VICARIOUS ABSORPTION OF OXYGEN IN PULMONARY OBSTRUCTION.

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Insufficient oxygenation due chiefly to pulmonary obstruction is one of the gravest pathological phenomena, and to find a method to supply the blood with oxygen when the lungs are unable to do so is a problem indeed worthy of investigation. Practically the three most important diseases in which obstruction to the ingress of air and the absorption of the oxygen from it occurs, are laryngeal diphtheria, broncho-pneumonia in children, and double pneumonia in adults. In the first disease we can fortunately make use of intubation and tracheotomy, and it is therefore to a consideration of the two last-named diseases that the author devotes his attention. The most available remedy for the purpose seems to be Marchand's H_2O_2 medicinal, which, as is well known, is chemically, water with an extra atom of loosely combined oxygen. By weight this loosely combined oxygen is equal to about ½ the weight of the H_2O_2 (more exactly, $\frac{1}{17}$) and as it is in the nascent state when given off, it is much more active than the ordinary oxygen and is readily absorbed by the mucous surfaces, finding its way directly into the tissues. The medicinal solution of H_2O_2 contains 4.5 per cent. of absolute H_2O_2, and is capable of yielding 15 volumes of oxygen. This solution the author considers too strong and he dilutes it with 4 volumes of water before administering.

The first case in which he tried the H_2O_2 was an infant three months old, suffering with broncho-pneumonia. The disease was going rapidly to an apparently fatal issue; there was general cyanosis and every other evidence of insufficient oxygenation. A teaspoonful of Marchand's H_2O_2 (diluted with 4 volumes of water) every five minutes was ordered, and this was continued for several hours. The breathing gradually became easier, the cyanosis gave place to redness, and the child recovered. The second case was a man of forty-two who had a severe attack of double pneumonia. Temperature, 104½°; pulse, 130; respiration, 56. H_2O_2 medicinal (Marchand's) was administered freely by mouth and by rectum; eight hours after the temperature was 104½°; pulse, 130; respiration, 27. The disease lasted six or seven days and terminated by lysis, but the respirations never exceeded 30 per minute. Patient made a complete recovery. This case occurred in the mountains in British Columbia, where, the author states, pneumonia is especially fatal. Of the previous eight cases treated in the same private hospital, seven died. Of course, if desirable, oxygen may be given by inhalation at the same time, nor does the H_2O_2 interfere with any other internal medication.