peripheral and not a central cause; in other words, "nervous" asthma is not a neurosis.

On account of the capriciousness of the onset and courses of asthmatic attacks, as well as on account of the absence of pathological-anatomical changes in this affection, asthma was considered a functional disease and hence a neurosis. From our point of view asthma is still a functional disease but not a neurosis. We have therefore a significant instance in which a functional disease need not be of nervous origin.

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VOMITING OF GALL-STONE

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The following is herewith reported to place on record a case which I believe is rare enough to be of some interest:

History.—Mrs. S., aged 40, was seen on July 3, 1910, at which time she complained of nausea and "feelings of distress" in the epigastric region. There was no rise in pulse-rate or temperature. Palpation over gastric and hepatic region elicited no tenderness. The patient had been constipated for several days and gave a history of three attacks of similar nature while traveling in the west, one on April 7, another April 15 and the third about May 1, the attack on May 1 being diagnosed as appendicitis. She was given one grain of mild mercurous chlorid every hour for three doses, the evening of July 3. Early the next morning, July 4, the nausea became very distressing and the patient vomited about 6 to 8 ounces of mucus and gastric juice, after which she took a glass of champagne to relieve the distress. About twenty minutes after taking the champagne she vomited (in my presence) a drachm or more of what looked to be pure bile and a small dark substance which made an audible click when it struck the side of the vessel. On closer examination of the substance it was found to be a gall-stone of the cholesterol and bilirubin-calcium variety, with two facets on it. Following the expulsion of the stone and bile the patient seemed to obtain immediate relief and did not vomit again. On deep palpation I could now find some tenderness over the gall-bladder area.

Dr. O. H. Elbrecht of St. Louis saw the case in the evening with me.

Operation.—July 6, the gall-bladder was exposed through a right rectus incision and found irregular in shape, of normal size, with walls in a healthy condition and no adhesions present. The appendix was looked at and found to be held down with a few adhesions which were separated and the organ removed by the usual method of crushing and invaginating the stump with purse-string suture. The area around the gall-bladder was walled off with gauze and the organ incised at the fundus, allowing the escape of a small quantity of bile and seven medium-sized stones, ranging in size from a grain of wheat to a hazel-nut, then one large stone the size of a large Brazil-nut was removed with a spoon curette, the gall-bladder thoroughly sponged out and the cystic, common, and hepatic ducts palpated but no stones felt. The packing was next removed and the gall-bladder drained with a rubber tube placed in the fundus and fixed by a purse-string suture to the parietal peritoneum, the wound closed by tier suture, and the patient dressed and placed in bed.

Postoperative History.—The patient was nauseated for some time afterward and next morning vomited a large quantity of bile, and passed a quantity by tube. The tube was removed on the fourth day; the stool was bile-stained on the

seventh day. There was no rise of temperature or pulse following the operation. The patient was removed to her home on twelfth day and her bowels moved of own accord on fourteenth day. The wound was entirely healed on the fifteenth day. A very interesting and extremely satisfactory result to the patient, who had been dependent on cathartics and enemas for the last eighteen years, is that since two weeks following the operation her bowels have been moving daily and sometimes twice daily without assistance.

I am preparing a paper on the records of all cases reported of vomited gall-stones and I should be pleased to hear from physicians who have had such cases to report.

Special Article

EPIDEMIC POLIOMYELITIS

A DISCUSSION OF THE PREVALENT INFANTILE PARALYSIS

Epidemic poliomyelitis has long been known under the name of infantile paralysis and under this name its symptomatology has been described in the text-books. Small outbreaks have been described, one occurring in the United States as early as 1841, but epidemics were not frequently noticed until about 15 years ago. The prevalence of the disease appears to have been increasing since that time. An extensive outbreak occurred in Sweden in 1905 and two have occurred in Australia, one in 1903 and the other in 1908. An extensive epidemic occurred last year in Prussia, especially in Westphalia. The principal epidemics in this country during the last 3 years have occurred in Boston, New York, Minnesota, Kansas, etc., and the disease has been unusually prevalent during the past summer in many states.

The interest excited by these epidemics has led to a great deal of investigation which has advanced our knowledge of the nature of the disease.

The disease is a general infection, attacking chiefly the nervous system and localizing itself in the anterior horns of the spinal cord.

ETIOLOGY

July, August, September and October are the months in which most cases occur. Both sporadic cases and those in epidemics have been noted to occur after hot dry weather. The disease is more prevalent in cold than in warm countries. Clinical experience has shown that the disease is contagious, though it is perhaps not highly so. The way in which it is communicated is not certainly known. Dust has been suggested as one means of conveying the contagium. In the Massachusetts epidemic out of 150 cases investigated 62, or nearly half, had been swimming or wading in water contaminated by sewage, just before the onset of the disease. The experiments of Flexner give some reason to believe that the virus is contained in the mucous membrane of the pharynx to an unusual degree. On the other hand, careful autopsies have shown that lesions of the tonsils or of the pharyngeal mucosa are not constant.

The nature of the virus is not known. That it is a living organism is rendered probable by the fact that it can be transmitted from man to the ape and from this ape to a second ape, as shown by experiments of Flexner and Lewis