

ACUTE BRONCHO-PNEUMONIA.

BY P. D. GOLDSMITH, M.D., PETERBORO', ONT.

This disease is so prevalent and so fatal in this country at this season of the year, that I venture to bring it before you for discussion. It is an inflammation affecting the mucous membrane lining, the bronchial endings, bronchioles and air cells in connection with it, making up a lobule. In severe cases the inflammation is not confined here but may extend so as to include any part of lung tissue. This diseased condition never begins in air vesicles, and it therefore is bronchial before it is pulmonary, and its extension from the finer tubes to alveoli is very easily and sometimes very quickly accomplished.

It forms the most serious and fatal complication of measles, influenza, whooping-cough and diphtheria. It is most frequent in children under two years, and during the winter months, when bronchial affections predominate. Quite commonly met with in old people who are debilitated from any cause, especially from catarrhal affections and chronic Bright's disease, but much more frequent in the young, especially before the fifth year; the most dangerous period being anytime before the end of the second year. Age is, therefore, an important point in reference to fatality.

Exposure to cold, changes of temperature and humidity are very common exciting causes. Unsanitary surroundings and debilitated conditions predispose. It certainly seems most unwise that young children should be allowed on the streets in quite cold weather with dress well above the knees and short socks. Inhalation of irritating particles and gases, operations about mouth and nose favor the production of this malady. Every acute and chronic affection of much severity gives conditions favorable to the production of broncho-pneumonia.

The very sick expectorate badly; mostly lie on the back and thus favor the accumulation of secretions. Pieces of food, fungi and bacteria also collect. Decomposition and bacteria developments readily take place. Now, in the benumbed condition of the very ill these collections are

badly got rid of and during inspiration may be further and further drawn into the bronchi or gravitate to dependent parts till the alveoli are reached and broncho-pneumonia results. It is in this way that this disease is produced in typhoid fever, erysipelas, neuralgia, chronic diarrhoea, etc.

This inhalation form of the disease is also readily produced in bulbar affections, bronchiectasis and hæmoptysis. Tubercles will produce a very fatal form of broncho-pneumonia. The badly housed, badly fed, badly cleaned, scrofulous, rickety, weakly children, are the first to fall victims. It is nearly as fatal a disease among children in cold damp, weather as "intestinal indigestion" is during the hot, dry months of summer.

In the young, the air sacs are much like dilations of bronchial endings, and their structure is loose and yielding. Epithelium is readily shed and re-formed. Connective tissue is delicate and tends to abundant cell proliferation. Peri-alveolar and peri-bronchial inflammation will produce pressure. Congestion of vessels and swelling of mucous membrane all combine to produce obstruction. Tenacious mucus in early stages acting as a valve, and mucus and pus in later stages, with weakened muscular action, aid in the production of obstruction and collapse. The disease may advance rapidly, and quickly involve large tracts of lung; or it may advance slowly and gradually, taking weeks of time. Its course is usually very irregular. I could not easily exaggerate the great importance of simple bronchitis in young infants. Increased liability to recurrence must always be expected, and it must be remembered that it is very easy for a severe case of broncho-pneumonia to come out of a mild case of simple bronchitis. Many a case of broncho-pneumonia would be avoided, if simple bronchitis had more attention. Not infrequently, we are called hastily to see a child in convulsions, and you find a temperature of 102° or 103°, pulse 140, respirations 50. You find the child has been ill two or more