PNEUMONIA.

THE STUDY OF A SERIES OF CASES WITH SPECIAL REFERENCE TO DIAGNOSIS AND COMPLICATIONS.*

JOSEPH SAILER, M.D.

PHILADELPHIA.

The following is a summary of the result obtained from a study of 65 cases of croupous pneumonia and allied conditions observed in the wards of the Philadelphia Hospital during the past winter. The service at this hospital is peculiar. Many cases of pneumonia are transferred from the out-ward, which, as the Philadelphia Poorhouse, contains a large proportion of seniles. A considerable proportion is also transferred to the medical from the alcoholic wards, cases developing in patients brought in for treatment for delirium tremens. The remaining cases are nearly all obtained from the most indigent classes of Philadelphia. As a result, we find that pneumonia runs a comparatively severe course and complications of a grave form are exceedingly common. The statistical information ordinarily obtained from the cases in the present instance are, therefore, of little importance and may be dismissed briefly. The ages of the patients were as follows:

From 0 to 10 years.....	1 case.
From 10 to 20 years.....	4 cases.
From 20 to 30 years.....	10 cases.
From 30 to 40 years.....	10 cases.
From 40 to 50 years.....	8 cases.
From 50 to 60 years.....	9 cases.
From 60 to 70 years.....	13 cases.
From 70 to 80 years.....	4 cases.

Nearly 40 per cent. of the cases, therefore, were over 60 years of age. The mortality is correspondingly high, 35 cases dying and 30 surviving. It is of interest in this connection to state that, from statistics collected by Dr. Landis, the mortality at Blockley in cases of pneumonia for the past years has been slightly over 50 per cent. The distribution, as determined by physical signs and confirmed wherever possible by autopsy, is as follows:

Left lower lobe alone.....	16
Left upper lobe alone.....	2
Right lower lobe.....	12
Right upper lobe.....	13

In addition, there were 5 cases in which a diagnosis was made of involvement of the right upper and middle lobes. It is probable that these two sets of statistics should be grouped together. The entire left lung was involved in 4 cases, and the entire right lung in 3 cases. In 1 case the entire left lung and the upper and lower lobes of the right lung were completely consolidated, the only pulmonary tissues containing air being the middle lobe on the left side. This patient had, before death, a respiratory rate averaging over 80. Both lower lobes were involved in one case, and the left lower and right middle lobes were involved in another. This also was confirmed by autopsy.

Aside from the case of extreme involvement, the only interesting effect is the unusually large proportion of cases in which the upper lobe was involved. There were certain points to which particular attention was paid in the course of the winter in order to determine some questions at present under discussion. It has been generally asserted that leucocytosis renders the prognosis more favorable. In the cases that recovered there were less than 10,000 leucocytes in 3 cases, between 10,000 and 20,000 in 10 cases, between 20,000 and 30,000 in 5 cases, between 30,000 and 40,000 in 5 cases, between

40,000 and 50,000 in 1 case, and between 50,000 and 60,000 in 2 cases. The classification is always made from the maximum count. Of the cases that died the leucocytes were: Between 10,000 and 20,000 in 11 cases, between 20,000 and 30,000 in 4 cases, between 30,000 and 40,000 in 1 case, and between 40,000 and 50,000 in 1 case. Therefore, although the advantage is slightly in favor of the cases that recovered, it does not appear that any definite conclusions can be drawn from the leucocytic count, and it seems also improbable that any method of treatment which is based merely on the increase in the leucocytes is likely to be of any advantage.

In the majority of the cases the urine was examined quantitatively for the chlorids. They were entirely absent on one or more occasions during the height of the disease in 29 cases. In 23 additional cases they were present in quantities of less than 3 per cent., and in all the remaining cases in which we were certain of the diagnosis of croupous pneumonia they were greatly reduced. This subject is one concerning which there is at present a good deal of dispute. Aufrecht, in Nothnagel's Practice, states that the chlorids are of no prognostic and very little diagnostic value. Musser, in commenting on this, quotes Hutchinson to the effect that the diminution is more constant in pneumonia than in other diseases, and therefore is of some diagnostic value. From a study of our cases we reached the conclusion that the quantity of chlorids in the urine is not an indication of the subsequent course of the disease, as great a proportion of deaths occurring in those cases in which the chlorids were entirely absent as in those in which they were more or less moderately reduced. On the other hand, comparison of the excretion of the chlorids in pneumonia and their excretion in other febrile conditions, particularly typhoid fever and pulmonary tuberculosis, have shown so constantly that in the latter states the reduction is comparatively insignificant, and in pneumonia always considerable, we have come to place the highest value on it in the diagnosis of pneumonia. In one case the absence of chlorids led to a successful diagnosis in pneumonia in which throughout the entire course of the disease there had been none of the physical signs of pneumonia. The diagnosis was only confirmed at autopsy, and in several of the cases we report the diagnosis was suspected from the urinary examination before the physical signs were sufficiently pronounced to have made it possible to diagnose pneumonia by them alone.

The examination of the sputum for the presence of pneumococci could not, unfortunately, be made in all cases. In 16 cases in which it was made they were positive 14 times. In one the signs were somewhat atypical. Tubercle bacilli were found, and at the autopsy a tubercular cavity surrounded by pneumonic areas, which the pathologist regarded as croupous pneumonia, were present. The diagnosis in this case before death was pneumonia complicated by tuberculosis. The leucocytes were 15,600, and the chlorids ranged from 0 to 7 per cent. The other case was not really one of pneumonia. The patient had had pneumonia three months previously, and the physical signs and the odor of the breath pointed to gangrene of the lung, which was confirmed at autopsy. Blood cultures were only attempted in one case, and in that one no satisfactory results were obtained. The clinical and physical signs were, in general, characteristic. A history of chill was obtained in 32 cases. In 19 no history could be obtained, and in 9 cases, usually because the patients when admitted were suffering from alcoholism, no definite history could be ascertained.

*Read at the Fifty-fifth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank Jones and W. S. Thayer.

Of the physical signs, we were chiefly interested in the bronchial breathing. The earlier writers on physical signs in the lungs, followed Skoda in regarding the indeterminate or indefinite respiratory murmur as characteristic of consolidation of the lung. Of late years, however, this appears to have been partially forgotten, and there is even some question as to whether, when consolidation is complete, bronchial breathing is ever absent, although it is admitted by some clinicians that in the very early stages of the disease the respiratory murmur may be feeble or oppressed. We were able to discriminate between two forms of bronchial breathing, to which we gave the name of loud and faint. In both forms the respiratory murmur has the hollow sound and both inspiration and expiration are equally long and loud. The difference, therefore, is one of degree; but the faint bronchial breathing is often barely audible on the most careful and attentive auscultation, and it is very much fainter than the normal breath sounds. This faint bronchial breathing, although occurring more commonly in the early stage of pneumonia, is not by any means limited to the period of congestion. It was frequently observed far into the course of the disease, when the note over the affected lung was absolutely flat, and when both bronchophony and pectoriloquy were distinct. It was noted in 21 of our cases, usually replaced toward the end by loud bronchial breathing, but occasionally persistent. The following case was particularly interesting:

P. R., an Italian laborer, was admitted complaining of malaise, chills, and diarrhea which had lasted for 13 days. The entire right lung was flat from the apex to the base, the bronchial sounds were almost un audible, but of a distinct bronchial character. Vocal resonance and tactile fremitus were diminished; the heart and liver were not displaced; the lungs expanded equally; exploratory puncture made on several occasions failed to show the existence of any fluid. After the patient had been in the hospital five days whispered pectoriloquy appeared, of a most intense character; bronchophony was also present, and in the course of a few days the bronchial breathing became very pronounced. Lysis commenced on the sixth day of the patient's stay in the hospital, and was complete six days later. During lysis numerous moist râles were heard in the lung. In this case the chlorids were 11 per cent., the leucocytes were 7,280; the Widal reaction was repeatedly negative; tubercle bacilli were not found, but the sputum contained great numbers of the pneumococcus.

Of the other physical signs we shall only mention that wooden tympany was only observed in 2 cases, although Aufrecht regards it as fairly frequent. Herpes was observed 4 times, icterus 3 times. Feeble heart action and albuminuria were comparatively common. Profound cyanosis was present in 2 cases; in 1 it was temporarily relieved by venesection, but the patient subsequently died. The other patient was treated with antipneumococcic serum and recovered. Of the symptoms, very severe abdominal pain was present 4 times; it was associated with tenderness in the hypochondrium on the same side as the pneumonia. Two of these cases recovered. On one of the others no autopsy was obtained; the other showed chronic obliterative pleurisy and hydropericardium, so that the symptoms could not be ascribed to diaphragmatic involvement.

The complications were numerous. Chronic nephritis, usually of advanced type, was found in 17 of 25 autopsies. Pleurisy, either chronic or acute, was present in every case. In 2 there was empyema in 1 gangrene of the lung, in 2 acute fibrinous pericarditis, in 1 chronic obliterative pericarditis, in 1 acute ulcerative endocarditis, and in 1 acute pneumococcic meningitis. In this case paralysis of the branches of the third nerve and the pres-

ence of Kernig's sign had been demonstrated before death. One patient, on whom an autopsy was not obtained, developed a flaccid right hemiplegia, with absent reflexes and a positive Babinski, three hours before he died. In 4 cases tubercular lesions were present, twice in the form of acute cavity, once as a healed cavity, and once as general diffuse tuberculosis involving the adrenals and the peritoneum. The remaining cases were treated with another variety of serum.

CASE 1.—J. D., white, aged 47; left upper lobe; six injections were given, each followed by a fall of one or two degrees at intervals of about twelve hours. Crisis occurred on the ninth day.

CASE 2.—A. J., colored, aged 18, left upper lobe and later entire lung and part of right lung; three injections were given on the ninth day, and the temperature fell about one degree. Death occurred on the tenth day. Only the middle lobe was not consolidated.

CASE 3.—S. N., white, aged 45; left upper lobe, deeply cyanosed. Two injections of serum were followed by fall of temperature of 3 and 4 degrees. Crisis occurred on the seventh day.

CASE 4.—C. T., white, aged 60; right upper lobe; 5 injections of serum were given, commencing on the fifth day. The fall of temperature varied from 1 to 2½ degrees. Crisis commenced on the eighth day.

CASE 5.—H. V., white, aged 33; right upper lobe; icterus. Two injections were given, the first followed by a fall of 2½ degrees, the second by a fall of 1 degree. Crisis occurred on the seventh day. Three days later the temperature again rose, became hectic; tubercle bacilli were found, and the patient subsequently died.

CASE 6.—J. M., white, aged 52; right upper lobe. There was a drop of the temperature to normal on the third day for a few hours. On the fourth day the serum injections were commenced and seven were given, the antipyretic effect being observed only on the last two days. Crisis occurred on the ninth day.

Altogether, there were three deaths and seven recoveries. Of the fatal cases, one was distinctly unfavorable, another practically moribund when the serum was employed, and the third died of tubercular infection after apparent recovery from the pneumonia. Of the cases that recovered, 3 may be regarded as severe—one with hyperpyrexia, one with cyanosis, and one with jaundice. Both varieties of serum showed in certain cases a distinct antipyretic action, but in other cases this was not observed. Nevertheless, the general results may be regarded as distinctly encouraging.

Pseudo-crisis occurred in 2 cases; in one of these the temperature fell twice, with marked improvement not only of the symptoms, but also of the physical signs. One case died suddenly of acute pulmonary edema seven days after the crisis.

The treatment consisted of expectant stimulation, with occasional resort to hypodermoclysis. Ten cases were treated with antipneumococcic serum provided by two firms; these cases were in part selected; two were distinctly unfavorable cases, and the others favorable subjects with not more than ordinarily severe infection.

The first case, a boy, was admitted the third day of the disease. In spite of repeated sponging, the temperature rose to 106. On the fourth day serum was injected, and repeated five times on the fifth day and once on the sixth. There was no perceptible effect on the temperature, which remained about 104 to 105. The respirations ranged between 40 and 55. Crisis occurred on the sixth day, and the recovery was uneventful.

The second, a negress of 58, with arteriosclerosis. There was consolidation of the left lower lobe. The

chlorids were absent, the leucocytes 32,800; 20 c.c. of serum were injected every six hours without any perceptible result, and the patient died.

The third, a man of 40, had a mild attack; the serum produced no perceptible effect, and he made an uneventful recovery.

The fourth, a man of 37, was admitted with signs of consolidation at the right base. On the fourth day 100 c.c. of serum were injected in the course of sixteen hours. The temperature, which had ranged between 103 and 104, steadily fell to 100. The supply of serum was exhausted, and eight hours later the temperature rose again to 103, where it remained for twenty-four hours. A new supply was then obtained and 120 c.c. injected in twelve hours. The temperature promptly fell to 99 and remained between 99 and 100 for three days, during which time 300 c.c. of serum were injected. The pulse and respirations also improved. Six days later there was a profuse urticarial eruption, with fever and pain in the joints, the attack lasting eight days.

DISCUSSION

ON PAPERS BY DRs. WELLS AND SAILER.

DR. R. C. CABOT, Boston—Dr. Wells' tables of the cases of pneumonia at the Massachusetts General and Boston City hospitals do not, in my opinion, show any increase in the mortality from this disease during the past twenty years. Before that the cases are too few to warrant any conclusions whatever.

DR. G. F. JENKINS, Keokuk, Iowa—There are one or two etiologic factors regarding which some information might be given. Since 1890 we have had an epidemic of influenza which of itself has not been particularly serious, but as an etiologic factor in croupous pneumonia it is of great importance. Influenza affects the mucous membrane, making it susceptible to secondary infection by the pneumococcus, and that is why it is more prevalent now than it was fifteen or more years ago. Another etiologic factor is the crowding together of people in great cities. This crowding lessens the resisting power and at the same time multiplies greatly the centers of pneumococcus infection. I think these two factors will explain to some extent the great increase in croupous pneumonia. With regard to venesection, I think we should go back and study the question a little bit. I think the proper use of cold water, the proper hygienic surroundings, fresh air, diet and venesection when indicated, is very important.

DR. DELANCEY ROCHESTER, Buffalo—There are one or two points in which I take issue, particularly the treatment of symptoms as symptoms when the possible treatment of the disease as a whole would overcome the symptoms. It would be best to recognize the causes producing the symptoms, and treat them. In cases of toxemia, if you get rid of it you will certainly get rid of the symptoms. I think it is a great mistake to add, in these cases, other poisons in the way of drugs when the patients are already poisoned by the toxins of the disease. I approve of bleeding early in sthenic cases, but I disapprove of the administration of opium in the beginning. I believe in getting rid of the poisons by the proper use of laxatives, particularly calomel and salts, and by one agent which acts on the skin to produce sweating, namely, hot air by means of a scientifically administered hot mustard foot bath: by sweating we can get rid of the poison of pneumonia a great deal better than by the administration of diaphoretic medicines. Last year at the New York State Medical Association I reported 210 cases of pneumonia, with 23 deaths; this included all sorts of cases and gave about 11 per cent. mortality. This is comparatively a very low death rate. To relieve the pulmonary edema occurring late in the disease, as a result of failure of the right heart, I believe that bleeding is of the utmost value; when in pneumonia the right heart becomes greatly dilated, as in the case of a boy of 16 years, whose heart apex was in the axillary line, with consolidation of the right lung, with a liver extending one inch below the border of the ribs, and with pulsation

in the veins of the neck, by withdrawing about 800 c.c. of blood the pulse can be made to fall from 140 to 120, and the temperature several degrees, and the respirations from 56 to 36, and impending death be thus averted, it is a procedure not to be neglected. I think it is a mistake to treat the temperature. If you treat the conditions present, the toxemia and then the special conditions as they arise, you can get good results. The boy referred to recovered after nineteen days' sickness.

DR. ROBERT H. BABCOCK, Chicago—I have been particularly struck by a statement made in the second paper that a patient died from pulmonary edema seven days after the crisis. Pulmonary edema is usually supposed to be due to right heart failure, and the occurrence of the edema seven days after the crisis suggests the possibility of the explanation offered by an Italian experimenter that pulmonary edema is due, not to heart failure, but is a manifestation of pneumococcus infection acting on the pulmonary alveoli. He found in cases examined after death evidences of this, since the pneumococci were demonstrable in the alveolar walls. It certainly seems in this case that the late pulmonary edema might have been a manifestation of a fresh infection by the pneumococcus. If I understood what Dr. Wells stated concerning blood pressure, he insisted that it is low from the start. I believe that if blood pressure is low at the start it is a contraindication to the administration of veratrum viride; in fact, I protest against the use of cardiac depressants when the blood pressure is already low. He stated that the low blood pressure might be an effort on the part of nature to resist infection by setting free leucocytes; that is purely theoretical; but granting the assumption correct, I believe the harm likely to be done by veratrum offsets any benefit due to increased leucocytosis. If the blood pressure is low, and grows lower and lower, then as the danger progresses digitalis is the agent par excellence. We are all influenced by personal experience, but I think it well to cite what Fraenkel from his great experience finds useful. He asserts that the tendency to low blood pressure must be combated, and is offset by the early use of digitalis. The form he employs is a fresh infusion injected hypodermatically. It is his rule to give four grams of the leaves in 100 c.c. of water, and this amount is injected during every twenty-four hours for three days, until twelve grams of the leaves have been injected. He begins the treatment in all cases seen before the third day, excepting those in which there is so much arteriosclerosis as to contraindicate the use of a drug. Fraenkel believes death is the result of toxemia acting on the myocardium, and that, as this danger is enhanced by the low arterial tension, it is absolutely necessary to counteract the tendency to increasing lowness of blood pressure, and personally I believe this is sound reason.

DR. S. SOLIS COHEN, Philadelphia—There are two periods in the clinical history of pneumonia, in one or both of which venesection may, in many cases, be usually employed. First, in the beginning of the attack, to reduce the toxemia. Secondly, toward the end of the attack, to reduce the overload on the right heart. The results obtained in any particular case by venesection, or, indeed, by any other measure, can not, however, be applied to all cases without qualification; the keynote in the treatment of pneumonia, as much as in any disease, is individualization. There are so many factors to be considered—the constitution and habits of the patient, the environment, the preceding or concomitant complications, etc.—that it sometimes becomes a delicate problem to decide what to do in any special case. Whenever the indication for interference is not clear, there should be no interference. However, we may justly draw conclusions from similar features and relations, pathologic and therapeutic, repeated in a great number of cases. I am satisfied that a goodly quantity of blood may be removed from a patient otherwise in good condition (that is to say, not senile nor terminal infection cases, etc., but cases of frank pneumococcus infection) at the inception of the attack, diminishing the amount of toxemia and stimulating the reproduction of healthy blood cells. This is of benefit independently of the mechanical relief to the obstruction of the circulation in the lung. Late in the disease the indication is purely mechanical. When blood is removed under the first

condition it is well to follow with saline infusion into the vein or under the skin—not too much, not too fast; but in the second condition saline infusion is not well given, because it does not seem reasonable to take blood to relieve the heart and then to add the same quantity of another fluid to embarrass the heart as much as before. There is a qualification to this, however, and that is in cases in which the blood is very thick and runs sluggishly from the open vein. Saline infusion will dilute it, and the respective quantities may be adjusted with skill. Temperature in itself, unless excessive or very low, offers no indication for treatment. I have learned to look on cases having temperatures of 103, 104 or even 105 degrees F. as being—other things equal—more favorable than those cases having a temperature of 100 to 101 degrees. The vital reaction is better and the temperature seems to be an indication of this vital reaction. Fenwick's statistics point in this direction, too, and I was recently reminded on looking over my student notes of DaCosta's lectures that he had taught the same thing. The matter is important, because many patients are killed by the by-effects of an'ipyretic drugs, needless under any circumstances. As to *veratrum viride*, it should be remembered that many drugs are used, concerning which it may be said that their physiologic action as laid down in the textbooks seems to have little bearing on their effect as observed at the bedside. I have seen some cases benefited by *veratrum viride*, given early and stopped soon, and I know not why. Certainly the benefit has not been due to depression of the heart. Dr. Babcock has well said that this would be a counter-indication. Perhaps there may be something in the complex chemistry of infections and drugs and body cells and fluids, of toxins and antitoxins, amboceptors and complements, which may hereafter explain its action. For the present it has distinct empirical value used judiciously—that is, before consolidation and for prompt effect; using the pulse as an index, diminishing the dose as the pulse falls, and withdrawing the drug as soon as the pulse reaches 60 or 70 beats in the minute, or otherwise shows that the physiologic effect of *veratrum* has been attained. This, I repeat, is an index only.

DR. EDWARD F. WELLS—In a twenty minutes' paper on pneumonia one can barely indicate a few of the general principles and can not go into a discussion of any of these features systematically. In answer to Dr. Cabot, I stated explicitly that the very first effect of pneumonia on the system was a reduction of the arterial tension; there is no doubt about this. Within a few minutes of the onset of the pneumonic chill this reduction appears. If this is an effort of nature to protect the system from the initial shock of a pneumococcus poison, the question arises whether we should or should not assist nature, and I believe that, early, we should do so. In view of this I have taught that *veratrum viride*, given early in these cases, seems to offer a further protection from the violence of the initial shock. Empirically we know that *veratrum viride* will reduce the frequency of the pulse and this without raising the arterial tension. On the contrary, the capillaries are still further dilated. I most emphatically disagree with Dr. Cohen as to the advantage of high temperature in this disease. One hundred and sixty years ago it was stated by Cleg-horn, who practiced scientific medicine in the island of Minorica, that in pneumonia, in ordinary cases, the temperature in the afternoon reached 102 degrees F. with a favorable prognosis, but in severe cases and with a bad prognosis it reached 104 degrees. This statement applies to pneumonia to-day as it did in the days of this great clinician. I wish to set myself right regarding the use of opium. I do not think any one appreciates more than I the disadvantages and dangers of the improper use of opium in pneumonia; but because it may be improperly used is no reason why it should not be used intelligently, properly and beneficently. I stated that in the beginning of the attack, during the course of the chill, that 1/16 or 1/8 of a grain of morphin, given hyperdermatically, will quiet and soothe the patient and be very beneficial. Also late in the disease, similar small doses of morphin, especially in those dangerous conditions accompanied by profuse perspiration and pulmonary edema, small doses of morphin will stimulate the

heart as nothing else can, and sometimes snatch victory from apparently certain disaster. With regard to blood-letting, from first to last, my only reason is to remove more or less of the toxins and I am quite satisfied that this is the keynote to the situation. Occasionally one may bleed for the relief of an over-distended right heart, but I always desire to anticipate that event if by the exercise of foresight and discretion it is possible to do so.

DR. JOSEPH SAILER—In pneumonia I have invariably found the blood pressure to be low. If very low I regard the prognosis as unfavorable. In another series of cases I hope to employ the anti-pneumococcal serum intravenously, chiefly because certain other serums, particularly the anti-plague serum, seem to be more effective when introduced into the circulation than when introduced beneath the skin.

OLD UNREDUCED DISLOCATIONS.*

DE FOREST WILLARD.

Professor Orthopedic Surgery, University of Pennsylvania; Surgeon Presbyterian Hospital.

PHILADELPHIA.

The term, old unreduced dislocations, is here used to cover cases where the joint surfaces remain luxated for a month or more after the accident. The delay in effecting reduction may have been due either to non-recognition of the condition or to the failure of the original manipulative replacement efforts. The designation "irreducible" is a misnomer, since a joint incapable of reduction by one method may be reducible by another procedure.

DIAGNOSIS.

The chief element in the prevention of this condition lies in immediate diagnosis at a time when reduction is easy; old dislocations exist because of faulty diagnosis. With ordinary anatomic and surgical knowledge, with anesthesia and the Röntgen ray, primary diagnosis is usually a simple matter. Whenever uncertainty exists in regard to an injury near a joint, anesthesia should be the rule, since without its employment the pain and swelling often render accurate diagnosis impossible. Diagnosis once established, the treatment follows as a natural sequence. If manipulative efforts fail, operative measures should be at once instituted. The greatest difficulty will, of course, be encountered in dislocations associated with neighboring fractures, especially in the shoulder region, while the cases most likely to be overlooked are those complicated by severe injuries of other portions of the body.

In old dislocations of the shoulder, the body should be stripped to the waist and examined sitting and standing. In fracture of the head of the humerus, or of the neck of the scapula, or a separation of an epiphysis, the elbow can be brought easily to the side of the body, and mobility is the rule instead of fixation. In all old hip luxations the patient should be naked and examined in both the recumbent and standing posture. By this method many errors will be avoided. By comparison with its fellow, the loss of normal movements, difference in contour, altered relation of bones and restricted motion will be noted.

Pathologic dislocations from hip disease, congenital dislocations, coxa vara, and sliding up of the trochanter after fracture of the neck, should be carefully differentiated. Not infrequently I have been obliged in consultation to restrain attempts at reduction in cases both

* Read at the Fifty-fifth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. DeForest Willard, Charles A. Powers and J. E. Moore.