cess of acid material. (3) On moistening with water, these powders, even when containing an excess of alkaline material, yield small quantities of aluminum and calcium in a soluble condition. (4) As a consequence of the common employment of calcium acid phosphate along with alum in the manufacture of baking-powders, these, after use in bread, leave at any rate most of their aluminum in the form of phosphate. When alum alone is used, the phosphate is replaced by hydroxide. (5) The temperature to which the interior of bread is exposed in baking does not exceed 212° F. (6) At the temperature of 212° F., neither the water of combination of aluminum hydroxide, nor the whole of the associated water of either this or the phosphate, is removed in baking bread containing these substances as residues from baking-powder. (7) In doses not very greatly exceeding such quantities as may be derived from bread as commonly used, aluminum hydroxide and phosphate produce, or produced in experiments upon myself, an inhibitory effect upon gastric digestion. (8) This effect is probably a consequence of the fact that a part of the aluminum unites with the acid of the gastric juice, and is taken up into solution, while at the same time the remainder of the aluminum hydroxide or phosphate throws down in insoluble form the organic substances constituting the peptic ferment. (9) Partial precipitation in insoluble form of some of the organic matter of food may probably also be brought about by the presence of the aluminum compounds in question. (10) From the general nature of the results obtained, the conclusion may fairly be deduced, that not only alum itself, but the residues which its use in baking-powder leaves in bread, cannot be viewed as harmless, but must be ranked as objectionable, and should be avoided when the object aimed at is the production of wholesome bread.

Clinical Department.

A CASE OF PARTIAL PLACENTA PREVIA IN A MULTIPARA.1

RECURRENT IAEMORRHAGE BETWEEN THE SEVENTH AND EIGHTH MONTH. DELIVERY BY MANUAL DILATION.

BY A. D. SINCLAIR, M.D.

Mrs. — about forty-two years of age, a multipara, had painless hemorrhage about seven months and a half after pregnancy. The bleeding recurred again and again for two weeks but whether profuse or not I did not ascertain. She then called her family physician who tamponed the vagina during five consecutive days. He found the cervix very rigid and the os uteri small until the fifth day, when the cervix softened. At this time I was called on to aid in the case. The patient showed the loss of blood and was nervous. The vagina was largely dilated by the sponge tampons, and the cervix could be easily dilated manually. Forced delivery was advised. The womb was readily entered and the child turned and extracted by the feet in about fifteen minutes. The placenta was found freed from the uterine wall on the left side to the extent of about two inches, but its upper segment was unnaturally adherent to the uterine wall. The placenta was smaller, thinner and more feeble than ordinary, contraction and retraction normal. The uterine cavity was thoroughly cleansed with warm water containing 1 to 3000 corrosive sublimate, the patient cared for in every way and made comfortable. Three days later she was reported to have had a decided chill with rise of temperature and pulse. She was given a uterine douche by her physician, and two grains of quinine in pill every hour, with the result that the temperature and pulse both fell and in a day or two were normal, and did not rise again. She made a good recovery. The infant, a feeble thing, lived three or four days.

A CASE OF PUERPERAL ECLAMPSIA.3

BY T. J. BRODERICK, M.D.

Mrs. M. W., thirty years of age, primipara, has enjoyed health up to her present illness. Married, June 27, 1888; and menstruated, July 6, 1888, for the last time. Her father is alive, her mother died twenty-seven years ago from some difficulty during child-birth. Mrs. W. went along in pregnancy comfortably, to within two weeks of her delivery, at which time her present illness began. During this time she noticed her eyelids and feet swollen; headache troubled her; nausea, vomiting, and loss of appetite. On Sunday, March 24th, she ate her supper, and retired at 10 P.M. She did not sleep, and at 12 P.M. pains were present in her abdomen, which she ascribed to the food she had eaten. At 1 o'clock Monday morning she suddenly became unconscious, foamed at the mouth, eyelids opened, eyes stared, limbs stiffened. She became conscious in about half an hour, but did not feel well. The pains in the abdomen continuing, with occasional nausea and vomiting and headache, I was sent for, and saw her for the first time, Monday the 25th, at 4.50 A.M. She was in bed, and complained of pains in her abdomen, headache, nausea and vomiting. Her eyelids and feet were oedematous, the right foot more so than left. Pulse 81. Uterus enlarged to about eight months' pregnancy, with contractions causing the pains in abdomen. Fetal heart-sounds heard on the right side of abdomen, and one hundred and thirty-eight beats to the minute. I requested her to move to the opposite side of the bed to make a vaginal examination. She raised herself on her elbow, but suddenly fell back unconscious, on the bed. Her eyelids closed, then opened, eyes fixed, limbs stiffened, respiration ceased, soon followed by twitching of muscles of the face, moving the arms and legs, stertorous respiration and slight frothy saliva at mouth, and gradual return of consciousness in an hour. Then followed a second convolution, severer than the first. I saw, during the tonic period marked cyanosis and swelling of face, absence of respiration, slow and irregular pulse, followed by the chronic stage with loud, stertorous and irregular respiration, rapid and feeble pulse, frothy saliva at mouth, and convulsive twitching of muscles of face and extremities. From this time she remained unconscious. A third convolution followed in one hour, and a fourth in two hours after, or at 9 A.M., having had five convulsions in nine hours.

1 Read before the Obstetrical Society of Boston, April 13, 1889.

3 From the Obstetrical Society of Boston, April 13, 1889.
At this time Dr. Forster was asked to see her in consultation. She was in bed, unconscious, breathing normally, skin perspiring freely, lips red and face swollen, pulse 84–92, and temperature 99\(^\circ\) half an hour before. No urine or faces passed. Delivery by internal version was decided as the proper course to pursue, but as the patient complained of the time, delay was counselled for a time. At 11.30 A.M., a sixth convolution occurred, not so severe as the previous three, and at 1.45 p.m., a seventh followed; after which I drew off urine (in amount about two ounces), with blood, and about one-half per cent. of albumen present. Then, at consultation, it was deemed advisable to empty uterus as soon as possible. From 2.30 p.m. to 4 p.m. she had two slight convulsions. At 4.45 p.m. or seventeen hours after the first convolution, version was begun, Dr. Forster, Dearborn and Broderick present. During dilatation of vagina a slight convolution occurred, and the hand entered the vagina in twenty minutes. During dilatation of os the membranes were accidentally ruptured. Before complete dilatation of os it was felt it could be felt in chord but it was slow and irregular. When the hand entered the uterine cavity in one and three-quarters hours no palpation was present. The position of child was verified as O. R. A. The left leg was seized, the child turned and head expelled in two hours from the commencement of dilatation of vagina. The placenta was expelled in ten minutes with slight hemorrhage. The pulse varied from 120 to 135 per minute during version. Fifteen minutes after delivery the pulse dropped to 108 per minute. Within the next two hours, two slight convulsions occurred. At 10 p.m., or three hours after delivery, a severe hemorrhage occurred. Pulse 135, and for a time absent from wrist; lips and face pale; limbs cool; tossing arms and body about the bed, and sighing. The hemorrhage ceased and in one hour the pulse was 120, and patient quiet in bed. At 6 A.M., Tuesday 26th, pulse 92, temperature 98.5\(^\circ\); no urine passed since 2 p.m. the previous day. At 10 A.M. I drew off her urine; specific gravity 1014, slightly acid, albumen about one-third per cent. She remained semi-conscious during the day. At 6 p.m., Tuesday, temperature 99\(^\circ\), pulse 96. Comfortable Tuesday night and conscious Wednesday morning with temperature 95.5\(^\circ\), pulse 100. Urinated voluntarily, passing nine ounces; specific gravity 1014, pale in color, albumen present. Edema of eyelids and feet disappearing, and on the seventh day entirely absent. The highest temperature, 101\(^\circ\), was on the evening of the fourth and morning of the fifth day. The highest pulse after hemorrhages was at the same time, 115–112. On the 14th day temperature and pulse normal, and have continued so to the present time. The last twenty-four hours the urine in amount is decreased to one-fourth, specific gravity 1016, reaction slightly acid, albumen about one-sixth to one-eighth per cent.

Diagnosis.—Puerperal eclampsia, caused by uraeic poisoning from acute Bright's disease.

Prognosis.—Mother alive, child dead.

Treatment.—When first seen and diagnosis made, I gave her a quarter of a grain of morphine subcutaneously, and followed it with a warm, moist air-bath and within half an hour her body and limbs were perspiring freely. Three-fourths of an hour after the morphine I administered ether, and kept her under the influence of it with occasional intermission, till after delivery; two and one-half hours after commencing anesthesia I gave her twenty-five grains of chloral by rectum, and in one hour repeated it. After expulsion of child, a subcutaneous injection of ergot, and expulsions of placenta by pressure on uterus. When post-partum hemorrhage occurred, she received thirty minutes of fluid extract of ergot, subcutaneously and thirty minutes of ether and firm pressure on the uterus and warmth to extremities. The after-treatment was rest in bed, milk diet and water freely.

A CASE OF PUERPERAL ECLAMPSIA AT THE SIXTH MONTH, TERMINATING FATALLY.1

BY DAVID A. COLLINS, M.D.

Mrs. C., primipara, aged twenty-four, in January last noticed a slight swelling about the feet and ankles which gradually extended to the thighs, and eventually to the abdomen, arms, hands and face, there being a slight puffiness of the lower eyelids. As this state of affairs occasioned no unpleasant symptoms, it was allowed to pass unheeded until about the first of March, when she began to complain of severe headaches, nausea and vomiting. On the 17th of March she consulted her family physician, Dr. E. N. Whittier, who examined her urine and found it to contain about three-quarters per cent. of albumen.

The next morning, the 12th, at 5 A.M. the first convolution occurred. I arrived at 7 A.M. and found Dr. E. J. Forster in attendance. He had placed her under ether, she having had three convulsions in the two hours. A hot-air bath was applied and Dr. Whittier was sent for. In the meantime I relieved Dr. Forster for two hours during which time she had three convulsions. At 10 A.M. Dr. Whittier arrived, and the induction of labor was begun by manual manipulations. At the end of two and one-half hours the os was dilated sufficiently to admit the hand, when the membranes were ruptured and a foot brought down. The trunk was delivered without much difficulty, but it was found that the cervix had contracted quite firmly about the neck, for which manual dilatation was again tried with but little success. The traction on the trunk caused a tearing of the neck, which continued to tear until it was necessary to completely sever the body from the head. The forces were now applied to the head, but were ultimately abandoned through fear of lacerating the cervix; and it was decided to do craniotomy, which was performed by Dr. Forster, perforating the head through the mouth, and delivering with the cranioclast. The placenta was expressed ten minutes after. A bi-chloride douche (1:3000) was given and antiseptic pads applied. It was now 1:30 P.M., just three and one-half hours since the induction of labor was begun, both legs involving the trunk caused a tearing of the neck, which continued to tear until it was necessary to completely sever the body from the head. The forces were now applied to the head, but were ultimately abandoned through fear of lacerating the cervix; and it was decided to do craniotomy, which was performed by Dr. Forster, perforating the head through the mouth, and delivering with the cranioclast. The placenta was expressed ten minutes after. A bi-chloride douche (1:3000) was given and antiseptic pads applied. It was now 1:30 P.M., just three and one-half hours since the induction of labor was begun, both legs involving the trunk caused a tearing of the neck, which continued to tear until it was necessary to completely sever the body from the head. The forces were now applied to the head, but were ultimately abandoned through fear of lacerating the cervix; and it was decided to do craniotomy, which was performed by Dr. Forster, perforating the head through the mouth, and delivering with the cranioclast. The placenta was expressed ten minutes after. A bi-chloride douche (1:3000) was given and antiseptic pads applied. It was now 1:30 P.M., just three and one-half hours since the induction of labor was begun, both legs involving

1 Read, by invitation, before the Obstetrical Society of Boston, April 15, 1860.