal joints suppurated and discharged. This recrudescence of the disease was attended with great suffering, the climax of which was reached at the beginning of January, when gangrene of the great toe showed itself. Amputation of the limb was now proposed, and, the risks of the operation having been duly explained, eagerly assented to. The operation was performed under chloroform on January 11th, by the method of long anterior and short posterior flaps, the femur being sawn through at the junction of the lower and middle third. On applying the tourniquet no pulsation of the femoral artery could be detected. Subsequently, when the fleshy parts were divided, the artery was found to be completely plugged by a firm clot. The collateral circulation seems to have been pretty well established, as six vessels required ligature. The wound having been well cleansed with dilute carbolic solution, a dressing of plain absorbent wool was applied. Everything proceeded favourably for the first forty-eight hours, when the temperature began to rise. On dressing the wound the anterior flap was found to have commenced to slough. Gangrene of the entire stump rapidly ensued, with a fatal result on the fifth day.

On examining the vessels of the amputated limb, the popliteal artery was observed to be much enlarged, presenting a fusiform dilatation, about an inch wide and four inches in length. In the process of dissection, the swelling having been accidentally pricked with the knife, a white matter, suggestive at first sight of pus, spurted out. On laying the swelling open, however, no pus could be detected. The walls of the artery were found to be thickened, but the main bulk of the dilatation was constituted by its contents, which consisted of a mass of hydatid cysts, varying in size from that of a very small pea to that of a good-sized raisin. Their walls in every case were collapsed. No hooklets could be discovered with the microscope. To clear up any doubt as to their true nature, a few specimens were sent to Dr. T. Spencer Cobbold, who most kindly examined them, and expressed the opinion that "they are unquestionably true hydatids. The ectocyst displays well-marked characteristics appertaining to *echinococcus veterinorum*."

Remarks.—It was the paper of Mr. J. Hutchinson, read before the Royal Medical and Chirurgical Society on Dec. 11th, 1883, urging the safety and expediency of high amputation in senile gangrene, that led to the undertaking of the operation in the foregoing case. It had been originally intended to amputate at the knee, but the existence of a small purulent depôt close to the popliteal space led to a suspicion of the healthiness of the tissues in its vicinity. One point to which it is desired to call attention is the early sloughing of the anterior flap. The experience of St. George's Hospital is, according to Mr. T. Pickering Pick, decidedly adverse to long anterior flaps, sloughing having taken place sixteen times in twenty-nine cases. The skin of a man aged seventy undergoes a certain amount of atrophy, a process in which its nutrient bloodvessels doubtless share. In the formation of a skin flap numerous vessels going to it must be divided, thus diminishing its vitality. Moreover, it is not improbable that a slight sloughing is quite sufficient to start off the process of gangrene afresh. For the foregoing reasons the method of long anterior flaps would seem to be unadvisable in amputation for senile gangrene. Though hydatids are found in many different situations in the human body, they seem to take up their abode in the bloodvessels but very rarely. In M. Davaine's analysis of 373 cases of hydatids, as given in Dr. T. Spencer Cobbold's work on "Entozoa," two cases occur in which the pulmonary vessels were the site of the cysts. As far as I can ascertain, these are the only cases of the kind hitherto recorded. In conclusion, it may be pointed out that there was very probably some connexion between the chronic ulcer of the leg and the plugging of the popliteal artery; either diminished blood-supply or pressure on the nerve from the bulging of the artery, leading to diminished vitality of the affected part. The constant and very severe pain would indicate the latter as the more probable cause.

Watton, Norfolk.

NEW REMEDY FOR CHOLERA.

By SHAMSUDIN J. SULEMANI, L.M. BOMBAY.

DURING the latter part of the epidemic of cholera, which broke out in July last at Baroda (a town in India), five marked cases of this disease were treated with jadvari khatai, papita, narjili daryai, and cardamom seeds; four of these were cured and one proved fatal. The above-mentioned four drugs were mixed and given in ten-grain doses to adult patients every hour or two, according to the severity of the symptoms; in each case three or four doses were used. The following are the notes of the cases in question:—

CASE 1.—A girl of about twelve was attacked with cholera at 1 A.M., and seen by me at 6 P.M. the same day. Her body was cold, pulse almost imperceptible, eyes sunken, frequent purging, stools watery and copious, and of the colour of rice water. There was suppression of urine of twelve hours' standing. Before I saw her she had been given chlorodyne and stimulants, but without any effect. Three doses of the above medicine were administered to her, the second dose being given one hour after the first, and the third after two hours. Soon after the administration of the first dose purging diminished and the pulse became perceptible; the second dose was followed by marked improvement, and the

extremities and the trunk became gradually warm. She voided urine some two hours after the third dose, and was then out of danger.

CASE 2.—An adult male commenced purging and vomiting at 6 A.M., and was treated with chlorodyne and stimulants, but without relief. I saw him at 5 P.M. the same day, and found him much exhausted. His eyes were sunken, extremities cold, and pulse hardly perceptible. Vomiting was incessant, and he could scarcely retain medicine or water, and had cramps. He had not passed urine for about eight hours. Sinapism to the epigastrium did not check vomiting, and so a mixture of equal parts of laudanum and chloroform was sprinkled over a piece of lint, which was applied over the pit of the stomach for about five minutes, though not continuously, and it stopped the vomiting. Immediately after this the medicine above referred to was given, and he gradually improved. It was repeated twice at the interval of two hours, and he passed urine and recovered.

CASE 3.—A woman aged twenty-five began to vomit and purge at 6 P.M., when chlorodyne and some other medicine were administered, by which vomiting was checked, but purging continued unabated. The next morning, at 11 A.M., I was called to see her for the first time. She was not able to speak, but could open her eyes when shouted to. She had not passed urine since the attack commenced. The whole body was cold, and there was no pulse; even the beating of the brachial artery could not be felt. Now and then cold perspiration broke out. Two doses of the above medicine were given, but there was no effect. Subsequently some other treatment was adopted by another medical gentleman, but the patient died at about 5 P.M.

CASES 4 and 5.—The remaining two cases had well-marked symptoms, and showed signs of improvement after the first dose; they were ultimately cured by two subsequent doses in one case, and by three in the other.

I may observe here that in all these five cases no food was allowed while vomiting and purging continued. Sinapism to the epigastrium (for checking vomiting) and friction and warm bottles to the extremities were ordered. As regards the medicinal properties of the above-mentioned drugs, I beg to state that the first three are said to be tonic, and recommended in Makhzanuladviya for cholera; cardamom seeds act simply as carminative. Their botanical names and the natural orders to which they belong are as follows:—

Name of drug.	Botanical name.	Natural order.
Jadvari khatai.	<i>Delphinium denudatum</i> .	Ranunculaceæ.
Papita.	<i>Strychnos ignatii</i> .	Loganiaceæ.
Narjili daryai.	<i>Lodoicea seychellarum</i> .	Palmeæ.
Cardamoms.	<i>Elettaria cardamomum</i> .	Zingiberaceæ.

These drugs are mentioned by Dr. W. Dymock in his "Vegetable Materia Medica." Narjili daryai has a very hard kernel, and requires to be filed before it is finely powdered.

It is obvious that the number of cases in which this new remedy was tried is too small to enable one to judge of its value; however, it deserves a further trial.

Oxford.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas at morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

EIGHT CASES OF FRACTURE OF THE PATELLA, PUT UP IN GUM BANDAGES AS SOON AFTER THE ACCIDENT AS POSSIBLE; REMARKS.

THE following cases illustrate the method of treatment of fracture of the patella as at present practised at one of the large London hospitals. It comprises the essentials of treatment of such fractures—rest, relaxation of the quadriceps extensor of the thigh, and apposition of the fragments by direct pressure. It also permits the patient to get about at an early date after the injury, the fractured ends being still retained in good position, and the knee-joint kept extended by means of the gum bandage. We would also refer to the