The site of the operation was prepared in the usual manner, and the patient placed on the side with a large sand bag between the thighs against the perineum. The osteotome, which was of the same width as the bone, was entered through the skin, and underlying tissues, upon the femur about 4 inches below the upper border of the trochanter major, where it was firmly held at an angle of 30°. It was then driven through the bone as far as the inner compact tissue, when it was exchanged for a narrow one, and the division continued well into this, after which, it was withdrawn and the section completed by fracture. The leg was placed in the corrected position, and dressing applied. A temporary splint was bandaged to the side to prevent accident during transportation from the operating room to the ward. After the patient was in bed a Buck's extension was applied to the leg, with side plasters reaching to the fracture. A side splint which extended from the axilla to the foot was loosely bandaged to the body, and weights were placed on the end of the extension, and

gradually increased. The muscles relaxed in thirty-six hours, when the length and position were regulated and the splint firmly applied, retaining the leg in the corrected position. Measurements were frequently made in order to ascertain if the length remained unchanged, and at the end of the eighth week all apparatus was removed, and the patient allowed to move around in bed. At the commencement of the tenth week he was given crutches and exercised freely. The femur was lengthened $1\frac{1}{2}$ inches, by actual measurement, and the flexion was completely corrected, as the adhesions were broken up by the operation, allowing movement of 15°. Recovery was uninterrupted, union being firm at end of eighth week, and the patient now walks easily with the heel of the shoe raised $\frac{3}{4}$ of an inch on inside. There are several steps in the operation which the writer considers of importance, and which should be brought to the notice of the surgeon:

Too much stress cannot be laid upon the advan-

tage of making a radeograph, which will enable him to determine the size of the femur, and the exact location at which the osteotome should be entered in order to free the attachment of the ileopsoas muscle to the trochanter minor.

Another point to be considered is the width of the osteotome, which must be regulated by the size of the bone, so as to obtain a clean cut surface by one passage of the instrument. The angle at which it is to be held must also be governed by the size of the femur.

It will be found necessary to use judgment rather than any hard and fast rule in regard to the amount of weight necessary, as it varies with different patients, and must be gradually increased until results are obtained when it can be lessened and held by the side splints.

Clinical Department.

A CASE OF CHIN LEFT POSTERIOR.¹

BY H. T. SWAIN, M.D., BOSTON,

Physician to Out Patients, Boston Lying-In Hospital.

MRS. A. P., an Italian, thirty-two years old, in her third pregnancy. Previous history negative. Previous labors normal.

When I first saw the patient in the Out-Patient Department of the Lying-in Hospital, November 15, 1900, at 8.30 P.M., she had been in labor about six hours, the membranes having ruptured three hours previously. She did not send for a doctor until she had been in labor for some time, and when first seen by the externe the head was so low that he easily made a diagnosis of face, sending at once for assistance. When seen by Dr. Cary, the out-patient house physician, the presenting part was only a little higher than the position in which I shall describe it.

Abdominal examination showed the back to be to the left, fetal heart loudest in the lower left quadrant, rate 130. During each pain the uterus contracted firmly, and the abdominal muscles were rigidly set, the patient straining violently. The intervals of the contractions were about two minutes, and they lasted a good minute. Visual examination showed considerable bulging of the external genitals during each pain.

Vaginal examination showed the os fully dilatable, membranes ruptured, and a face presenting about one and a half inches from the introitus, with the chin left and posterior. During a pain the head descended very little. There was not the least rotation. What little was gained during the pain was lost in the interval, for the head receded immediately. I tried during two or three pains to rotate the head by pressure with the hand against the posterior ramus of the lower jaw, but was unable to accomplish anything, the head being firmly wedged into the excavation. Dr. Cary's attempts

¹ Read before the Obstetrical Society of Boston, January 15, 1901.

to flex, and then to extend and rotate had been without result.

The patient was now given full surgical anesthesia, and pressure with the hand, and then a single forceps blade failed to rotate in the least. The forceps was then applied and rotation attempted, some traction at the same time being used. However, the head being so firmly wedged in, the forceps could not be well enough applied to allow much pull, and even had I been able to get a firm application, I should not have felt like pulling much because it was evident that the unrotated head could not come down without great violence to the soft parts. I was unable to turn the head in the least by any of the methods mentioned after careful trial. I knew the child was alive, for every time that I accidentally touched her lips she sucked my finger. I disliked to think of perforation under these circumstances.

Making another attempt at manual rotation after taking off the forceps, I noticed that, while pulling hard under the chin to increase extension, the head seemed to recede a little. Following this lead, by extreme extension, the middle finger under the chin, the thumb against the forehead, and gentle pressure upward, the head was gradually slid up, and placed above the brim between an assistant's hands holding it through the abdominal wall. I then wondered as to the next step. I knew that a speedy delivery was essential to the child's life for the cord was pulsating feebly. I felt that it would be hard to bring the head down with the occiput presenting because of the extreme moulding and because the forces which made it come down as a face, would still be likely to extend the head. Feeling a foot without putting my hand above the lower uterine segment, I brought it down, my assistant turning the head up at the same time. Delivery was easy as a half breech.

The child resuscitated with some difficulty. Her face was extremely cyanotic and edematous, the lips, eyelids, and nose bulging a great deal. There was a complete subconjunctival ecchymosis in each eye. The baby weighed nine pounds, and is now well, although there is still a noticeable retraction of the head. The mother was uninjured and had a normal convalescence.

Other methods of operation have been advised. McLean, in two cases, has converted a posterior chin to an anterior occiput in the pelvis. In this case the large moulded head so filled the pelvis that it would have been necessary to disengage it before turning.

Symphiseotomy has been advocated.

I realized the dangers of replacing the head above the brim, and turning in a dry uterus, and should not have used force to accomplish them. It seems to me that the ease with which the head pushed back was due to the fact that the patient, by her own muscular force, had crowded the head down and that the uterus was not in the state of retraction that it would have been, had it been forcing the head down.

I shall attempt to draw no conclusions from

this single case. It is interesting to me as showing how easily a head well down in the pelvis in a position impossible of delivery without violence, could be replaced above the brim. It was interesting also as showing the impossibility of the commonly accepted mechanism in this case, for while the head was so far down that it could advance no farther without violence, the chin was not impinging against anything.

Medical Progress.

RECENT PROGRESS IN PUBLIC HYGIENE.

BY SAMUEL W. ABBOTT, M.D., BOSTON.

(Concluded from No. 14, p. 335.)

WATER SUPPLY AND SEWERAGE.

A Process for Removing Iron from Water.

Messrs. Linde and Hess²⁴ describe a process for removing the iron from water by treating it in a filtering vessel filled with wood shavings free from turpentine, and impregnated with oxide of tin. The hydrated oxide of iron resulting from this process is retained by the shavings as a brownish red deposit. The shavings are renewed every two months.

Schumburg's Process for Purifying Water.

Pfuhl²⁵ states that this process consists in adding .06 gramme of free bromine in the form of bromide of potassium solution to each liter of water. A like volume of 9% solution of ammonia is added to remove the bromine and make the water palatable. This process is advocated for use in the case of suspected waters, epidemics, ships' tanks and armies in tropical countries.

Septic Tanks for Sewage Disposal.

Messrs. Alvord & Shields,²⁶ of Chicago, in commenting upon the use of septic tanks for sewage disposal, make the following statement:

"A good deal of this enthusiasm has arisen because of the unwillingness of experimenters to publish their failures, or in any way record experiences which did not come up to their expectations. The literature on this subject is oftentimes misleading, and must be read in the light of personal examination or practical experience to be of any benefit. As a sample of the overconfidence now being displayed, the interesting proposition of a village has been noticed which intends to place its septic tank and contact beds in a public park overlooking a beautiful lake, floor it over, and provide seats so that it may become a playground for the misses and children of the neighborhood, and a resting place for the pleasure seeker. Such overconfidence has arisen from repeated statements in print that no nuisance results from the process. The statement is not

²⁴ Ges. Ingenieur, April 15, 1900, p. 105.

²⁵ Zeitsch. f. Hyg., 1900, p. 53.

²⁶ Engineering Record, March 16, 1901, p. 247.