residual urine. In the meantime I had noticed distortion of the image of the neck on the left side of the bladder with the appearance of a tumor of the prostate on this side.

Under daily treatments with local antiseptics, phenol (carbolic acid), 1 per cent. in boric acid solution, and silver nitrate solutions and the use of the Kollman dilator, in February, 1917, there was no residual urine, but the urine still contained pus and swarmed with colon bacilli, and this condition continued steadily. In January, 1917, I began to place importance on the fact that the man was chronically constipated. Ureteral catheterizations showed that he had colon bacillus bacteriuria in the pelves of both kidneys. I had the intestine examined with the roentgen ray and found that there was a stasis in the ascending colon with an old adhered appendix apparently attached to the top of the bladder. April 5, 1917, Dr. Rea Smith and I performed a laparotomy. We found the ascending colon twisted on itself. The deformity appeared to be prenatal more than inflammatory, but it was adherent to the transverse colon and to the omentum, almost its entire length. We broke up the adhesions, straightened out the intestine, and patched the raw places with mobilized omentum.

Recovery was very slow but complete, and on May 5 the patient was having natural bowel movements, a thing he had not had since boyhood. The urine was still full of colon bacilli. May 8, I performed a perineal prostatectomy and removed the growth on the left side, which I had suspected to be cancerous because of its rapid development after the suprapubic operation, and straightened out an adhered verumontanum. Thus I took away the nest from which the infection started and removed the obstruction to the exit of urine, which kept up the infection, and brought the man into a condition in which a cure could take place.

The result is that today he has no longer any uneasy feeling over the bladder, he lies in comfort all night, the urine is perfectly clear and free of colon bacilli, he passes it naturally, he has bowel passages without the use of laxatives, and he is to all appearances a perfectly normal and well person.

EPIDEMIC PNEUMONIA (SPANISH INFLUENZA) IN PREGNANCY

EFFECT IN ONE HUNDRED AND ONE CASES

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During the recent epidemic of pneumonia, or so-called Spanish influenza, 2,154 patients were admitted to Cook County Hospital between Sept. 18 and Nov. 5, 1918. Of this number, 101 were pregnant women.

Of these 101 cases of pneumonia, complicated by pregnancy, fifty-two died, giving a mortality of 51.4 per cent., as compared with a mortality of 719, or 33.3 per cent., of the 2,154 patients admitted to the general hospital. This shows a relatively higher death rate by 18.1 per cent. in the pregnant women. These apparently high percentages of mortality may be explained in part by the condition of the average patient on entrance to this hospital.

The Cook County Hospital received by far the largest majority of the patients during this epidemic, all of whom were from the poorer classes of the population. The patients were all extremely ill on entrance, many dying in ambulances on the way to the hospital, many in the examining room, and others while on the way to the wards. Of the fifty-two deaths occurring in the pregnant women observed, 53 per cent. died within the first twenty-four hours and 73 per cent. in the first forty-eight hours after admission.

Of the fifty-two deaths, in thirty-nine, or 75 per cent., an interruption of pregnancy occurred, and in a great majority of these cases this occurred within twenty-four hours preceding death. These figures include abortions, premature labor and labor at or about term. Interruption of pregnancy occurred with equal frequency, irrespective of the month of gestation.

Thirteen, or 25 per cent. of the patients remained pregnant at death, and practically all of these were in the fifth to seventh month of pregnancy. Seven of these were in the seventh month, three in the sixth month, two in the fifth month, and one in the third month of pregnancy.

Of the forty-nine patients discharged, twenty-one, or 42.7 per cent., aborted or went into labor prematurely. The remainder of these were pregnant at the time of discharge.

The cause of this frequency of interruption of pregnancy is uncertain. The fact that by far the greatest majority of abortions or premature labors occurred within twenty-four hours after death, at which time the patients were extremely toxic, would lead one to assume that probably this condition, associated perhaps with the lack of proper oxygenation of the fetal blood, was responsible for this frequency. The cough, which was a constant feature in these cases, undoubtedly played a part in the interruption of the pregnancy. The exertion incident to abortion or labor also tended to exert a harmful influence on the mother.

The most prominent feature noted during the clinical course of the disease was the apparent ease of abortion or premature labor, its rapidity and the apparent lack of pain incident to it. The mental state of the patient due to the toxemia may possibly have accounted for the freedom from pain. In term labors, the duration seemed to be no longer than that of normal labor.

The bleeding incident to labor, which would be equivalent to venesection (a therapeutic measure suggested when cyanosis appears) did not appear to affect the clinical course of the disease.

Complications were few in this series of cases. One case of empyema of the streptococcic type developed, the contents of the pleural cavity being a reddish-brown fluid. The empyema developed late, as has been characteristic of the cases following this type of pneumonia. Four patients developed suppurative otitis media.

Blood counts revealed the characteristic leukopenia, the degree of leukopenia varying with the severity of infection. The white cell count gradually increased as improvement occurred. Five patients, at the onset, gave a true leukocytosis of from 15,000 to 20,000. All of these patients recovered.

Of the twenty-two babies born, two developed definite symptoms of bronchial pneumonia within from eighteen to twenty-four hours after birth. This short interval after birth would make it difficult to say that infection did not occur in utero. Lung punctures of the stillborn gave negative cultures, however.

CONCLUSIONS

The death rate among pregnant women is materially higher than among nonpregnant women.

The frequency of the interruption of pregnancy in epidemic pneumonia is very high.

Abortion occurs with relative ease and lack of pain.

In the majority of cases, death follows within twenty-four hours after emptying of the uterus.

The percentage of recoveries after interruption of pregnancy is small.

THE PROPHYLACTIC VALUE OF LEARY'S VACCINE

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As an institution offers unusual advantages for the study of an epidemic and the measures for its control, a record of our experience with influenza vaccine at the state sanatorium may not be without value. The institution had about 225 patients and ninety-four employees. During the last two weeks of September, 1918, four employees and five patients contracted influenza. These patients were all in one ward of the hospital and were apparently infected from a patient who visited Woonsocket. They were isolated in rooms and a cubicle of the ward, and the disease did not spread.

INCIDENCE OF INFLUENZA AMONG VACCINATED AND UNVACCINATED

Wards	Vaccinated			Unvaccinated		
	Number of Persons	Cases of Influenza		Number of Persons	Cases of Influenza	
		Number	Per Cent.		Number	Per Cent.
East	32	11	34	26	12	46
West	31	6	19	10	3	30
Hospital 1	16	0	0	24	1	4
Hospital 2	14	1	7	24	0	0
Children	32	0	0	1	0	0
Employees	27	7	26	28	7	25
Total	152	25	16	113	23	20

The four employees were isolated in their rooms. September 29, all patients and employees, with few exceptions, were forbidden to receive visitors or leave the institution. We were free from influenza, which was at the height of the epidemic in the surrounding country, until October 10, when a woman patient admitted on October 9 developed the disease. October 14, a patient who slept near this patient developed influenza. October 22, the first case developed in the men's ward of the sanatorium, and from there the disease spread to the employees, until there had been a total of eighty-two cases, or 25 per cent. of the total population. All of the 114 young adults, including some expatient employees sleeping in the east and west wards, were probably well exposed to the disease and furnish the best opportunity to estimate its morbidity. Counting all cases that occurred before and after vaccination, 45, or 40 per cent., developed influenza. October 22 and the few days succeeding, influenza vaccine furnished through the courtesy of Dr. Timothy Leary of the Tufts Medical School was given to 172 employees and patients. The doses were 400, 800 and 1,200 million at twenty-four hour intervals.

In computing the incidence of the disease for comparison between vaccinated and unvaccinated, no cases were counted that developed before the vaccine was given, and no patient has been counted as vaccinated unless he received the three doses. Before the arrival of the vaccine, eight cases that terminated fatally had developed.

In estimating the value of the vaccine, it would seem clear that the children should be deducted from the total because they were quarantined and so far as known were not exposed to the disease. If the children are deducted, the influenza incidence was 20 per cent. among both vaccinated and unvaccinated. It would also appear preferable to deduct the two hospital wards which had only one case each which were so promptly isolated that the exposure probably was insufficient to test the vaccine. If these wards are deducted, ninety vaccinated persons furnished twenty-four cases, or an incidence of 26 per cent., while sixty-four unvaccinated persons furnished twenty-two cases, or an incidence of 34 per cent. In twenty-five influenza cases following vaccination, four patients, or 16 per cent., died. In fifty-seven influenza cases among the unvaccinated, the mortality was nine, or 15.8 per cent.

CONCLUSION

The morbidity was only slightly lower among the vaccinated, and the mortality among those who developed influenza was practically the same whether vaccinated or unvaccinated.

Military Medicine and Surgery

THE PANDEMIC IN THE ARMY CAMPS*

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The pandemic in the Army camps was a part of the great outburst that swept over the United States in September and October, 1918. This, in turn, was a manifestation of the still larger visitation that was to cover most, if not all, of the world.

As soon as the pandemic appeared, each camp and other station of troops was required to keep the Surgeon-General informed of the appearance and progress of the disease. Daily and weekly telegraphic reports were sent in giving the number of new cases of influenza and pneumonia and other details. Most of the statistical data presented here are taken from these reports.

Were it not for the pulmonary complication which has accompanied it, few would doubt that the disease was influenza. Its epidemic character, its clinical aspects and its bacteriology, so far as they have been studied, all point to that disease. It will consequently be called influenza here.

As to the lung complication, that is a similar matter. Objection has been made to the use of the term "pneumonia" to describe it. As yet no other official designation has been given it. It may or may not be a part of the original disease. Pending further investigation, and since it must be given some name in this report, it will be called pneumonia here.

Had it not been for the pneumonia, the pandemic would not have attracted much attention. Epidemics of so-called "colds" and other respiratory diseases occur every fall, and if the typical influenza of today does not bear a close resemblance to these

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