

but is not necrotic. In their place there is an accumulation of thick, dirty yellow pus. There is some purulent infiltration of the tissues near the bone, just below the line of the pelvis. The gluteal and other muscles just posterior and external to the iliac bone are infiltrated with thick, dirty yellow pus, which exudes from the cut surfaces in abundance. The iliac bone on being broken open shows in places yellow pus in the interior of its spongy bone. The left hip-joint on being opened exudes a considerable quantity of thick, dirty, grayish-yellow purulent fluid. No definite lesion of the cartilages was made out. No disease of the spinal column was found. No disease was found in the portion of the sacrum adjacent to the left ilium.

Bacteriological examination. — Cover-glass examination of the pus of the left hip-joint shows pus and cocci. The pus cells are generally necrotic; cocci are numerous; cultures in blood serum, right lung, confluent growth of small colonies of a yellow color; staphylococcus pyogenes aureus. The exudate from the peritoneal cavity, liver, spleen, and the pus from the region of the left iliac bone, all show numerous colonies of staphylococcus pyogenes aureus.

REMARKS.

The sequence of a comparatively slight trauma and an acute infective process is extremely interesting. It was impossible to determine the exact origin of the primary infection. The osteomyelitis appeared to be secondary to the process elsewhere present — to have extended from other parts. Until the involvement of the hip-joint and the associated muscular spasm, it was impossible to locate accurately the lesions. The inclination to lie with the left thigh flexed was suggestive of a left-sided lesion seated within the psoas or iliacus muscle or within the hip-joint. In the absence of early muscular spasm, primary disease of the hip-joint could be ruled out, and some obscure lesion near the left psoas or left iliacus muscles was thought to exist. The muscular spasm which appeared later suggested that any difficulty in the hip was secondary. The autopsy demonstrated this to be true.

CASE II. EXTRA-UTERINE PREGNANCY; RUPTURE OF SAC; OPERATION; RECOVERY.

J. O., thirty-five years old, married ten months. Last catamenial period was eight weeks ago, lasting three days. Ordinarily catamenial period lasts four or five days; ten napkins a day. Some nausea and loss of appetite seven weeks ago. To-day when patient was first seen she told the following story: At eight o'clock this morning she was seized with sudden agonizing pain in the median line of the abdomen, above the pubes. She was working about the house at the time, but on reaching a sofa she fainted. On recovery from the initial faint the pain had become general in the abdomen and she was unable to sit up. The pain persisted in the abdomen, but extended upward away from its first seat to the epigastrium, the right shoulder and the right side of the chest. She had through the day a few fainting spells.

Upon entrance to the hospital her temperature was 99.8° F.; pulse 100 and of fair strength; respiration 42; leucocytosis 28,000. She presented an anxious expression of countenance, with pallor of lips and rapid respiration. The abdomen was slightly distended uniformly. A mass was felt in the hypogastric

region which was firm and slightly sensitive. The bladder was empty. In either groin there was tenderness to deep pressure. Dulness existed in each flank and suprapubically. Vaginal examination discovered the uterus pushed forward and crowded downward. The os was patent and slightly soft. In the left cul-de-sac was a fulness which was tender to the palpating finger. The history of a sudden onset of pain during pregnancy, associated with repeated fainting attacks, the pallor, the rapid respiration, the dulness in the flanks, suggested an extra-uterine pregnancy which had ruptured, partially filling the abdominal cavity with free blood.

Operation found a ruptured tubal pregnancy on the left side. The quantity of blood present in the abdomen was not measured. The tube was tied off, the abdomen sponged out with dry gauze sponges, and the abdominal wound closed with sutures of silkworm-gut.

During convalescence the temperature rose once to 100.5° and then slowly came to normal.

In the after care of this case no nourishment was given for twenty-four hours. During these first twenty-four hours sips of hot water were given to relieve thirst. There was a little abdominal distention during the first few days, which was relieved by the use of enemata of suds placed with the aid of a rubber catheter high in the colon. Broths were allowed on the second day; broth and milk on the third day; liquids and soft solids by the end of the week; house diet after the first week. The bowels were moved by enemata every other day. The patient left the hospital after seven weeks, wearing a snugly-fitting abdominal swathe. She will wear this swathe for about two months.

THE CLINICAL MANIFESTATION OF A PHYSIOLOGICAL FACT.¹

BY WILLIAM H. ROBEY, JR., M.D., BOSTON.

THIS brief paper is presented because the physiological fact mentioned does not seem to be generally appreciated, no clinician whom I have questioned being able to tell whether the sign was pathological or not. The matter came to my notice in the following manner: A man brought his four-year-old child to the out-patient clinic for examination. He said that the child was sitting on the kitchen table about seven o'clock the previous evening when he suddenly fell, having apparently lost his balance, struck his head on the floor and became unconscious; he vomited at the time and had been dull and stupid ever since. The father held in his arms a pale, limp, unconscious child. The history, as given by the parent, suggested some cerebral condition, and with that in mind we first examined the eyes, and found that the pupils were contracted to pinhole size, equal, and unaffected by light. Then the patellar reflexes were tried and proved to be normal, but in tapping the knee the child regained consciousness, sat up and looked around; the pupils instantly dilated to their normal size and we found, to our surprise, that a healthy, sleeping child had merely been awakened. The man had not made it clear to us that the child had eaten his breakfast and that he had brought him to the hos-

¹ Read before the Clinical Club, November 17, 1899.

pital because he feared some possible obscure injury as the result of the blow.

Only a few days ago I saw another child, whose parents gave almost the same history of a fall. He was apparently asleep at the time of the examination and the pupils were contracted to pinhole size. In this case the reflexes were tried and the child was completely examined without waking him. When he was wakened the pupils instantly dilated.

Since the first experience I have examined 22 normal sleeping children: in all the pupils have been pinhole and have dilated instantly on waking. In several instances the children were examined and handled exactly as if they had been awake without arousing them. For obvious reasons the eyes of children have been examined. In children who have been pinched and stirred up without regaining consciousness the pupils have partially dilated under the sensory stimulation.

In the 1878 edition of his "Physiology" Foster says: "The pupil is contracted when we accommodate for near objects, when the retina is stimulated, as when light falls on the retina, the brighter the light the greater the contraction. The pupil is also contracted when the eyeball is turned inwards, when the aqueous humor is deficient, in the early stages of poisoning by chloroform, alcohol, etc., and in nearly all stages of poisoning by morphia, calabar bean and some other drugs." In the 1880 edition he mentions all of these causes and adds, "in deep slumber."

The twelfth edition of Kirke's "Hand-Book of Physiology" (1888) mentions all of the above causes save deep slumber. The "American Text-Book of Physiology" says: "In sleep, though the eyes are protected from light, the pupils are strongly contracted, but dilate on stimulation of the sensory nerves, even though the stimulation be insufficient to rouse the sleeper."

The drugs which cause contraction of the pupils are physostigmine, nicotine and pilocarpine, by action locally or through the circulation; cocaine locally causes transient contraction, which is followed by wide dilatation; conine applied locally contracts through conjunctival irritation, but the drug has gone out of use. The most important drugs which cause contraction of the pupil are opium and alcohol, the latter less marked than the former.

The cerebral diseases with uniformly contracted pupils are few and the contraction is not a constant symptom. Myosis occurs in syncope. In the unconscious state caused by a blow, with symptoms of shock producing a condition sometimes spoken of as "concussion," the pupils usually react to light.

When an adult is handled incident to examination, if he is merely sleeping the manipulation will waken him, but fatigued children sleep soundly and are sometimes aroused only after considerable effort, but, once awake, they generally remain so, differing from the drowsy child whose pupils are contracted by some drug. It seems to me to be of some importance to remember the fact that the pupils are strongly contracted during sleep and that they are instantly dilate on regaining consciousness from healthy slumber.

ANOTHER 'PLAGUE VICTIM.—It is reported that Dr. Vital Brazil, a bacteriologist of S. Paulo, has contracted plague while attending patients in the hospital at Santos.

Medical Progress.

REPORT ON DISEASES IN CHILDREN.

BY T. M. ROTCH, M.D., AND A. H. WENTWORTH, M.D., BOSTON.

AFFECTIONS OF THE CENTRAL NERVOUS SYSTEM IN ACUTE INFECTIOUS DISEASES.

E. FRÄNKEL¹ reports four cases, three of which were infants.

The first case was that of a male infant of ten months, who was brought to the hospital with influenza and bronchitis. Eight days later he developed a fetid diarrhea, and died two weeks later without any other noticeable symptoms. The temperature during the first eight days was somewhat elevated, and varied from 38.5° to 40° C. With the onset of the diarrhea the temperature fell and remained below normal for several days preceding his death.

At the autopsy the chief lesion consisted of a purulent meningitis which involved the anterior portion of both hemispheres. The exudation infiltrated the piaarachnoid and caused some flattening of the convolutions beneath. A similar purulent exudation was found at the base of the brain on the frontal lobes. The ventricles were somewhat distended with fluid and contained flakes of pus and fibrin. The ears were normal. Bacteriological examination showed the presence of the influenza bacillus in pure culture in the exudation. Cultures were made in agar mixed with blood.

The striking feature of the case, clinically, was that the meningitis was absolutely latent, so that no suspicions were entertained of a cerebral complication during life. The localization in the frontal lobes led the writer to believe that the infection took place from the nasal cavity through the lymphatics.

The second case was that of an infant of nine months, who entered the hospital with symptoms of bronchitis and enteritis, and who died fifteen days later with symptoms of tubercular meningitis.

At the autopsy a purulent meningitis was found covering the convexities, and also, to some extent, the base of the brain. The ventricles were distended with cloudy fluid. In this case the pneumococcus was found in the exudation. There was a double otitis media, but no connection could be found between it and the meningeal exudation.

The third case was that of a child of two years, who succumbed to an operation for empyema following pneumonia.

At the autopsy, in addition to the pulmonary lesions, there was a hemorrhage over the second right frontal lobe, which penetrated into the medullary substance of the brain. A similar hemorrhage was found in the region of the gyrus paracentralis. The meninges over the cerebellum contained a small quantity of purulent exudation, in which was found the diplococcus lanceolatus. In this case there were no clinical symptoms of the cerebral complication.

ARSENIC IN THE TREATMENT OF CHRONIC ECZEMA IN INFANCY AND CHILDHOOD.

J. Neuberger² has obtained excellent results in the treatment of rebellious cases of eczema by giving

¹ *Zeitschr. f. Hyg. u. Infektionskrankh.*, Bd. xxvii, p. 315, 1898; *Rev. Mens. des Maladies de l'Enfance*, April, 1899, p. 187.

² *Arch. f. Derm. u. Syph.*, Bd. xlvii, S. 195; *Rev. Mens. des Maladies de l'Enfance*, Tome lxvii, 1899, p. 381.