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TREATMENT OF PNEUMONIA

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When I was a student I became the proud possessor of a reprint of an article on pneumonia by one of my teachers, Dr. Meara. He divided pneumonias into three classes: 1st, a class of cases that would get well provided you kept them in bed; they got well without any other treatment; 2nd, a class of cases that when you saw them you knew they were doomed to die and your treatment would be without avail; and 3rd, the largest group, to whom good treatment and good nursing were of great importance in deciding the issue.

Today with serum treatment and with chemo-therapy, some of the cases in Class Two, those who seemed doomed to die, make surprising recoveries; but it is in Class Three that we have made our greatest gain. The average case of pneumonia today stands a much better chance of recovery.

Wells in 1907 collected from the literature 465,400 cases of Lobar Pneumonia. The mortality was 20.4%. The average mortality of hospital-treated cases is about 25%. This is due to the fact that physicians are apt to send their more severely ill patients to the hospital. The approximate mortality therefore has

been between 20 and 25% ever since statistics have been kept. In the years, numerous specific cures for pneumonia have been brought forth. At times, mild pneumonia has occurred in certain areas for a year or more, and the treatment then in vogue was thought to be responsible for the low mortality. Another year, a virulent organism has been present in an epidemic; the same treatment has been used and a high mortality has proved that the treatment was not effective.

Serum treatment of pneumonia had been tried since the early 1900s, but it was only about 1931 that it began to appear that the improved serum was definitely life-saving, and it was only in early 1939 that a specific serum for all types became available.

It is remarkable that although, through the ages, no therapy had been found that was effective in pneumonia, just when serum therapy had been proved without a shadow of a doubt remarkably to reduce mortality, a new therapeutic chemical should be discovered which would equal or outdo serum in saving lives in this disease.

It so happens that since January, 1939, I have not used serum in the treatment of any case of pneumonia. In treating pneumonia in 1939, I used sulfapyridine, and in 1940, I used sulfa-

* Paper read at a recent meeting of the Catholic Physicians' Guild, Boston, Mass.

thiazole. I have treated approximately 70 cases with one death. In studying the toxicity of the drugs, however, I have given sulfapyridine to over 100 patients with diseases other than pneumonia, and also have administered sulfathiazole to a like number of patients with various illnesses.

I should therefore like to discuss with you the treatment of pneumonia from my own experience, from a rather extensive study of the literature and also from impressions gained from personal talks with men in various parts of the country who have worked with the drugs.

Most cases of pneumonia are first seen by the man in general practice. From all of the evidence now available it seems certain that sulfapyridine and sulfathiazole have a remarkable effect on pneumonia caused by any of the pneumococcus types. It is my feeling that the time to administer these drugs is on the first visit. To use them most effectively they must be administered quickly and in adequate dosage. This exceeds in importance in my opinion the getting of the patient to the hospital—typing, blood cultures, X-ray, blood counts and everything else.

Don't misunderstand me. All these things have been most important and still are important but the administration of the drug comes first. If you are able to get a blood culture quickly, do so. If you are able to get sputum, by all means have it typed. It may yet be proved that the drugs plus

specific serum may save some lives. Dr. Flippen of Philadelphia and Dr. Volini of Chicago both have a series where the drugs, not having produced a cure in 48 hours, specific serum was given with good results. However, they could not be sure that the same results might have occurred if they had continued the drug and not used the serum. It is obvious that this will be a difficult point to decide.

To use these drugs most effectively there are certain things the physician must know. As far as the use of sulfapyridine in pneumonia is concerned most articles over-stress the toxic effects. In our cases, we found that practically all had nausea and about 80% vomited. Outside of that, mental depression and "a mean, sick feeling" we had no trouble with the drug. Most of our patients had a drop in temperature to normal or near normal in 16 to 24 hours; and in 48 hours, they felt well. However, we gave larger doses than most observers and stopped the drug quicker.

The most important toxic conditions resulting from sulfapyridine are Agranulocytosis, Hemolytic Anemia, and renal complications. These are rare, but they are serious, and therefore deserve special comment.

Agranulocytosis: A study of most of the cases reported show that the drug had been long continued. Usually it has occurred when diseases other than pneumonia—such as Typhoid, or

Streptococcus Viridans cases — were under treatment. It seems to occur at times when the drug has been stopped and then started again because of some complication of the primary disease. You should check the white count, but a hastily taken blood smear taken to the laboratory and stained will show that you have nothing to worry about if you see plenty of polymorphonuclear leucocytes in the smear.

Hemolytic Anemia: I have never seen it in a pneumonia case on sulfapyridine; but I have seen it when I have continued the drug in other conditions. Red blood counts are important, but if you observe your patient carefully each day you will not miss the diagnosis. The patient gets pale very quickly. Stop the drug, and the patient gets well very soon as a rule. If he does not get well quickly, give a transfusion. The condition is easily handled.

Kidney Complications: These are due to crystals in the urine—crystals and finally gross blood—rarely calculus formation. In treating pneumonia cases with sulfapyridine I have seen a few microscopic R.B.C. in urine; but never gross blood. It does occur however and when it does occur, you may even get anuria with nitrogen retention. Stop the drug, give plenty of water, and as a rule the condition is quickly relieved. If you should unfortunately get a case of anuria due to blocking of the ureters with crystals, and the condition does not respond to in-

creased fluid intake, get a urologist to put catheters in the ureters and irrigate with warm water. The chances are that your patient will get well promptly.

Summary of treatment:

1. In the pneumonia season, carry sulfapyridine or sulfathiazole in your bag.
2. When you see a patient with a history of sudden onset of an illness with fever, a chill or chilly sensation, cough, increased respiration with or without pain in the chest, even if the chest examination is entirely negative — immediately give either 4 sulfapyridine or 6 sulfathiazole tablets.
3. If you can get sputum, get it and have it typed.
4. If you can get a blood culture, get it; but do not wait. Give your medication right away.
5. Keep the patient in bed.
6. Keep him on liquids and soft solids.
7. Do not give any other medication unless absolutely necessary. There is no evidence that soda-bicarbonate or other medication helps.
8. Tell the nurse or attendant to put every specimen of urine in a glass and let it stand. Report to you if there is gross blood or crystals.
9. Continue the drug in lesser dosage for about 48 hours after the temperature is normal.

10. Give the patient the amount of fluids he requires for comfort. If you force fluids especially when giving sulfathiazole you may cut down the blood concentration to a point where it will not be effective,
11. Watch the blood; but don't be too disturbed about it. If you get your medication started quickly, you will be through with it before a blood disturbance has time to occur. Any exception in pneumonia cases will be very, very rare.

PIONEERING IN MEDICINE 1930-1940

A Reflection and a Tribute

By PALUEL J. FLAGG, M.D.
NEW YORK

If progress in medicine were limited to the experimental method, to a succession of physically demonstrable facts, we might find difficulty in ascribing motivation for progress from the mainspring of religion.

But may we not look for the effect of religion in the typical habit of mind which flows from the Catholic outlook. Reverend G. D. Bull, S.J., briefly summarized this habit of mind, a quest for unity, a flair for integration, and in an "other-worldly" outlook in which the present is unconsciously measured by the yard-stick of eternity.

It is with the purpose of rendering due tribute to its source that the following is offered in evidence that religion is not infrequently the inspiration of medical progress.

In the fall of 1929 Professor Yandell Henderson of Yale, addressing a meeting of anesthetists in Boston, said, "You men are more than anesthetists, you give gases for the saving of life and the treatment of disease, you are gas therapeutists."

This remark, falling upon a soil inspired by the Catholic quest for unity supported by a naive other-worldliness, resulted in the present movement to prevent asphyxial death, a movement which in the last ten years has made the medical profession "Asphyxia conscious."

Studies in the technique of resuscitation conducted during the late twenties revealed that a common bond of unity formed the twenty or more causes of asphyxia. This bond is "a common treatment," the same in each case,