other contagious diseases, because it is only contagious in the sense that it may be transmitted from one to another, but is not contagious in the sense that the average person is liable to catch it. It is only contagious to those who are susceptible to it. This is a very important point, because in it lies the principle of the only treatment known for tuberculosis, and that is to restore to the individual the natural immunity which he enjoyed before he became infected and this is best accomplished by measures directed to the system in general.

There is no specific remedy for tuberculosis, and I am not sure that there ever will be, but some day it is possible that we may learn some better way of restoring this individual immunity. It has been found by experience that if a person not too far advanced in tuberculosis can be put in the open air and kept there day and night in any climate, that this treatment with proper feeding has a strong tendency to restore the natural immunity, and the result is that the lesion heals in most people who are infected slightly and in some who are quite severely infected. The whole thing comes down to a matter of susceptibility; if we are susceptible to tuberculosis we can hardly escape, while if we are not susceptible we can scarcely get it if we try.

As far as danger in taking care of tuberculous patients is concerned, this is practically nil. I think that if anyone working among tuberculous patients who uses ordinary care gets the disease he would have acquired it under other conditions.

Clinical Department.

LOCAL CONDITIONS IN THE RESPIRATORY TRACT MODIFIED BY GENERAL FUNCTIONAL OR ORGANIC DISEASE.

BY FRANCIS P. EMERSON, M.D., BOSTON.

LOCAL measures have been carried so far and have accomplished so much for the relief and cure of chronic catarrhal conditions of the respiratory tract that one does not need to urge their importance nor to reaffirm belief in such rational methods. It is not to detract from these brilliant results that I try to emphasize some general principles that seem in danger of being overlooked. We have all reached the point where it is admitted that no examination of the respiratory organs is complete that does not include the air tract as a whole, but does this mean the search for mechanical obstructions or the sequelæ of acute inflammatory processes only? Drainage can be established and obstructive lesions overcome to the temporary gratification of our patient, but is there not a local function to be preserved and also a relationship between it and general functional and organic disease? The term "specialist" can only be used relatively, because the result of minute investigation of any organ in its physiological and pathological aspect is to lead us to the broader consideration of the modifying influence upon it, of habits, en-

vironment, climate, seasons, occupation, heredity, age, etc., as well as its relation to other organs. This would seem to be a self-evident truth did not the question come up for discussion at a recent meeting of a national laryngological society as to whether the rhinologist was ever justified in prescribing even a laxative without the consent of the general practitioner. Every man who operates in the nose often must have noted the difference in reaction between the patient who leads an active out-of-door life and the one of sedentary habits. In the same way the man or woman with chronic constipation, indigestion, rheumatism, or gout will show an individual reaction that is not represented by the amount of trauma or the virulence of an infective organism. Normal excrementitious products may be retained within the body so that there results an incomplete chemical metabolism, or we may have an acid intoxication or the formation of leucomaines. The retention of such by-products may cause a chronic pharyngitis, an enlarged inferior turbinate or be one of the causes of a general arterio-sclerosis indicated locally by prominent tortuous vessels at the base of the tongue. Alcohol and chronic secretory disturbances of the stomach may for a long time produce local throat trouble, preceding marked symptoms in other organs.

"Taking cold" may result from reduced immunity due to over function of the larynx or from excessive heat or debauch so that pathogenic organisms of the throat become active, as well as from the lighting up of a subacute rhinitis from the chilling of the surface of the body. The prephthical anemia of the larynx is an early local manifestation of a general trouble which all recognize.

A violent epistaxis may be the only symptom of a serious organic kidney or cardiac disease. Instances might be multiplied, but the object of this paper is not to exhaustively point out all the local conditions that simply indicate a general disorder or are associated with it, but to emphasize the importance of studying the patient as a whole so that when the local condition has been remedied general medicinal measures may be carried out in conjunction with the family physician to prevent a recurrence. Even chronic follicular pharyngitis is probably the sequel of changes resulting from hypertrophic disease in childhood and associated with the so-called lymphatic tendency. The chronic form we often hear spoken of by the older practitioners as throats of debility. Here the general lymphatic tendency needs to be studied on broad lines as well as local measures instituted.

CASE I. Miss M. S., single, school teacher, age twenty-five. Referred to me in 1901 for hay fever. Nervous temperament. Was anemic two years. Digestion good. No especial sickness but is always nervously exhausted, especially at the end of her school year. Nose always troubled her but two years ago had sore throat and has been worse since. Hay fever comes on in June and lasts until September then skips one month and returns to last all winter. A large horizontal

ridge was removed from the left naris and the naso-pharynx treated. Freedom from hay fever one year when she returned as bad as before. Adrenalin was prescribed and a specimen of urine requested which on two analyses gave specific gravity 1008. Quantity 2 qts. Urea 1%. Albumen and sugar absent. Her symptoms immediately subsided under adrenalin and she was referred back to her physician with the analyses and suggestions as to her general condition. Whether she remains well or not, the importance of a stable nervous system from a good physique is conceded as probably one of the factors in the triad which go to make up the symptom-complex which we call hay fever.

CASE II. Mr. A., school teacher, American, forty-seven years, 150 lbs.

Family History. — Father died seventy, grippe. Mother died eighty, always well. Two brothers and one sister. One brother and sister have rheumatism.

Past History. — Patient had inflammation of the bladder six years ago of three weeks' duration. Grippe ten years ago. Indigestion or so-called bilious attacks frequently. As a boy had sick headaches. Left wrist has pained him since fall of 1903. Throat sore and pharynx red, horizontal ridge through left inferior meatus. Septum to left and at upper third is in contact with the middle turbinate. Naso-pharyngitis and laryngitis. Larynx malformed from early struma. Uvula large and glistening. Croupy cough and embarrassed breathing as through a sieve. Tongue heavily coated and bowels inactive. Much prostration. He remained under my care through the winter, and, after the acute symptoms subsided, attended to his usual duties but having constant subacute exacerbations until summer when he went as usual to the seashore working about his summer place but failing to be benefited as usual. As the season was very wet I suggested that he go back into the mountains which he did but returned in the fall in poor condition. The ridge in the left nose had been removed but no attempt was made to set up his septum owing to his bad general condition. His bowels had been regulated and beside the local measures he had been given tonics with poor results. At this time examination of the urine gave specific gravity 1024, strongly acid. He was given lithia grs. v T. I. D., advised to box twice weekly with sufficient clothing to make him perspire followed by a cool sponge bath, sleep in a cool room and take a cold bath daily. The diet was regulated, the ingestion of water increased and the temperature of the house lowered to 64°-68°.

Nov. 28. — Urine 2 qts., specific gravity 1017. Urea 1.13%. No albumen, although he still has his deviated septum he is doing his work easier than usual and has been free from any but a slight cold for the last three severe winter months and keeps improving. It is still necessary to use an alkaline nasal wash twice daily and probably will be until the nasal condition is corrected, but his improved general condition has modified the activity of the local process and makes it easier to control.

Since writing the above his left middle turbinate commenced to show myxomatous tissue along its anterior border, and later a fully developed polypus necessitated its removal. This was apparently an ethmoiditis from grippe.

CASE III. Mr. L. S., referred by Dr. — in November, 1903; merchant, American, fifty-four years, weight 185. Smoked excessively since eighteen years of age until one year ago. Throat trouble fifteen years. Uses no stimulants. No catarrh. Is large meat eater three times daily and drinks three glasses water per

meal. Never sick except typhoid fever at fifteen years. Throat begins to trouble him in the fall and lasts through the winter. Painful and accompanied by a hacking cough.

Family History. — Father died seventy-three, chronic rheumatism. Mother died sixty-one, apoplexy. One brother well. Three sisters well.

Examination. — Chronic pharyngitis. Large amount lymphoid tissue at the base of his tongue and prominent blood-vessels. Upper naso-pharynx negative.

Urine. — Specific gravity 1024. No albumen. Urea 1.77%. Uric acid marked.

Beside local treatment the nitrogenous food was restricted and he was given Carlsbad Sprudel, one teaspoonful in a glass of water on rising, with an occasional dose of calomel and citrate of lithia grs. v T. I. D. He continued to improve steadily and at the end of two weeks volunteered the information that he was getting over the feeling of exhaustion at night that had troubled him so that he felt like lying down as soon as he returned from business and that his throat was entirely free from pain. Here the pharyngitis seemed to be worse in the fall from the diminished action of the skin and the increase of nitrogenous food.

CASE IV. Mr. K., referred to me in 1899 by Dr. —; Irish American, merchant, forty years. Has smoked 3 to 5 cigars daily. No stimulants.

Past History. — Tonsillitis, quinsy. Bronchitis frequently. Grippe, pneumonia, typhoid at twelve years. Bowels inactive.

Family History. — Father died sixty, stoppage of bowels. Mother died sixty-four, grippe and meningitis. Three brothers well. One sister well.

Examination. — Right naris. A horizontal ridge running well back on to the vomer. Right middle turbinate shows dried secretion on its anterior border and is close to the septum. Right sphenoid carious. Ridge was removed and local treatment instituted for several weeks. The following winter he had some bronchitis and went south. 1901 and 1902 his history was one of continued bronchitis and naso-pharyngitis until April, 1903, when after a change of flannels he took cold and examination showed so much puffiness over the left arytenoid with a general dark red appearance of the whole mucous membrane that I sent him home and saw him again in the evening when the edema had extended to the other side, and during the night the larynx was scarified twice to relieve his respiration. He recovered very slowly and on coming to the office a careful examination showed the nose and upper pharynx not inflamed, but as the sphenoid was bare the anterior wall was broken down to relieve the dropping posteriorly. A previous examination of the urine had given a specific gravity of 1031. Quantity, one and a half pints. A few crystals uric acid. No albumen. His physician had been aware of his condition but as the patient was a man with large business interests he could not be prevailed upon to follow directions for physical exercise until his last attack which so frightened him that he commenced systematic horseback riding, cool bathing, long walks, etc. General medication was directed toward his concentrated urine with noticeable effect upon his larynx which improved at once in becoming less sensitive to changes of temperature and more free from unpleasant sensations which had annoyed him since his acute attack. The throat here strongly suggested an incompetent kidney.

CASE V. Mr. K., referred by Dr. — in April, 1901; American, teacher, forty-six years. Has always had a persistent cough following every cold.

Examination. — Slight cartilaginous ridge well for-

ward in both nares. Naso-pharyngitis. Tonsils enlarged. Adenoid tissue at the vault and in Rosenmüller's fossæ. Lymphoid tissue extends laterally from base of tongue up to epiglottis and is continuous with that at base of tonsils. Glandular tissue at base of tongue very prominent which accounts for his long continued coughs. Chronic indigestion. The enlarged glands at the base of the tongue were cauterized and the lymphatic tissue in the vault and fossæ removed as well as that lower down about the epiglottis. He continued in good condition until February, 1903, when he reappeared with a painful pharynx, without any naso-pharyngitis above. He was referred back to his family physician with suggestions in regard to his digestion. A test meal showed chronic secretory trouble which was corrected with benefit to his throat.

The above five cases show that judicious local treatment was necessary to their restoration, yet they also illustrate the point that one must have a broad outlook as these conditions represent no one disorder but chronic functional or organic disturbances of metabolism which aggravate and tend to recurrent exacerbations of the local disease.

GERMAN MEASLES.

BY F. H. MONTGOMERY, M.D., DANVILLE, KENTUCKY.

THE Clinical Department of THE JOURNAL of April 14 contains an article entitled "Concerning German Measles" by Dr. Chas. W. Townsend, which I have read with much interest and which induces me to submit to you the following clinical experiences:

CASE I. A young lady, sixteen years of age, developed a rash the thirtieth day of January. There were no prodromes, a rise of less than one degree of temperature, only slight malaise and some enlargement and tenderness of the posterior-cervical glands. The eruption lasted two days. On Feb. 13 I was again called to see her when she gave a history of having felt badly for three or four days with marked catarrhal symptoms and considerable cough. Temperature 101. She had a typical eruption of rubeola over face, chest and back. This persisted four or five days and disappeared leaving her in good condition. She had no sore throat in either attack.

CASE II. A child two years of age. After three or four days of catarrhal symptoms this child, on Jan. 23, developed an attack of broncho-pneumonia of the congestive type and had several convulsions. Both lungs became filled with liquid rales, the patient became somewhat cyanosed and fell into a condition of semi-coma. Temperature at this time was 105½ (taken in the groin). He rallied from this condition and during the following night broke out with a typical rash of rubeola. This patient was seriously ill for three weeks, the pneumonia producing grave anxiety for a fortnight after the disappearance of the rash. On March 6, after having been out of bed for some ten days, he developed a rash with more of the characteristics of scarlatina than that of the former attack. He had no prodromes, his temperature did not reach 100 F., he had no sore throat and the rash disappeared in less than two days. The post-cervical glands were enlarged and tender.

CASES III, IV AND V. All were members of the same family. I attended them during well marked, uncom-

plicated attacks of rubeola from Jan. 23 to Feb. 3. On March 21 one of them developed a rash similar to that described above, having had no prodromes, and was followed in a few days by its development in the other two. The source of infection in these cases was undoubtedly case No. II, as they were next-door neighbors and playmates.

CASE VI. A girl of about twelve years of age on Feb. 12 developed a rash, having had no prodromes. Temperature 99½, post-cervical glands enlarged and tender. No catarrhal symptoms. On Feb. 27, after the usual prodromes, this patient developed a well marked attack of rubeola. An interesting point in this case is that I attended her during a well marked attack of scarlatina in the spring of 1898, when the symptoms were all so characteristic and the source of infection so well known that there was no chance for error.

CASES VII AND VIII. Two children of the same family, cousins of case VI and exposed to her on Feb. 12 and 13. On Feb. 24 one of these, without prodromes, developed a rash attended by slight temperature and enlargement of the post-cervical glands. On Feb. 28 the other child developed a similar condition, and a few days later their mother (who had had rubeola) went through the same character of sickness. This family moved to a neighboring state, but just prior to their removal these children were exposed to case IX during his attack of rubeola, and I have recently learned that they both developed this disease in about ten days after exposure.

CASE IX. Cousin to VII and VIII and visiting in the same family. Was exposed to VII and VIII and to their mother during their attacks of illness. On March 16, without prodromes, developed a rash accompanied by slight temperature and enlargement and tenderness of the post-cervical glands. He had absolutely no sore throat. On March 6 played with a child who had the cough and catarrhal prodromes of rubeola, and on the twenty-third was thoroughly broken out with the typical rash of this disease.

During the period covered by these cases there was no scarlatina reported to the authorities of this town, and I could hear of none, but there was an epidemic of rubeola and I am confident of Rotheln.

The following points in this series of cases are interesting:

(1) The occurrence of two attacks of eruptive disease in each of these nine cases within the duration of a few weeks.

(2) The fact that one of these attacks could be absolutely diagnosed as rubeola.

(3) The fact that the other attack did not have the initial chill or vomiting of scarlatina, did not have any sore throat, and did not desquamate, and the period of incubation where it could be determined was too long for scarlatina — being from twelve to twenty days.

(4) That case VI had previously had an attack of scarlatina contracted from a known source and followed by marked desquamation.

In conclusion I would say that I attended during this period a number of other cases of typical rubeola and also a number of cases of this very mild eruptive disease as they were both epidemic in this community, but report only those cases that had an attack of each.