paracentesis, and cure is then immediate; 2. Because a second effusion is more easily absorbed than the first; 3. Because speedy relief to the pressure on the lung promotes its complete re-expansion, before fibrous adhesions have toughened, and thereby prevents permanent collapse of the lung and contraction of the thorax. In his clinical lecture, Dr. Fuller leans towards this opinion also, though not appearing to adopt paracentesis usually until some delay has taken place. This lecture is directed mainly to prove that the entry of air into the pleural cavity is a matter of small importance. This accident, on the other hand, is maintained by Drs. Playfair and Powell to be so noxious that extreme precautions must be taken to avoid it, though their objections are admirably answered by Dr. Fuller (BRITISH MEDICAL JOURNAL, March 23rd, 1872). Without looking upon the entry of air into the pleural sac as so harmless an occurrence as does Dr. Fuller, I rejoice to find his great experience corroborates my observation, that the risk is not great; and still more am I convinced that, however carefully adjusted the apparatus for draining the chest may be, in the course of a few days the presence of the tube in the wound causes enlargement of its edges sufficient to allow the occasional entry of a bubble of air into the cavity. Dr. Playfair's plan, of keeping the end of his drainage-tube constantly under water, is thus rendered futile. I speak from having tried the plan myself some years ago, by means of a little tin trough, to which the end of the drainage-tube was fastened, and thus secured from accidental exposure; the trough itself being suspended over a bucket, into which the fluid overflowed. But I found not only that after awhile small quantities of air passed into the chest by the side of the drainage-tube, but that if the air did not enter freely enough, the syphon-action of the drainage now and then—for what reason I know not—caused considerable distress to the patient, which was immediately relieved by letting a little air or tepid water flow into the chest. It has occurred to me that this distress was caused either by the pericardium with the heart being thrust or drawn too rapidly towards its normal position before temporary adhesions had time to yield, or by the lung being also dragged upon; but I am not satisfied that this is the right explanation. In one of Dr. Powell's cases (*Clin. Soc. Trans.*, vol. iii, p. 244), the pain caused by this syphon-action is well illustrated, and exemplifies, I venture to think, the soundness of the opinion, that exhaustion may be carried on too fast if more than very gentle suction-power be employed; and I prefer to let the evacuation depend entirely on the resiliency of the walls of the cavity. The amount of mobility of the diaphragm has, I think, been underestimated in accounting for the rapid filling up of pleural cavities. The access of air—a phenomenon constantly present in spontaneous cure of empyema—though sometimes mischievous, is usually devoid of inconvenience, and, I believe, for the following reason: if air have access to a cavity that is continually more or less distended by pus, fermentation of the pus takes place, and septic absorption may follow; or, as this latter phenomenon does not always happen, the character of the pus is yet sufficiently changed to act as a stimulant to further secretion of purulent fluid, and the continual escape of large quantities of matter is kept up. In this respect the pleura behaves just as do other large abscesses—psaos abscess, for example. Since Lister's method of treatment of psaos abscess has been adopted, very large suppurating surfaces cease at once to form matter, and a few drops of serous pus may represent the total discharge for twenty-four hours. So, if the pleural cavity be kept empty by arranging the drainage-tube in a way that the pus can escape as fast as it is secreted, no store collects in the chest, and the lung gradually fills the space previously occupied by pus, being met half way by the collapsing chest-wall. But the simple introduction of a drainage-tube at one orifice will not always insure this continuous evacuation; the tube must be carried across the chest and have an aperture as low as the seventh or eighth interspace. Though commonly successful, complete cure by drainage fails in certain cases of long-standing fluid-effusion; the lung has undergone permanent collapse, and is no longer able to fill out the empty space even when the thorax has fallen in as much as possible. I believe such cases to be very rare, and that they would never be met with were the repugnance to tapping less general among practitioners. Though incurable, these patients may enjoy good health if they are taught to empty the cavity carefully every day. A former patient, transferred to me by Sir William Jenner, in University College Hospital, whose case was published in 1865, has been since then working in a barge up and down the Thames, according to his own account "as well as he ever was", but drawing away every morning about half a wineglassful of thin pus. On the other hand, complete cure sometimes follows very prolonged use of the drainage-tube. There has just left my care a girl aged 10, who wore for nearly two years a drainage-tube passed from a spontaneous opening in the third interspace in front through the thorax to the sixth, opposite to which point the pus had a second time perforated the pleura and formed a large abscess beneath the superficial parts. The child

has been enjoying good health during the greater part of the time, notwithstanding she has had a bad attack of scarlet fever in the interval. At the present time, the fistula has been soundly healed for six months, and a respiratory murmur is heard over the affected side, as low as the sixth rib. It may be urged that this was a very long time to submit a patient to the risk attending a fistulous communication with the pleura; but this, after all, was a period of good health and comfort to her, and she was rescued by it from an extreme condition of hectic, depending on the imperfect drainage that had been set up spontaneously.

I venture to think that the case of Andrew, the subject of Dr. Fuller's clinical remarks, and still more, the cases of Dr. Douglas Powell, were less successful than they would have been if continuous efficient drainage had been carried out, and that they establish its advantage over repeated tapping or imperfect drainage by a simple fistula after tapping without insuring that the evacuation of the pus shall speedily follow its secretion.

PARACENTESIS IN EMPYEMA.

By GEORGE COWELL, F.R.C.S.,

Senior Assistant-Surgeon to the Westminster Hospital; etc.

THE remarks of Dr. Fuller with regard to this subject, remind me of a case which occurred in my practice eight and a half years ago, and which so completely corroborates Dr. Fuller's view, that I make no apology for asking a place for it in the pages of the BRITISH MEDICAL JOURNAL.

The case was one of empyema of the left side, occurring in a boy nearly eight years old. The circumference of the left side was slightly more than an inch larger than that of the other, and the heart was displaced to the right side. Paracentesis was performed by making a small incision through the skin, and the introduction of an ordinary trocar. As it was my intention to introduce a piece of perforated drainage-tube, no precautions were taken to prevent the introduction of air into the cavity of the chest. As soon as the flow of pus began to diminish, the cannula was withdrawn, and a No. 4 silver catheter was introduced through the wound with the object of making a counter-puncture in the wall of the chest, by cutting upon its end made prominent in an intercostal space. Whilst I was attempting this manoeuvre, pus continued to flow slowly through the catheter, and I confess that little or no air could, up to this point, have gained admission to the chest. Before I had accomplished my counter-puncture, a matter much more difficult than I had anticipated, the patient became faint, and it was deemed wise to desist. The catheter was withdrawn, and the wound closed with a piece of lint and a bandage.

On the next day, the wound, which had closed, was reopened with a probe, and a few ounces of pus again flowed. After a few days, the wound remained open, and, being covered only by a piece of wet lint, the pus was allowed to flow freely from it. The lint was changed daily. The boy had no shivering, and in a few months recovered. There was considerable deformity at first from the falling in of the side of the chest.

About eight months ago, my friend Mr. Pain, who had assisted me at the operation, sent this boy to me, and I examined his chest. Besides the cicatrix of the paracentesis wound, there was nothing to show which side of the chest had been affected. Respiration was perfect, and the boy was strong and well.

This case and others since have convinced me, not only that the admission of air does no harm, but that a single opening is sufficient for the continued draining of the pus cavity, and that a drainage-tube of any kind is superfluous and unnecessary. The introduction of a drainage-tube, according to the plan of M. Chassaignac, has been sometimes adopted with the view of diminishing the supposed risk of absorption after the admission of air, but the risk at the subsequent removal of the tube is far greater. I remember a case where a tube was worn for eighteen months; but in which, after convalescence was apparently established, death ensued within a week of its removal.

GUARANA (PAULLINIA) POWDER A REMEDY FOR SICK-HEADACHE.

By P. W. LATHAM, M.D., F.R.C.P., Physician to Addenbrooke's Hospital, Cambridge.

THE abovementioned remedy, to which Dr. Wilks called attention in last week's JOURNAL, has for some time been a favourite one in France for sick-headache, as well as for various forms of neuralgia, given in doses of ten to fifteen grains or more of the powder once or oftener in the day.

It is now also, according to Dr. Herman Lebert, coming into use in Germany (*Handbuch der practischen Medicin*, 3te Aufl., 1863, Bd. ii, s. 632).

The following account (abridged from Posner's *Handbuch der Klinischen Arzneimittellehre*, 1866, p. 189) may not prove uninteresting to those who are desirous, on the recommendation of Dr. Wilks, of giving the remedy a trial, and who may wish to know something of its properties.

The plant *Paullinia sorbilis* is a native of Brazil, and belongs to the natural order Sapindaceæ. The seeds, roasted, bruised, and pressed into cylindrical masses, constitute the guarana paste, which, when finely pounded, is then known by the name of Paullinia powder. This is light brown in colour, has an odour faintly resembling roasted coffee, and a bitter astringent taste. It contains, in addition to empyreumatic oil (developed by the process of roasting) and tannic acid, guaranin, a substance identical in composition with caffeine. The large proportion of tannic acid in its composition renders its action very efficacious as an astringent; whilst, owing to the guaranin, it has much the same effect on the nervous system as tea or coffee.

Therapeutically, Paullinia powder is employed, not only as stated above, to act on the nervous system in sick-headaches and various forms of neuralgia, but also as an astringent in catarrhal diarrhoea, and in blennorrhœa of the urinary organs. In infantile diarrhoea, some regard it as specially indicated, since, besides acting as a styptic, it may serve as a nutrient. The best form of administration is either as the simple powder alone, or mixed with an equal quantity of sugar. The kind of sick-headache most likely to be benefited by the remedy is probably that occurring in persons of a hysterical temperament.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

GUY'S HOSPITAL.

OPERATIONS, TUESDAY, APRIL 23RD, 1872.

Amputation at Middle of Lower Arm.—This patient, T. Foreman, aged 18, a railway-ticket issuer by profession, was under the care of Mr. Howse. About three months ago, in trying to lift five hundred-weight, he hurt his right wrist; and two or three days afterwards he still further injured it by falling on the rails. In a month, an abscess formed on the ulnar side of the carpus; and he went to a surgeon, who opened it, allowing a quantity of blood and pus to escape. The wound had been discharging ever since, and now presented a most unhealthy and greatly swollen appearance. On probing the wound, Mr. Howse felt dead bone, and advised the lad to have an operation performed, to which he readily acceded. Mr. Howse endeavoured first to save the hand by making a free incision into the joint, and allowing a still freer escape of pus and *débris*; but he found the parts so very vascular, and the degeneration of the soft tissues of the hand so great (the bones being also diseased), that he determined on amputation. He could not hope to leave an useful hand to the lad by any operative interference. The bleeding from the flaps was effectually stopped by torsion; and Mr. Howse brought the two muscular surfaces together by sutures drawn through them, as well as by the ordinary sutures near the edge of the skin. In this way he hopes to leave the boy a good and useful stump.

Cancer of the Breast.—The patient was a woman aged 54, having a good family history, and no occurrence of any similar disease among her relatives. She never had any children, although married at 30. Till the age of 50, the catamenia were regular; and at that time she observed a small round hard swelling in the right breast. It was now four inches in diameter, in the axillary half of the gland principally; and possibly the glands were affected with the disease. For the four years' growth, it was not very large, and seemed to be a good case for operation. It was necessary to remove the whole gland, as nodules of carcinoma were to be felt all over it. Mr. Birkett thought that life would be much prolonged in this case, and mentioned one very similar which was shown the day before in the same ward. On her an operation had for the second time been performed four years ago, and now not a trace of any disease whatever could be discovered in her constitution or in any of the glands. He recommended the removal of as much skin as possible, and the making of the lower flap very small, to prevent the burrowing of pus and blood; and also that the lower flap be made and dissected first. He had never seen a better specimen of

the extremely hard form of carcinoma than the mamma which he had just excised.

Amputation at Middle of the Thigh.—This case also was under the care of Mr. Birkett. The patient was a miserably unhealthy boy aged 11. He received a kick on the shin on the memorable 27th of February. He managed to walk home, and doubtless would have recovered, as many others must have done, but for his bad health. Next day it was very painful, and a surgeon told him he had twisted his ankle, and gave him some lotion to apply to it. His left leg was now enormously swollen, from the tuberosity of the tibia to the annular ligament. On Tuesday morning, a large abscess was opened, and a great quantity of pus escaped. There seemed to be disease involving the whole of the shaft of the tibia. Acute periostitis had been set up; and the periosteum was now a large sac of pus. Similar disease had appeared in his right ulna, but to a more limited extent. Mr. Birkett, on moving the limb after the administration of chloroform, thought it quite impossible, under any circumstances, to save it, and accordingly amputated through the thigh. The bleeding was completely stopped by torsion, and the edges of the wound were brought together in the usual way. The flap made was circular.

ST. BARTHOLOMEW'S HOSPITAL.

OPERATIONS, SATURDAY, APRIL 20TH, 1872.

Hard-Lip complicated by Fissure.—This case was under Mr. Callender. The fissure was on the left side. Some time ago, the patient was seen by Mr. Callender, who found that the intermaxillary bone projected to some extent. He did not remove it, but pushed it back. He found that it now formed a good support to the lip during healing. A considerable fissure in the hard palate remained for subsequent operation.

Fatty Tumour on the Left Shoulder.—Mr. Holden, before operating on this case, pointed out a very unusual feature in it; the tumour, instead of growing out freely and forming a rounded mass, was like a flat cake lying under the skin on the trapezius. He accounted for its flattening by its peculiar situation, and it being covered by the braces supporting the clothes. It had few adhesions, and came away readily enough.

Tumour on the Lower Lip.—This had been growing since Christmas, and was of the size of a large pea. Mr. Holden could not see its exact nature, but supposed that it was an enlarged and inflamed labial gland that had taken on an abnormal growth. On cutting it open, it looked very vascular, and "just like a red currant without the seeds". Escharotics had been freely applied since it began to grow unseemly, but without any effect.

ST. THOMAS'S HOSPITAL.

FOREIGN BODY IN AIR-PASSAGES: TRACHEOTOMY.

(Under the care of Mr. SYDNEY JONES.)

A. B., aged 9, was admitted on May 8th, 1871. Whilst swallowing a piece of apple, he was seized with a fit of coughing, and, in a strong inspiratory effort, drew the substance into the trachea. Violent dyspnoea occurred, and asphyxia seemed impending. Mr. Sydney Jones, being at the time in the hospital, proceeded to perform tracheotomy. The veins were enormously distended, and the hæmorrhage from some, divided about the thyroid isthmus, had to be arrested before the air-passage was laid open. During the introduction of the tube the patient was sick, and probably brought up the piece of apple. The breathing was immediately relieved by the operation, and a quantity of mucus was expectorated; but the foreign body was not found. The child went on very well, and left the hospital well, with the wound closed, sixteen days afterwards.

BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

ALBUMINURIAL ECLAMPSIA AT THE FIFTH MONTH OF PREGNANCY.

(Under the care of Mr. LAWSON TAIT.)

C. J., aged 27, the mother of two children, and to whom two miscarriages had occurred, applied at the hospital on February 12th, complaining of pain in the back. She stated that she had fallen down stairs, in consequence of a sudden loss of consciousness, which lasted for some time. She believed that she was within a month of her full time. Her urine was found to be intensely albuminous; and there can be little doubt that the fall was really the result of an uræmic