

tice to learn to discard the most unreliable ones.

Attention should be called again to the fact that matters of most vital importance in every case are degrees of normal physiologic function which are possible, not anatomical variations or defects, except as the latter indirectly influence the former through the existing physiologic balance between bones and their flexible supports. For good functional capacity sometimes is possible with decided structural peculiarities because muscles and ligaments hypertrophy and compensate perfectly for the latter inequalities.

X-rays of cervical spines demonstrate their positive values in instances of dislocation, fracture, and of bone disease so often that it is needless to emphasize their great importance. The patient first mentioned above, with a fractured odontoid process, for illustration, obviously needed an x-ray before any neck manipulations were attempted. Negative x-rays of cervical spines do not always indicate injuries of minor importance; because there are occasional instances in which fractures cannot be identified on the plates at all, as in case three, cited above, or in case two, where an old fracture can be reasonably suspected without ever being absolutely proved only after a long period.

Negative x-rays with severe ligamentous strain in presence of existing hypertrophic bony changes do not necessarily signify a favorable prognosis. On the contrary, if hypertrophic changes represent serious wear and tear of past events and past time on the neck tissues, then the new trauma received is likely to start an increasing stiffness despite treatment.

Treatments for neck injuries have, therefore, to be broadly conceived, and hypertrophic tendencies combated with internal medical measures, as far as possible, and modifications of diets to improve faulty vascular conditions which accelerate hypertrophic processes. Circulating blood should be given proportions in its constituents as far as practicable which are most favorable for quick repair of the damage to neck structures.

Local treatments, consisting of orthopedic supports combined with mechanical exercises or manipulations continue to be most effective; and degrees of effectiveness are dependent upon skill with which these two physiologically opposite measures are varied and united to suit individual needs of cases. Other forms of physical therapy such as electricity, moist heat,

radiant heat, are useful for superficial muscular stiffness at times, but do not reach deeply situated ligaments satisfactorily that are strained.

"One-idea" diagnoses and treatments constitute an increasing menace to successful management of cases as refinements of extreme specialization are allowed not infrequently to obscure fundamental principles of physiologic balances involved, and as special measures are prescribed in one-sided ways.

Periods of disability following neck injuries depend upon the severity of the trauma received, age and general condition of the patient, and on the kind of treatment given. There are possibilities for so many variations in each of these variable elements that generalizations are unsatisfactory. It can be said, however, that several months are needed usually with the majority of patients for recovery from moderately severe neck injuries. Partial permanent disabilities are not extremely uncommon, and, on the other hand, quick complete recovery in a few weeks is occasionally possible after apparently very severe accidents.

CLINICAL OBSERVATIONS IN RECENT EPIDEMIC OF INFLUENZA.

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

THE epidemic lasted, in my part of the city, roughly speaking, about a month, September 16 to October 16, 1918. The greater number of cases occurred in the first two weeks and then gradually subsided. Proportionately more patients developed pneumonia in the last two weeks than in the first two weeks. During this time I have treated approximately 250 to 500 patients, most of them from the beginning to the end.

A remarkable feature of the epidemic was the mildness of the infection as it occurred in children. Only two children had pneumonia. All children recovered. Only a few children had gastritis as a complication.

Another remarkable feature of this epidemic was the almost entire absence of any other disease. Only three patients had follicular tonsillitis, three had diphtheria, one true pneumococcus lobar pneumonia in an elderly man, and practically little else aside from these. Everything was influenza. I saw very few who could be helped by Christian Science.

Symptoms. They all complained of headache

dizziness, chilliness or fever; rawness or tearing sensation of the throat; heavy, tired feeling of limbs; pain in the lower region of the spine; cough was generally present.

Diagnosis was easy. They all had laryngitis or tracheitis, which was evidenced by the husky voice and hoarseness. Coryza was present in some. In contrast to a normal appearance of the tonsils and the pillars the uvula was either red or bluish-red. There was fever and increase in the rate of the pulse. Prostration was marked from the start. The respiration was feeble and shallow at the bases and often accompanied by atelectasis until the patient was made to breathe deeply. This may account, in part, for the tendency in many of these cases to pneumonia. There was a vaso dilatation of the skin, manifested by a purple to a bluish color of the skin associated with edema.

On the face, in a marked case, the redness over the cheeks and the bridge of the nose gave it almost the "butterfly" appearance and distribution of erysipelas. In a mild case there was only just blushing of the tip of the nose and *alae nasi*, and perhaps, also, a little on the central part of the forehead, the middle of the chin, and the middle of the upper lip. This predilection for the central part of the face made me look to see if there was anything corresponding to it in the mouth or throat. In the cases that I have studied, I have found either marked redness or a violet red appearance of uvula with edema. To elicit this sign the uvula should be observed by depressing the tongue very gently, care being taken not to cause the patient to gag.

Setting aside the cases of chronic pharyngitis and associated redness of the tonsils and uvula, the latter, normally, has either a pale or a whitish-red appearance. The markedly red uvula was especially suggestive in mild and abortive cases, where it was difficult to know whether the patient was merely frightened, fatigued, or really sick.

Such patients simply complained of slight headache or fatigue. The temperature was below 98. The pulse normal. Subsequent study of these cases proved them to be mild cases of influenza. There was usually a slight rise of temperature after patient was put to bed.

Complications. Bronchitis was the most common, or a part of it, from the start. Next in order was gastritis, or a gastric type of influ-

enza. Thirdly came pneumonia. Nose bleed occurred often during the stage of fever or during convalescence. It was generally unilateral. Albuminuria was not an infrequent complication. Otitis media I have seen only in two cases in adults, and one in a child. I had one case of empyema. I have not encountered very acute sinusitis.

The disease was aggravated, prolonged, or caused to relapse, by too early leaving of bed; inattention to the bowels, too early recourse to solid food, or excitement from company. In my opinion too much covering of patient, or fear of drafts also did harm.

Bronchitis was present from the start, or developed in the major portion of cases on the second or third day. It was marked by râles at the bases or throughout the lungs.

Gastritis. No distinct gastro-intestinal type of influenza was met, there being only gastric symptoms, but no intestinal symptoms. Gastritis in these cases developed either during the stage of fever, or else during convalescence. It was marked by nausea, vomiting, or abhorrence of food. Objectively, this was evidenced by local tenderness in the epigastrium. A few of these cases were associated with albuminuria.

Pneumonia. This was the chief complication. The infection localizing itself as a catarrhal process in the respiratory tract, causing a toxin which depresses the respiration, either directly by action upon its center in the brain, or indirectly by exhaustion, the patient soon falls an easy prey to pneumonia.

It usually set in between the third and fifth day and lasted from three to ten days. Any patient who had fever more than five days generally developed pneumonia. This complication was diagnosed very early, generally a day sooner than hemoptysis appeared. It is my impression that this was a more serious complication in patients who did not get to bed soon enough in the course of the disease; or, in those who suffered a relapse after leaving their bed too soon.

Objective Symptoms. Rise in fever, rapid respiration, cyanosis and local signs in chest. Pleuritic pain to require strapping of chest occurred only in two cases. There was either an area of dullness, bronchial respiration, or an area of localized coarse crackling râles. Consciousness was generally maintained through the entire course of the pneumonia. As in ordinary influenza, exhaustion was its chief characteris-

tic. In one case I suspected bronchiectasis from the foul odor of the sputum raised, but was unable to follow the case. The consolidation was evidenced by quickly spreading dullness, usually of the lower part of the back; either on the right or left side of the chest. The bronchial breathing was not always heard over the entire area of dullness. Over part of this dullness there were areas of localized coarse crackling râles. Bronchial breathing was often of a faint and distant type. Vocal and tactile fremitus were not always as marked as in ordinary pneumococcus lobar pneumonia. Consolidation in these cases was probably often a confluent broncho-pneumonia, probably accompanied by pleurisy. Consolidation was very often bilateral.

Albuminuria. A high tension pulse called attention to this and the urine showed albuminuria. Time did not permit a microscopic examination of the urine, but all patients treated as if for nephritis, the albumin in the urine disappeared and the tension in the pulse became normal.

Treatment. As prostration was the marked feature of this epidemic of influenza, therefore the principle of absolute rest was the basis of treatment. Patients were therefore put to bed and kept there at least three days after fever had entirely left. Not even for the purpose of going to the toilet was any patient permitted to leave his bed. After pneumonia a patient was kept five to seven days in bed with a normal temperature.

Two or three windows had to be open in the room. The patient was lightly dressed and lightly covered. The sponge water bath was found more effective than alcohol sponging. Patients were instructed to sit up high on pillows and breathe deeply a few times a day. Patients were forced to take much fluid and nourishing liquids.

I have found phenacetin to be more effective than aspirin in reducing fever and aborting the disease in adults. Only in a few obstinate cases did I find occasion to combine it with aspirin. In children, however, owing to the milder type of the disease and the depressant effect of phenacetin, I have used aspirin instead, with good benefit. In a few obstinate cases in children I combined aspirin with phenacetin. Brandy was combined with phenacetin or aspirin. Where there was a tendency to weakness

of the pulse I combined caffeine in large doses from the start. To combat a tendency to gastritis I have used sod. bicarbonate in all my powder prescriptions.

To prevent the development of pneumonia I have used, from the first, stimulating expectorants of the ammonium type wherever there was the slightest bronchitis. Where pneumonia developed, the stimulating expectorant was continued. Digitalis and caffeine were used with the first tendency of the pulse to weaken or become rapid.

Narcotics and sedatives were used without hesitation to ease the cough or induce sleep. The bowels were kept open not only by enemata, but by laxatives also.

Gastritis was treated by counter irritation, opiates, alkalis and diets.

A few blood pressure readings were made. One patient with pneumonia showed a systolic blood pressure of 80 and a diastolic which could not be read. Many of the very ill patients during convalescence showed a blood pressure below 105, and the second pulmonic sound was weaker than the aortic. It is my opinion that toxin depresses first the vaso-motor system, next the respiration, lastly the heart.

Mortality. All those who stayed in bed or developed pneumonia while staying in bed recovered. A few extreme cases will illustrate this point;

The patient with the very low blood pressure recovered. One patient was so severely effected by his pneumonia that he actually suffered from air-hunger for ten days and yet he recovered. One patient had pneumonia three times, complicated by left suppurative otitis media, and recovered. A patient with advanced pulmonary tuberculosis developed pneumonia after a few days of influenza. He had several smart hemorrhages. In spite of his T. B. condition and the hemorrhages, he recovered.

On the other hand, the patients who left their beds too soon fared very badly. One patient, a well-developed muscular man, made a quick recovery from a mild type of influenza, left his bed, against advice, to close the windows during a rain storm, developed pneumonia, got worse every day, and died in a few days.

A woman, eight months pregnant, with double mitral disease, developed pneumonia early in the disease, recovered on a Friday, left her bed on Saturday to go to the bathroom, had a re-

lapse, gave birth to her baby two days later, and died about 24 hours afterwards.

I was called upon to see three moribund cases with pneumonia. One died within a few hours after my visit; one in 36 hours, one in about 48 hours. A similar number of my serious patients drifted to other doctors and died under their care. My mortality was, therefore, either nothing or less than two per cent.

Convalescents. This was marked by loss of flesh and weight, pallor, sweating, and prolonged weakness. Often there was persisting cough or hoarseness. Various neuralgic pains are common. The heart and kidneys were not seriously affected. Convalescence was slow. The blood pressure continues low for a long time.

Medication. Phenacetin instead of aspirin should be used in adults, in uncomplicated cases. A stimulating expectorant should be used through the entire disease. Stimulants should be used in radical doses, if necessary. Irritation of the nose and throat should be avoided. Inhalation of camphor or other irritating vapors should be condemned. Camphor, argyrol, etc., should be used only if there is an actual rhinitis present.

Vaccine seemed to aggravate the disease in a few of my cases. A few persons receiving vaccine as a prophylaxis did not develop influenza.

Conclusion. True epidemic influenza is manifested either by a bright red rash on face, or simply a violet blushing of *alae nasi*. This same phenomenon is observed on the uvula; and, at times, on the entire body.

There are always symptoms of laryngitis or tracheitis. A patient without a rash on face with pallor of nose and of uvula is probably ill with ordinary "grip."

The disease is characterized by marked and prolonged exhaustion out of proportion to the fever, pulse or duration of the illness.

In treatment, rest must be absolute, physically or mentally. Sitting up simply to have bed fixed, or one walk to the bathroom has caused a relapse with pneumonia.

Phenacetin in the great majority of patients aborts the fever and the general malaise in a few days. Where the pulse is weak or rapid caffeine citrate is given with it in the same dosage, usually three grains every two hours. Syrup ammonium hypophosphite in teaspoonful doses every three or four hours is regarded as the best expectorant and invaluable stimulant of

respiration. I used it during the entire course of bronchitis or pneumonia.

For cardiac depression, tablet digifolin gr. 1½ every eight to four hours was found to be dependable in nearly each patient. I combined it with caffeine citrate, grains two to five, every two hours. As the blood pressure is usually already low no nitrites were used. Venesection in one case gave temporary improvement. Perhaps it should be tried more often.

As a prophylactic, I make so bold as to suggest syrup of hydriodic acid, a teaspoonful two or three times a day, hoping that the iodism it causes in the respiratory tract may be of a protective nature.

Society Report.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA, SIXTY-EIGHTH ANNUAL SESSION, HELD AT PHILADELPHIA, SEPTEMBER 23, 24, 25 AND 26, 1918.

THE session was called to order in general meeting at 10 A.M. Tuesday, September 23rd in the ballroom of the Bellevue-Stratford Hotel, by the president, Dr. Walter F. Donaldson, Pittsburgh.

THE PRESIDENT'S ADDRESS.—MEDICAL ACTIVITIES IN PENNSYLVANIA.

DR. FREDERICK L. VANSICKLE: For the first time in the history of the Medical Society of the State of Pennsylvania has it been bereaved by the loss of a president during his active term of office. Our late lamented worthy president, Dr. Samuel G. Dixon, whose demise was so untimely in the work of this Society, has left an imprint upon medical and civic affairs of this Commonwealth far greater than is possible to the average man. I would express the hope that the work established by Dr. Dixon may not be altered, perverted, or disorganized. With so few of the qualifications which he possessed, with so few of the honors which he received, I would voice my grateful appreciation upon being elected a successor to so great a man. Many duties confront us to-day: In the present situation the first duty of the medical profession is to organize in two classes requested by the Government, the Medi-