

April 2 - 1929

Dear Ralph:-

The most important thing in your letter - came yesterday - was the arm amputation case. Even though you were in no wise to blame, I am sympathizing sincerely with you. There is no use in feeling the necessity of knowing just WHY, because as a rule we never find out. I suppose though that the thing balances up. Your friends are sorry and your enemies are happy. The friends will say nothing and the enemies will publicly express their sympathy at every opportunity. Wish you were here and that we were both well located. Then we could thrash some of these things out.

You said something in that we know very little about Carbon Dioxide. I am changing my opinion. I still maintain that it is a stimulant in sub anesthetic doses. However, from some recent observations, which recall some cases that I had back home, it seems to have in some individuals at least, an early depression period following one of brief stimulation. Here is a typical case and it happened just after I had received your letter yesterday. Woman 65. B.P. 220 over 120. Ovarian cyst size cocoon, adherent. Anesthesia O.K with filter ethylene plus $3/4$ ounce ether. When surgeon started closure of peritoneum he complained that she was a bit rigid. I slipped out the filter, and closed the system. Then turned on the ether and filled the bag with ethylene, oxygen and CO₂, the latter in what I guessed to be ten or fifteen percent. Instead of getting a typical deep hyperpnoea, the increase was in rate only, and the respirations seemed shallow. Her eyeball was oscillating. After about 45 seconds she stopped breathing entirely. Beautifully relaxed and hyper pink from excess oxygen, for I had put an excess into the bag. I do not know that the surgeon noticed it and I hope that he did not for he is easily frightened. She did not breathe for almost a minute, and the return was similar to the return from fourth stage ether. I compressed the bag a couple of times, (pure oxygen and no CO₂ or ether. It may have been those compressions that started her breathing. I did not dare trying more CO₂ as a stimulant, and I did not dare let the surgeon know that I was in the least worried. Fortunately she started to breathe before she showed cyanosis.

Now as I look back, I can remember a number of cases, particularly in children, that stopped breathing after a short period of CO₂ administration, and I had attributed it to an overdose of the CO₂. However the amount that this woman had yesterday, would not be an overdose for the ordinary individual. It is something for both of us to think about, and we cannot be too liberal in teaching the tyro to have too much confidence in his CO₂. I am afraid that I have been guilty of just that at times. Have you had any similar experiences?

If I were to classify the action of CO₂ today I would state that it is an anesthetic agent with a much exaggerated stimulating stage, and often a powerful respiratory

depressant stage following closely beyond the stimulating dose. I was not taking the blood pressure and I do not know whether or not it fell during the relaxation period. Was it?

Lundy is O.K. but I realize that he is too serious in maintaining the superiority of the Mayo clinic. He must not learn anything from anyone else. Of course he is dead wrong, and maybe he knows that he is but fears pulling down low enough to ask.

I am inclosing two more bags. (Three more) You might need them and I have time to make them. I have not had any communication with DeCaux. You send him the bag or two of them with your compliments, and tell him how to use them. If he uses the filter, or if he does not, I feel that he will appreciate the technique. Of course we will get some for Sise and Woodbridge, and for any one else who is qualified to use them. I am anxious only that they do not get into bad hands where they will be blamed for technical difficulties for which they are not to blame. I have had twenty five cases here with closed endo-tracheal and ther were all satisfactory. I had to change catheters in one because of a leaky bag, and in one other I pinched off the tube, and allowed some aspiration. No post operative trouble.

I received the two catheters from McKesson COD. The COD stuff injured my vanity. I felt that he might have sent a bill for them. However thanks for ordering them for me. I will ream them out and try them.

I admit that I do not know what I mean when I say that anesthesia is lightened by CO₂, at least in a few cases that I have found. I am with holding that atatement again for awhile..

The title of my paper at the State meeting here next month is " An Analysis of Carbon Dioxide Absorption Anesthesia" Therefore send e any new dope that you have. I must know about the average CO₂ content of the bag. Tell me the average. I thought that I had a paper with Leake before the surgical section but I find that I was mistaken in that. No Matter.

Harding came out here a few months ago and located. He brought Ross with him. I do not know whether I like Harding or not. He was formerly with the university of Iowa, you will remember. He had himself appointed to the Good Samaritan Hospital Staff, I believe on the strength that he could do Endo Tracheal anesthesia. I wanted the job (it was a vacancy created by the death of Trew) but I was too dignified to ask for it. Harding asked and got it. He took his former assistant Ross with him. The first endo-tracheal that he was asked to do, he stated that the surgeon would have to introduce the catheter. The surgeon objected and they did the job under other anesthesia. His chief Dr. Francis then took me to lunch and invited me to join the staff. I expressed my willingness and he promised to mail-me an application. He has not done it and I feel that he will not. However you may expect one of them over to visit you to leanr the

endo tracheal technique. If they come show them. It is my own fault. I have too damned much dignity. The Good Samaritan is our Bon Ton hospital, and the -anesthetic staff does not know anesthesia. I am sure of it for I have talked to Francis. Francis is a friend to McKesson and like McKesson believes that everything can be done with Nitrous Oxide.

The house is going up in good shape and we will be in it by the middle of June. It is a peach and too fine altogether for me to live in. If I do not sell it in a hurry I am sunk.

I am glad Air Way is a good dog. That experiment that we did - you and I in our town - is one of the high lights of my experience and I often live it over again.

I have not seen much of the Shumans recently. I am afraid that they might begin to think that we do not want to see more of them. I have been going to be at about nine oclock each night, because my best supporter here is a casualty surgeon and he works nearly every morning, beginning at 6:45. I cannot afford to miss them even though they do not pay much. He is a peach of a fellow, and I am mighty glad to get his work. Therefore I have been going none at all socially, and the wife is tired at night as your wife will know after a days work with the Kiddies. You should not have spanked John. Retribution is sure as hell.

Good night. I am now going to ream out DeCaux's catheters.

Art.

My children are growing up. Bill now drives the car and ~~is~~ is pledged to a sorority. Father must get down from his dignity and go to work.