nerve paralysis on the right as being due to direct pressure of a lesion on that side and realizing that further observation and delay would cost the patient his life, I advised the following operation to be performed without an anesthetic:

The head being shaven, a horse-shoe shaped skin incision was made starting above and behind the right ear and ending 3 cm. above and behind the right eye-brow.

Diagram of field of operation, showing skin incision C-D; trephine opening and rongeur cut for bone flap T-R, and crack through skull crossing middle meningeal artery near A, A-B.

A small trephine opening was made through the posterior squamous portion of the temporal bone and from this a rongeur cut was made upward, forward and then downward, forming a smaller horse-shoe. Partly clotted blood was evident through the trephine opening and when the temporal muscle was dissected back a clean crack could be seen extending vertically through the anterior portions of the parietal and temporal bones in the region of the middle meningeal artery. On laying down the bone flap by breaking across at its base nothing but oozing blood clot came to view. This was scooped out by the fingers, with instant relief to the patient's respiration and marked lessening of the pulse tension. The clotted mass was over an inch thick at its center over the posterior frontal convolutions and, tapering, spread out over the whole frontal and the anterior temporal and parietal regions of the right hemisphere.

Palpated through the dura the brain felt abnormally soft where the greatest pressure had been. The dura was left intact. The hemorrhage was fairly readily controlled by packing gauze. The bone-flap, except a part which became broken off in the hurried opening, was replaced, a wick left near the trephine opening and the skin-flap replaced with silkworm-gut sutures.

It is interesting to note that the patient had felt nothing of the operation until the last two skin sutures were applied, which provoked a low muffled groan.

During the night the patient was restless, requiring some morphia, and his pulse ran as high as 130 but it was less irregular. The head dressing was once re-inforced. The patient slept most of the next day, took some liquids and was partly conscious when roused. On examination at this time I found that he had no paralysis of any muscle. Sphincter control and the normal reflexes had returned. The pupils were now equal and reacted normally to light. The Babinski reflex was now absent.

Thereafter the patient gradually became clear mentally and less somnolent. The packing was removed on the second day and by the eighth day the

last wick and stitches were out. After making an uninterrupted recovery the patient left the hospital eighteen days after the operation in excellent condition.

Questioned as to his memory after the accident, it was found that the patient was fairly clear as to his actions until about when he left the surgeon's office but remembered no more of his trip home than getting in and out of the automobile. After that he had complete amnesia.

I am indebted to Dr. L. F. Woodward for calling me into the case and for his skill in carrying out the operation.

Finally, this case illustrates the advantage of the bone-flap method of exploration over the simple trephine opening. Too often after the trephine button is removed the true condition of things beneath is not revealed unless considerable enlargement is made. Thus a large and often ragged opening is left. Where there is good reason for making an exploration and the field is selected, it is a rapid operation to make a small opening either with trephine or burrs and from that make a horse-shoe channel with the proper rongeur. Then the flap may be turned back and allow free opportunity to work inside of the opening and, when replaced, the skull retains its contour and protective strength. This is especially feasible where, as in this case, the temporal muscle and fascia can be utilized to prevent complete breaking off of the flap. It should be planned not to cut off a good blood supply to the flap.

Within a year I have six times advised this mode of operation for brain tumor, hemorrhage or epilepsy, and in no case has there been any great degree of shock or alarming symptoms attending the operation.

A CASE OF "ANGINA SINE DOLORE."

BY ALBERT N. BLODGETT, M.D., BOSTON.

THE subject of this communication is a man of about twenty-six years, a native of Spain, and is by profession teacher and performer on the mandolin. He has always been well, until attacked by his present affliction, from which he has suffered for a period of ten months past. He has never been in any malarious district, nor has he had any disease predisposing to nervous or mental disorders, so far as he is aware. His life is rather irregular, as he is in the habit of going about the country, and gives concerts or appears with other musical artists, and thus is often obliged to keep late and irregular hours.

In his habits he is not given to the immoderate use of wine, though he freely admits that he has been far from prudent in his social relations, and has suffered from gonorrhea during the past year, but is now free from the disease. He does not think that these dissipations or this disease have any causal relation with the troubles of which he at present complains.

About ten months ago he began to suffer from occasional attacks of distress, which he describes in the following manner: While in a state of quiet and free from excitement of any kind, he begins to realize a lack of breath, which occasions him to change his position, and is the cause of immediate and great anxiety, which he tries to relieve by making violent efforts to inspire air more deeply than he can. In this attempt he stands or sits, with open mouth, gasping, and apparently taking

full and sufficient inspirations which, however, do not relieve the sensation of impending suffocation. He often throws himself into unusual attitudes or postures, in the effort to obtain ease from the sense of impending dissolution. He is at such times unable to go alone in the street; though this is no doubt partially and perhaps wholly due to the fear of impending death, rather than from any physical disability. He does not present any signs of lividity, or other indications of asphyxia at any of the times in which I have seen the patient, nor does his history or general appearance indicate that there is any serious impairment of the respiratory or other apparatus. The pulse is sixty per minute, the temperature normal, and there is nothing to attract attention to the patient as a sick person, except a look of restlessness, and the appearance of great anxiety. The face is clear, the complexion is fair, the lips not discolored, though the features are haggard and the eyes large and restless as if in terror.

Physical examination reveals no signs of organic disease of any organ. Pulmonary sounds are everywhere normal and quiet. . . . The only variation from a normal condition observed is in relation to the diaphragm, which appears to remain in a state of quiescence in all the movements of respiration. There is no noticeable contraction of this viscus, and the effort to take a "long breath," which is repeated on the average at intervals of one minute, is made by means of the thoracic muscles alone and is not perceptibly participated in by the diaphragm. The abdomen is not protruded in inspiration, but rather retracted, as if in the effort to overcome some obstruction. There is no wheezing, only an occasional cough of nervous or hysterical character, and no râles or other adventitious sounds in the chest. The patient is in fair strength and is able to give a clear account of his disease so far as he knows it, and, fortunately, he brought with him the record of treatment of his malady by several other eminent practitioners, both in Boston and in New York. He willingly gave the data thus acquired to me, and I have made them the subject of some investigation in the preparation of the present account of the case. The record is only that of therapeutic and dietary measures, and not of diagnosis, which I am disposed to believe was not clear in the mind of either of the former consultants, as it certainly is not in my own mind. The most of the documents relating to the treatment of this case are in the writing of one of the most distinguished clinicians in New York, and are most carefully arranged, and explicitly defined. They direct the use of various remedies, all of them addressed to either the digestive organs or to the reflex nervous system, and consist chiefly of mild alkalies, bismuth, pepsin, charcoal, the bromides, etc., and are accompanied by diet-lists which carefully exclude all substances calculated to undergo fermentative changes in the bowel, or in any way to increase the pressure within the abdominal cavity by the production of flatus or gas in the alimentary tract. Wine in diluted form was advised, and vegetables in general with the exception of potatoes are excluded.

The patient later came under the observation of a prominent physician of Boston, who gave strychnine in the dose of one sixtieth of a grain, and also prescribed carbonate of ammonia and acetic ether, to be taken at intervals through the day, evidently as a stimulant to the nervous structures. I have no record of the application of any form of electricity in the treatment of this case, but would suppose that some benefit might be hoped from it. My own prescription was for arsenic in small doses, with a solution of sodium bromide, with iodide of potash as an alterative, and the occasional use of a mild solution of cocaine to relieve the spasm

when it was more than usually severe. I am unable to give the result of this treatment, as the patient was soon lost to view, and has not since been seen.

From the history of this case, even in its present meager form with the added indications afforded by the prescriptions of eminent practitioners, combined with the facts which I was able to elicit in my limited observation of the patient, I think that we are justified in assuming that we have in the phenomena here presented one of the obscure neuroses occasionally observed in varying conditions, the origin of which is not at present evident, but which, by interfering with the proper action of an important organ accessory to the respiratory act, is the occasion of great and protracted suffering, and which has thus far proved refractory to any form of treatment adopted for its relief. There are, I think, not sufficient grounds for pronouncing this a case of hysteria, but I am not disposed to say that there may not be in it a large augment, due to the prolonged duration (ten or more months) of the symptoms and the distressing character of the paroxysmal attacks; the constant sense of impending suffocation. Although the patient has never become unconscious, nor has he ever become livid, yet he has been at times unable to speak, or at least he states that this effect has been produced by the severity of the paroxysms. He knows of no ameliorating measures, nor does he know the cause of the varying severity of the attacks. He is in a state of constant apprehension during the attack, lest they become more severe than before; and in the intervals he is constantly anxious lest he be attacked anew. From this fear his sleep is disturbed, his peace of mind destroyed, and all the conditions necessary for the development of any degree of hysterical complication are fully maintained. The fact that the patient is of the male sex is, I think, no sufficient reason for eliminating the element of complicating hysteria from this case. I have not seen more evident indications of this condition in females than I have noticed in this man.

If I am correct in the view I have taken of this case, we have in the patient, who is its subject, a person who is affected with a reflex excitability of spasmodic character, which is confined to a certain limited development. It is of variously intermittent nature, and is excited to greater severity by some cause or causes not at present evident to the observer. The spasm resembles to a certain degree some of the phenomena of chorea, and is induced by similar conditions. There is no evidence of organic disease of any important organ or viscus, and all the functions of the body are carried on with regularity, except for the spasmodic interference with the respiratory act. The patient is of highly nervous temperament, and this, no doubt, has some influence upon the frequency, and possibly upon the degree of severity of the attacks.

In searching for a cause of the phenomena presented in the foregoing case, I have not been able to find anything in the way of family history,

or personal idiosyncrasy which would to my mind sufficiently account for the symptoms presented by the patient. There is one feature of the case, however, to which I am inclined to think that the origin, and possibility the perpetuation, of the distressing spasm of respiration may be attributed. This is, the social indulgences to which the patient is addicted, and which he does not hesitate to say have been very immoderate, even in the view which such individuals are accustomed to take of those matters. The nervous disposition of the patient, associated with the character of the profession which he follows, with its frequent dissipations, its late and irregular hours, accompanied by the exhaustion of nervous power which must be the result of such a combination of circumstances,—all would have a tendency to produce a degree of inordinate nervous irritability which would tend to show itself in disordered or irregular voluntary or involuntary acts.

I cannot explain why the reflex excitability is confined to the field of nervous distribution associated with the diaphragm, but there seems to be no doubt that such is the fact. There is no evident tendency on the part of the disorder to extend to other parts or organs, and I see no reason to apprehend that such extension is to be feared. It seems hardly necessary to mention the different varieties of local lesion which may be induced by the excesses in venery alluded to as the probable exciting cause in the present case. There is only one to which any weight could be laid, and this is syphilis; but there are none of the signs of this disease either in the past history or the present appearance of the patient, and it does not seem necessary to seriously consider this disease as a factor in this case. The existence of a pathological lesion in the shape of a tumor, either in the brain, or in some part of the nervous supply of the diaphragm, is hardly to be entertained on account of the variable intensity of the symptoms, and their stationary character, which we would hardly expect to meet in the history of a developing tumor. A degenerative affection of the nerves or of the muscular structures to which they are distributed is also hardly to be apprehended. If I may hazard a conjecture as to the character of the attacks from which this man suffers, I should place them in the same category with the distressing paroxysms of so-called "angina pectoris"; and believe them to represent one form of "angina sine dolore." There are no evidences of the condition which has been called "cardiac asthma," nor any signs of tonic contraction, the so-called "spasm of the diaphragm."

The treatment of such a condition as is here so imperfectly described must be somewhat upon the expectant plan, for the history of the case, and the observation of the patient give very little clew upon which to base a plan of medical procedure. The evident opinion of the eminent practitioners, who have been consulted by the patient before I saw him, was that the phenomena of the case were due to exaggerated reflex excitability, accompanied with, or aggravated by,

some impairment of the digestion, or defect in the nutrition due to such impairment. The prescriptions would seem also to indicate that the possibility of some hyperemic condition of the larger nerve centers might have been also present in their judgment of the case. The medicines ordered were almost without exception such as would have a restorative and a restraining effect upon the cerebral centers and at the same time would exert a beneficial influence upon the nutritive functions.

The careful arrangement of the diet, which one of the consultants advised would seem to have been recommended on account of its anti-fermentative effect, rather than for the exclusion of any particular kind of aliment. The symptoms may be very obscure in some cases with undoubted signs of serious disease. Angina sine dolore, as described by the patient, may perfectly simulate dyspepsia or some other nutritional derangement. The underlying conditions may also include sclerosis of the coronary arteries, degeneration of the myocardium, cardiac hypertrophy, atheroma of the aorta, commencing aneurism, aortic regurgitation and some forms of chronic disease of the pancreas, mechanical pressure from the growth of a neoplasm, enteroptosis or adhesions of the viscera, effusions into the serous cavities, etc. Trousseau held that the angina, "air-hunger," is due to some disturbance in the sympathetic nervous system. A case presenting this special feature has recently been under my care, in which the distress was chiefly on account of breathlessness, though pectoral pain was also present. Death ensued from apparent extension of the respiratory paralysis without cardiac agony.

It seems to me a very fortunate feature in this case that no one of those whom the patient consulted has recommended the use of anodynes. In some cases of acute cardiac angina, these seem indispensable, as no other means can control the agony which the patient suffers. The present patient has not experienced the acute distress of the classical form of the disease, though he suffers from extreme apprehensions which have not yet been realized. I cannot but think that his occupation, which requires him to change to new scenes, the diversions and even the vexations of his calling are of service to him, as all authorities advise continuous occupation for mind and body, with unstimulating food and sufficient rest. This is indicated in the directions carefully written out for this man. Even in the true acute angina, up to the occurrence of the fatal attack, this is considered the best method of combating the mental and moral effects of the disease. There can be no doubt that the deep respirations which our patient endeavors to take contribute to the subsidence of a given attack, as massage has been thought to do in similar cases. This was noted by John Hunter, in the account of his own case, who asserted his belief that he had prevented himself from dying during a paroxysm by forcible deep breathing, although he died from the same cause in a later attack. This case is unfortunately not

complete, and as the patient is at present resident in this city, and has already consulted more than one of the profession here, I thought it might be of local interest to present a sketch of so unusual a condition, feeling sure that any colleague who may become acquainted with the phenomena here reported will at once recognize the patient should he in turn be called upon to treat him; and I hope that some one will at a future time take up the case at the point where I leave it, and contribute a further chapter, and I trust a more satisfactory one, to the elucidation of what to me has been an interesting and instructive study of a rare condition.

Medical Progress.

PROGRESS IN GYNECOLOGY.

BY W. L. BURRAGE, M.D.

THE SECONDARY OPERATIONS OF TRACHELORRHAPHY AND PERINEORRHAPHY DURING THE PUERPERIUM.

FRANCIS H. STUART, obstetrician to the Brooklyn Hospital, communicates to the editor of the *American Journal of Obstetrics*, vol. liv, p. 258, a brief report of thirteen cases of secondary operations performed on the cervix and perineum during the puerperium at the Brooklyn Hospital. He says that it has been his practice for a number of years to repair recent lacerations at about forty-eight hours after delivery. Now he comes forward with the first list of patients having old lacerations who have been subjected to operations for their repair during the lying-in period. He thinks that by doing the reparative work at this time many working women, who ordinarily neglect treatment because unable to spare the time away from their homes, can be saved from the serious consequences of these neglected lacerations.

The patients remain in the hospital only a little longer than is usual after delivery, and go home in as good condition as if they had come for the special purpose of having trachelorrhaphy and perineorrhaphy performed.

The results were, as a rule satisfactory, and there was no interference with the puerperium. The operations were performed two or three days after delivery for the most part, though in some cases a longer interval elapsed. None of the patients in this list had fresh lacerations.

[There are no comments on the facility experienced by the operator in making out the situation and extent of the old lacerations with the tissues swollen from the trauma of delivery, nor are there any observations on the patient's state of health at the time of operation. It is to be hoped that Dr. Stuart will furnish these important data in a later communication.]

EXTRA-UTERINE PREGNANCY.

The *Journal of Obstetrics and Gynecology of the British Empire* for June, 1906, publishes a

symposium upon extra-uterine pregnancy, in which papers appear upon the diagnosis of early extra-uterine pregnancy, ovarian pregnancy, a clinical experience of ectopic pregnancy, and recent work on tubal pregnancy. The first three papers throw little new light on the existing knowledge of the subject, but the fourth paper, by Henry Russell Andrews, of London, a critical review of the literature since October, 1902, when he summarized the subject in a previous paper, is highly suggestive, notwithstanding his conclusion, to wit, "That beyond an occasional diverticulum or the presence of a mucous polypus to arrest the progress of the ovum, our knowledge as regards the etiology of tubal pregnancy is most unsatisfactory." As we should expect, a majority of the authorities quoted are German.

William H. Lamborn¹ also reviews the literature under the heading of "A Study of the Development of Extra-Uterine Decidua," and presents some specimens from a case of tubal pregnancy operated upon by Dr. T. J. Watkins for rupture at about the tenth week.

It would appear that the investigators in this field are divided into two camps,—one holding that true decidua is found only in the uterus, the other that it may occur in the tube, on the ovary, or at any point on the peritoneum even. The similarity of decidual cells of maternal origin to modified Langhans cells of fetal origin, and the great difficulty in distinguishing between them with the present known methods of investigation, has led to much confusion.

An attractive hypothesis is that of Hitschmann, who claims that "the bulk of the evidence is in favor of the view that the fetal cells act in a malignant or pseudo-malignant manner toward the maternal tissues, in somewhat if not exactly the same way as do the cells of a chorio-epithelioma; the difference seems to be one of degree only, not of kind." Thus rupture of the sac, abortion, is caused by this destructive action of the cells of the trophoblast, by bleeding, and by contraction of the muscular wall of the tube. It seems to be agreed that in studying tubal pregnancy it is necessary to make serial sections of the tube in order to be sure of the conditions present. Authorities are not yet in agreement whether tubal pregnancy is due to imbedding of the ovum in a diverticulum of the tube, or whether or no a previous salpingitis has any causative relation.

It has been suggested that the ovum can only plant itself at a certain stage of its development, therefore anything which delays its progress from the ovary to the uterus may cause it to be still in the tube when this stage is reached.

FORMATION OF AN ARTIFICIAL VAGINA.

J. J. Federow² adds another to the list of ingenious devices for covering with mucous membrane the walls of a vagina formed by dissecting in the cellular tissue between bladder and rectum in cases of congenital absence of the vagina. He

¹ *Surgery, Gynecology and Obstetrics*, September, 1906.

² *Zentralblatt für Gynaekologie*, 1906, No. 20.