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Circular Letters

Scrubbing the Pleura in the Treatment of Chronic and Recurrent Spontaneous Pneumothorax

During the past 10 years, 38 cases of nontuberculous spontaneous pneumothorax have been admitted to the Rhode Island Hospital and the 3 deaths which occurred in this series can be attributed to lack of proper treatment.

Fortunately, most cases of spontaneous pneumothorax require little in the way of therapy. The lung expands in a relatively short time without recurrence of collapse or other undesirable sequelae. Those cases, however, in which the lung fails to expand or in which collapse continues to recur over a varying period of time present a real problem.

Recent reports in the literature indicate that there is now a greater appreciation for open surgical treatment in chronic and recurring pneumothorax. The operation, which consists merely in opening the thorax and dealing with the lung surface, is a comparatively minor procedure and should carry with it no mortality. Recent comprehensive reports make no mention of employing a method which insures the formation of adhesions between the visceral and parietal pleura in order to avoid recurrence of the condition. Regardless of etiology, this should be the fundamental aim of any method of treatment. The resection of a bleb where a leak has occurred is no insurance against recurrence. Blebs are frequently present in various parts of the lung surface, and, in many instances, in great numbers. Each is a potential hazard, yet excision and closure of a large number of small blebs is impracticable, and, if carried out, does not in itself prevent recurrence.

In their cases the authors have employed, in addition to resection of blebs when they are of significant size, decortication of the lung surface and they have made it a point to scrub the entire visceral and parietal pleura with rough gauze in order to create an inflammatory reaction on all its surfaces. This has resulted in the early formation of a serosanguineous exudate, following which, early aspiration is carried out to allow the visceral and parietal pleura to become approximated with the formation of firm adhesions. In certain instances, catheter suction may seem to be desirable, especially where prolonged collapse has resulted in a diminished lung volume. Either method should ensure success, although in the latter infection is more prone to occur. (Surgery, Dec. 1951, J. M. Beardsley & V. M. Pahigian)

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Inhalation of Ethyl Alcohol for Pulmonary Edema

The purpose of this paper is to report the addition of ethyl-alcohol inhalation to the therapeutic regimen for pulmonary edema in man and to describe the solution of certain technical problems in the administration of this drug.

The conventional management of paroxysmal pulmonary edema has aimed at three goals: depression with morphine or other sedative drugs of the nerve

centers involved in the reflex effects on lung capillaries; reduction of blood volume in the pulmonary circulation by upright posture, tourniquets, phlebotomy and positive-pressure respiration; and treatment of the basic cause of the pulmonary edema, as for example, digitalis for the failing heart, measures directed to the reduction of elevated intracranial pressure, removal of inhalants irritant to the bronchial mucosa and so forth.

Depending on the basic disturbance leading to the pulmonary edema, some of these measures are beneficial, others are contraindicated. Positive pressure may not be tolerated when there is already a positive intrapleural pressure. Morphine is dangerous when the pulmonary edema develops as a result of high intracranial pressure. In patients with myocardial infarction it is sometimes very difficult to balance between pulmonary edema on the one hand and shock on the other. Reduction of venous return is beneficial in the former and may prove fatal in the latter.

The common denominator in all cases of pulmonary edema is the transudation of blood elements through altered alveolar capillary walls into the air spaces of the lung and the whipping of this fluid into froth by respiratory activity. Not only do these bubbles of froth interfere materially with diffusion of inspired oxygen but the volume of transudate is greatly increased by its conversion into foam. More and more of the bronchoalveolar system is occluded, gaseous exchange is impeded and the patient dies of asphyxia.

Ethyl-alcohol inhalation has been shown to be effective against epinephrine-induced pulmonary edema in the rabbit. This effectiveness is presumably due to alteration of the surface tension at the fluid-air interface, producing collapse of the foam bubbles, and to the volatility of the alcohol, which permits penetration into the finer air spaces.

The technical difficulty in administering alcohol by inhalation arose from the need to combine the alcohol with oxygen under pressure. Meter-mask equipment is not easily adaptable to inhalation of alcohol. Available humidifiers through which alcohol may be administered were found inadequate for delivery of sufficient oxygen under pressure. When oxygen is bubbled through fluid in a humidifier, so much resistance develops that although the gauge on the tank's reducing valve may indicate 13 to 15 liters per minute the actual volume of oxygen delivered may be less than 4 liters per minute. To obviate this difficulty, the authors tried at first to use 2 oxygen tanks. The oxygen from one tank ran through a humidifier containing the alcohol, and thence to a Y tube attached to the meter mask; oxygen from the other tank flowed without any intervening resistance to the other arm of the Y tube. In this way the oxygen-alcohol mixture was delivered at more suitable pressure. Although results were satisfactory, this setup was cumbersome.

Their present equipment comprises a single tank from which oxygen is passed through a simple vaporizer. This latter is an 8-ounce bottle, half filled with 50 % ethyl alcohol, with a rubber stopper that holds 2 large-bore metal tubes. One of these tubes reaches to the bottom of the bottle and delivers oxygen,

which bubbles through the alcohol; the other tube is above the fluid level and carries the alcohol-laden oxygen to the meter mask. All sprayers and filters are removed so that loss of pressure is minimized. This equipment can be easily and inexpensively improvised wherever oxygen therapy is practiced.

Paroxysmal pulmonary edema may develop in the course of a wide variety of clinical situations. Many of these are reversible, and the patient may recover if he can be tided over the acute threat of asphyxia. The final outcome depends, of course, on the nature of the underlying disturbance. Two cases presented by the authors offer evidence that the addition of ethyl-alcohol inhalation favorably modified pulmonary edema that had previously resisted all other treatment. Moreover, the mechanism of improvement in man is the same as in the experimental animal, namely, the elimination of the froth in the bronchoalveolar spaces with resulting improvement in conditions for gaseous exchange. They have observed similar favorable effects of alcohol inhalation in other patients with pulmonary edema in whom the effects of this measure alone could not be clearly separated from the effects of other therapy.

It has been demonstrated that in normal males inhalation of alcohol does not raise the alcohol concentration in the blood to a significant level. The rate of metabolic conversion apparently keeps pace with the rate of absorption. On the other hand, at feasible rates of intravenous administration alcohol does not reach the lung alveoli in sufficient concentration for effective antifoaming action. In the authors' patients no adverse systemic effects of alcohol have been noted. (New England J. Med., 29 Nov. 1951, A. Gootnick, H. I. Lipson & J. Turbin)

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The Coexistence of Rheumatic and Arteriosclerotic Heart Disease in Patients Over the Age of 40 Years

The combination of rheumatic and arteriosclerotic heart disease is not frequently encountered in hospital admissions. The reason is self-evident; rheumatic heart disease is an affliction of the young, and the vast majority fail to survive the age of 45 years.

The present study was undertaken to ascertain the place of arteriosclerosis in patients with rheumatic heart disease above the age of 40 years. The conclusions are based on 66 deceased patients with post-mortem proof of rheumatic heart disease, in whom a correlation is made between the rheumatic heart disease and the history, course, and post-mortem evidence of arteriosclerotic heart disease.

Atherosclerosis of the coronary arteries was found in approximately 40 % of the whole group, and among those with atherosclerosis, one-half presented significant narrowing of the coronary vessels. A clinical diagnosis of coronary disease was made in 18 of the 66 cases (approximately 30 %), but in most of these 18 cases (80 %) the diagnosis of concomitant rheumatic heart disease was not even suspected clinically.

The dual etiology (rheumatic and arteriosclerotic) was considered in the clinical diagnosis of 5 patients. In all these the post-mortem findings failed to substantiate the diagnosis of coronary disease.

The present study points to the fact that, in the age group of 40 years or over, arteriosclerotic heart disease is fairly common in those with rheumatic heart disease and that there is little justification for the apparent reluctance to make the dual clinical diagnosis. (Am. Heart J., December 1951, J. Chasnoff & A. Silver)

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The Finnish Trambusti Tuberculin Test

The efficiency of the little-known tuberculin test used in Finland, a modification of Trambusti's procedure, is discussed in relation to the more widely known intradermal Mantoux test.

Although the procedure for giving this particular type of tuberculin test has undergone various modifications during its 24-year history, the basic principle of puncturing the skin with a needle through a drop of tuberculin has remained unchanged. First described by Chester Stewart in 1928, it was modified that year by Bruno Trambusti in that a large caliber injection needle was used in place of an ordinary sewing needle. Subsequent minor changes have been proposed. In Finland it has been used extensively during recent years in the nation-wide tuberculosis-control program.

In order to relate the results of the Finnish mass BCG campaign with findings in similar mass-examination programs in many other countries throughout the world, a comparison of the Finnish Trambusti test with the more generally used Mantoux was carried out in November 1950 among 1,543 Finnish school children through the cooperation of the Finnish National Anti-Tuberculosis Association and the Tuberculosis Research Office of the World Health Organization.

The present technic for giving the Finnish Trambusti test has been in official use since 1946. The radial aspect of the forearm, about 5 cm. distal to the antebrachial fossa, is cleansed with ether before application of a drop of Old Tuberculin. A No. 12 steel injection needle (Standard S-B Brand), after being heated in a flame, is wiped with an ether sponge, attached to an empty 5-cc. syringe and inserted into the intradermal tissue tangentially, bevel upward, through the tuberculin. When the entire opening of the needle is within the skin, the needle is twisted several times, raised perpendicular to the forearm, lowered and withdrawn. The children are asked not to wipe off the tuberculin for at least 5 minutes. A small amount of bleeding occurs infrequently.

Mantoux tests were given intradermally in the mid-dorsal aspect of the right forearm, injecting 10 TU of PPD in 0.1 cc. of diluent with a No. 25 platinum needle. The Finnish tests in the left arm were given and read by an

experienced Finnish nurse; Mantoux tests, in the other arm, were given and read by an experienced Danish nurse who also read the Finnish Trambusti reactions.

A substantial proportion of Finnish Trambusti reactions centered around 5 mm. of induration in the transverse diameter with almost none exceeding 15 mm.; over one-third of the Mantoux reactions were larger than 15 mm. with a peak in the distribution at 20 mm. Bullae, lymphangitis or surrounding edema were seen in 10.7 % of the Mantoux and 1.0 % of the Finnish reactions.

Sixty percent of the children had positive Finnish Trambusti reactions according to the interpretation made by the Finnish nurse, whereas 70 % were positive by the Mantoux test if the usual 6 or more mm. of induration is considered positive. Disagreement between the two tests in persons called positive is 18 %; 203 out of 1,110 persons were positive by one test but negative by the other.

Less disagreement between the two tests is found when Finnish Trambusti reactions of 3 or more mm., read by the Finnish nurse and Mantoux reactions of 10 or more mm., Danish reading, are considered positive. By these criteria, 85 % of the persons considered positive by either test is positive by both tests - a disagreement of 15 % for persons called positive. With the Danish nurse's reading of Finnish Trambusti reactions, however, the best correspondence is obtained with the usual criterion for positive Mantoux reactions of 6 or more mm. of induration and 3 or more mm. for Finnish reactions.

The Finnish Trambusti test, a one-test procedure given easily, quickly, and painlessly with a minimum of unpleasantly large reactions has certain advantages over the Mantoux 10 TU test for mass examinations in that it may obviate the need for graded doses of tuberculin and is performed with very simple supplies and equipment.

The important disadvantage of the Finnish Trambusti test, as with the Pirquet, is the difficult problem of discriminating between positive and negative in the large number of reactions that measure 2 or 3 mm. Nearly 20 % of the cases, in contrast to 4 % with the Mantoux, must be distinguished by a difference of 1 mm. of induration which necessarily involves considerable uncertainty due to experimental error. (Pub. Health Rep., 7 Dec. 1951, P. Q. Edwards & S. Savonen)

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An Epidemic of Paralytic Poliomyelitis Characterized by Dual Infections with Poliomyelitis and Coxsackie Viruses

Coxsackie viruses have been isolated from patients with a variety of illnesses and at times have been particularly associated with poliomyelitis, aseptic meningitis, epidemic myalgia or pleurodynia (Bornholm disease), and herpangina. In certain instances, patients with paralytic or non-paralytic poliomyelitis have been found to be harboring in their intestinal tract both poliomyelitis and

Coxsackie viruses.

This paper presents a study of the first epidemic of poliomyelitis which appeared in Easton, Pennsylvania, during the summer of 1949. It was characterized by the high ratio of paralytic to non-paralytic cases, by the high proportion of fatal cases, and by the isolation of both poliomyelitic and C viruses from more than half of the patients studied. One month later C virus was only occasionally recovered. Twenty-eight strains of C virus were isolated and were classified according to antigenic type. This classification revealed that 24 belonged to one antigenic type, Easton-2 (related to Albany type 1 virus)

Patients from whom C virus was isolated showed a rise during convalescence to the Easton-2 or homologous type antibody. Two patients with paralytic poliomyelitis were studied for the quantitative development of antibodies to the poliomyelitis virus and to the C virus found in their stools. Using the neutralization test in monkeys and in newborn mice, respectively, a simultaneous rise in antibodies to both agents was observed.

The situation at present can be summarized as follows: Poliomyelitis virus or C virus may produce infection in man, with a specific antibody response. Both agents may be carried, particularly in the intestines, without causing any serious illness and healthy carrier states have been observed for each. Both viruses can be found in nature in flies and in sewage. However there has been no evidence to suggest that these two viruses bear a relationship to each other, even when isolated from the same patient. Thus, when both viruses are found in a patient with paralysis, it is not yet possible to say with any degree of accuracy to what extent each is responsible in the over-all pattern of the disease. How frequently dual infections of this nature may occur remains for future investigations to determine. While all cases of poliomyelitis are not complicated by a superimposed infection with a C virus, this will have to be one more item to consider in epidemic poliomyelitis. (J. Exp. Med., Dec. 1, 1951, J. L. Melnick, A. S. Kaplan, E. Zabin, G. Contreras & N. W. Larkum)

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Purpura Due to Food Sensitivity

Purpuras of both the thrombocytopenic and nonthrombocytopenic types have been reported to be of an allergic nature. As etiologic factors foods, drugs, inhalant allergens and infections have been suspected. Often there is no evidence of an allergic nature or the specific allergens are difficult to recognize.

At present there are four procedures which may aid in detecting the specific etiology of an allergic purpura: clinical history, skin tests, elimination of suspected allergens and clinical trials. Other diagnostic methods have not been generally adopted. Of the diagnostic procedures available to the clinician in his attempt to elicit the cause of an allergic purpura, the clinical history is probably the most valuable and in many cases leads to the discovery of the

specific noxious substances. The skin tests have been found to be of less practical value when applied to the study of purpuras. Positive skin reactions of clinical value are not common if skin testing with ordinary extracts is done by the scratch or intracutaneous methods. The patch test method was used by Falconer and Schumacher in 1940 to verify the etiologic diagnosis in a patient with thrombocytopenic purpura due to sensitivity to Sedormid, with negative results.

More recently, however, Donaldson and Scarborough, and Ackroyd, have applied the patch test technic in purpuras due to sensitivity to drugs, with better results.

A third procedure, the elimination of suspected foods or drugs or the use of extensive elimination diets, has, in many cases, provided diagnostic clues. The final proof that a suspected allergen is the real offender can only be obtained by the fulfillment of Cooke's postulates: the clinical manifestations should disappear after removal of the suspicious allergen and should be reproduced at will after proper exposure to it. The "provocative method of testing" is based on this concept. With its use one endeavors to reproduce the clinical symptomatology on a small scale by the controlled administration of small doses of the suspected allergen.

The authors studied and followed a patient who exhibited a nonthrombocytopenic purpura due to sensitivity to crustaceans. The skin tests performed with foods in this individual showed some peculiarities which they report. It appears that the food testing materials containing crustaceans can be employed in a manner different from the usual skin testing routine used in the past.

Raw, frozen, boiled, or autoclaved crab meat induced positive reactions by the scratch method, although the usual commercial crab extracts prepared by several reputable firms failed to give positive reactions by the scratch or even by the intradermal method. All the crab materials, i.e., raw, raw frozen, boiled, autoclaved, and powdered or glycerinated commercial extracts had in common the property of eliciting positive skin reactions to patch tests. This would appear to indicate the existence of two antigenic fractions in crab meat: one fraction present in the fresh raw, raw frozen, boiled, or autoclaved meat is apparently thermostabile and is absent in the commercial extracts. However, since the results of the patch tests were all positive even when commercial extract was used, it is suggested that all these testing materials contain a second antigenic fraction which, although unable to provoke positive reactions by scratch tests in the patient, elicited the positive reactions in the patch tests. This second antigenic fraction also appears to be thermostabile, but unlike the first fraction, it does not lose its potency through the various steps of extraction, filtration and drying encountered in the manufacture of the commercial extracts. Moreover, this fraction in powder form as well as in glycerinated solution maintains its activity for years at room temperature. (J. Allergy, Nov. 1951, G. R. Ancona, M. J. Ellenhorn & E. H. Falconer)

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"Idiopathic" Thrombocytopenia

On the basis of an analysis of 89 consecutive cases of "idiopathic thrombocytopenic purpura," the following conclusions appear justified:

1. The condition generally known as idiopathic thrombocytopenic purpura comprises two broad clinical entities, i.e., acute, self-limited thrombocytopenia and chronic idiopathic thrombocytopenia. In the former, spontaneous recovery is the rule and usually occurs within 4 months from the onset of the disease. In the latter, while clinical remissions are also the rule, thrombocytopenia persists and exacerbations are common.

2. The two types differ in their modes of onset, the presence or absence of etiological factors, the occurrence of eosinophilia and lymphocytosis, incidence of splenomegaly and familial tendency. On the basis of these features it is usually possible to distinguish between the two entities.

3. The diagnosis of thrombocytopenia, particularly of the chronic idiopathic type, must be considered whenever excessive bleeding is present, even in the absence of petechiae or purpura.

4. In evaluating therapy, it is necessary to differentiate clearly between acute (self-limited) thrombocytopenia and the chronic disease. In acute thrombocytopenia the evaluation of any form of therapy, including splenectomy, is frequently impossible because of the self-limited nature of the disease. In chronic idiopathic thrombocytopenia, because spontaneous clinical remissions are frequent and often of many years' duration, and because of the spontaneous fluctuations in thrombocyte count, therapy can be said to be successful only if it achieves a rise in the thrombocyte count to normal over a significant time. Splenectomy may be considered curative only if the thrombocyte count is still normal for at least 4 to 6 months after operation.

5. Supportive measures, particularly the transfusion of fresh blood, and splenectomy, are the most important therapeutic measures available at present. Although the decision for or against splenectomy is still a difficult one in an individual case during an attack of acute purpura, the authors' data suggest that it may be best to treat such episodes by supportive measures and to perform splenectomy only after frank purpura has subsided. On the other hand, local bleeding from mucous membranes, even though severe, often responds dramatically to splenectomy and, if unaccompanied with purpura, should not be considered a contraindication to the operation.

6. Splenectomy results in the cure of about two-thirds of patients with chronic idiopathic thrombocytopenia. Because of the low mortality of this operation when patients are free of purpura (none in the authors' series, exclusive of the thrombocytopathic type) and the possibility of future hemorrhagic crises, splenectomy should be done in all patients with chronic idiopathic thrombocytopenia as soon as the diagnosis is established and the patient is free of purpura. Splenectomy is probably of no value in thrombocytopathic thrombocytopenia. Insufficient data are available to indicate the possible value of splenectomy in modifying the course of acute thrombocytopenia. (A. M. A. Arch. Int. Med., Dec. 1951, E. O. Hirsch & W. Dameshek)

The Value of Electromyography in Neurology and Neurosurgery

The electromyograph, utilizing a monopolar needle electrode, cathode ray oscilloscope, sensitive sound amplifier and a magnetic tape recorder is a diagnostic instrument with a high degree of accuracy in diagnosing certain diseases of the neuromuscular system.

In diseases of the spinal cord affecting the anterior horn cells, the EMG offers early diagnostic and prognostic information that often cannot be obtained by any other means. Diseases of the anterior horn cells can be accurately separated from those affecting the skeletal musculature alone.

The differential diagnosis between certain spinal cord tumors (i.e. high cervical) and degenerative spinal cord disease is often established by electromyography. Specific spinal nerve root involvement can be diagnosed accurately and differentiated from plexus or peripheral nerve lesions.

In peripheral nerve lesions the EMG is of great value in determining (1) the presence of complete or partial interruption; (2) the earliest possible evidences of reinnervation following nerve suture; (3) the shortest period of delay before re-exploration can be carried out if no evidences of reinnervation have occurred.

Medicolegally, the EMG is of great importance because the finding of denervation fibrillation voltages is indisputable objective evidence of the presence of lower motor neuron disease. The accuracy of electromyography depends on (1) knowledge of neuromyology; (2) proper technics of examination and (3) recognition of fundamental sources of error.

The improved clinical electromyograph is opening up new investigative fields in the physiology and pathology of the nervous and muscular systems. (J. Neurosurg., Nov. 1951, W. W. Woods & P. A. Shea)

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The Isolation of Pathogens From Tissues of Embalmed Human Bodies

The studies of bacterial content of tissues reported thus far have dealt with surgically removed specimens, and have emphasized the importance of thorough bacteriologic examination as a supplement to the histopathologic procedure in order to arrive at an accurate etiologic diagnosis. Tissues removed at necropsy likewise should be studied by bacteriologic procedures to supplement the histopathologic examination.

Not infrequently, however, necropsy is unavoidably delayed for several hours, and it becomes desirable and even necessary to embalm the body in the interim. During the course of examination of such embalmed bodies, unexpected lesions may be encountered which, in the unembalmed state, would be subjected to extensive bacteriologic studies. However, it appears to be a generally accepted opinion among pathologists that microorganisms in the tissues are rapidly

killed by embalming, and that bacteriologic studies in such cases therefore would not yield results.

During the past 6 years the authors have found it desirable to make bacteriologic studies of tissues from such embalmed bodies. They have found that in many cases organisms which, from a clinical and histopathologic point of view, appeared to be the etiologic agent could be isolated without difficulty and in pure culture from such tissues. From the various tissues and body fluids they frequently isolated such commonly encountered organisms as Escherichia coli, Klebsiella pneumoniae, Micrococcus pyogenes, various species of Streptococcus, Pseudomonas aeruginosa, Proteus vulgaris and Hemophilus influenzae. In addition, they have isolated certain pathogens which are of more than casual importance to the pathologist; namely Nocardia asteroides (2 cases), Histoplasma capsulatum (1 case) and Mycobacterium tuberculosis (22 cases).

Arterial embalming, as commonly practiced, does not sterilize within 24 to 48 hours the tissues which are the sites of infection. Consequently, tissues from an area of infection in a cadaver may serve as a source of contagion to those who handle such tissues, even though the body has been embalmed for as long as 24 to 48 hours. Embalming does not protect the pathologist against infectious agents in the deceased patients at necropsy. Tubercle bacilli were isolated from many bodies which had been embalmed for 24 hours or more. In 1 case the body had been embalmed 60 hours before the tissue was emulsified for the making of cultures. The lesions from which the organisms were isolated were not surrounded with a fibrotic wall, but were well-vascularized areas which, on a histologic basis, would appear to permit rapid penetration of the embalming fluid. It is suggested that such materials may be the source of tuberculosis or other infection for pathologists and others who have contact with cadavers. (Am. J. Clin. Path., Dec. 1951, L. A. Weed & A. H. Baggenstoss)

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Genital Tuberculosis in the Male: A Concept of Its Pathogenesis and Treatment

The purposes of this paper are threefold: to review critically the data presented by pathologists and urologists on the pathogenesis of genital tuberculosis in the male; to outline the forms of treatment dictated by the conclusions drawn from such a review, and to present the results of this treatment in 10 patients studied since 1940.

Interest in the subject was aroused late in 1939 by a review of 15 cases of urogenital tuberculosis observed on the urology service of Freedmen's Hospital (Washington, D. C.) over a period of 8 months. Among these were 9 cases of genital tuberculosis, most of which had clinical evidence of active extragenital disease, but 3 were patients 25, 28 and 31 years of age who complained of unilateral tuberculous epididymitis without clinically demonstrable tuberculosis

elsewhere, except for an ischiorectal abscess in the oldest patient. The desire for the most effective rehabilitation of these patients led to a careful review of the data and opinions available in 1940.

The evidence did not appear to support the belief that, in the absence of clinically demonstrable renal tuberculosis, genital tuberculosis in the male is due to a hematogenous implantation, usually in the epididymis. The evidence did appear to support the premise that the infection results from subclinical renal tuberculosis, with involvement of the genital tract beginning in the prostate and seminal vesicles with secondary spread by way of the vasa to the epididymis.

This premise rendered untenable any form of surgical treatment of tuberculous epididymitis which did not take into account the parent lesions in the prostate and seminal vesicles. Accordingly, conservative forms of surgical treatment were abandoned in favor of radical measures for patients with tuberculosis limited to the genital organs or with tuberculosis of other organs under control. This form of treatment has as its object the removal of the obvious disease in either epididymis, as well as the less obvious disease in the corresponding vas, both seminal vesicles and prostate, and the ligation of the vas on the nondiseased side in unilateral cases.

The experience with this form of treatment in 10 patients over a period of nearly 11 years has been reviewed. The results warrant the belief that the premise adopted in 1940 was sound and the form of treatment evolved was justified. (J. Urol., Dec. 1951, R. F. Jones)

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Transorbital Lobotomy in Chronically Disturbed Patients

The problem of the chronically disturbed patient in a large institution such as the New Jersey State Hospital at Trenton is aggravated by the accumulation of the criminally psychotic from the entire state, as well as by the transfer of highly disturbed patients from other state institutions. Overcrowding and inadequate staffing help make it not only a psychiatric problem but also one of economics.

In November 1949, the first transorbital lobotomy was performed in that hospital on the most difficult patient to manage in the entire institution. The immediate results were so remarkable that a plan was begun in January 1950 with a twofold purpose: (1) the improvement of the chronically disturbed patient and, as a result, the alleviation of crowding and the need for more staff personnel; (2) comparison of the results of transorbital lobotomy with those of prefrontal lobotomy. Within 3 months it became quite evident that the transorbital method has the following advantages over the prefrontal type: It is a far simpler procedure thus allowing many more to be done, with less morbidity, lower mortality, less pre- and postoperative care and much better results. The last factor, of course, is of paramount importance. There were no apparent disadvantages.

The prefrontal lobotomies were therefore discontinued.

The results in the first 200 cases operated on by the transorbital route are reported. Each patient has been followed for at least 6 months, many for more than a year. As the problem was the care and treatment of the chronically disturbed patient, the criteria for selection of patients for operation were how sick is the patient and how much previous treatment has been given without response? All of the patients had had at least one and usually most of the various therapies generally given for this type of patient - electroconvulsive, insulin, fever, histamine, psychotherapy, occupational therapy and recreational therapy, as well as others used less frequently. These patients were all difficult care problems, considered hopeless, and most had been kept in seclusion for varying lengths of time to 20 years. Average duration of illness was 11.7 years. The authors began with the criminally psychotic.

The cases were almost evenly divided between the sexes, but the white patients greatly outnumbered the colored. These figures are generally in accord with the hospital population.

The relatively simple procedure performed on these 200 patients enabled 26 to leave the hospital, improved 90 so that they are useful in their environment, and caused a fair hospital recovery in another 22 patients. A great conservation of hospital personnel was brought about by the general improvement of the group as a whole. In round figures seven-tenths of the patients require much less supervision, whereas only three-tenths show little or no improvement and, therefore, require the same amount of care. It can be stated with emphasis that no case has become more difficult to manage following operation. However, the authors do not advise indiscriminate operation before other types of therapy are used, but feel that with failure of other treatments, after a reasonable length of time, transorbital lobotomy is indicated.

The 3 operative deaths reported do mean that a certain risk is involved. (See Medical News Letter, Vol. 16, no. 10). With more rigid physical criteria, it is believed that 2 of these deaths could have been avoided, but denying the operation to other patients of similar physical status would have excluded some of the cases who have made good recoveries. In the authors' opinion, a mortality rate of 1.5% is not great and a higher one could have been endured considering the ends gained.

It is recommended that following the operation the patient not be returned to seclusion if he is to get the maximum response.

The authors believe, but can offer no figures in support, that transorbital lobotomy renders the patient more amendable to electroconvulsive therapy. They give this treatment to all those in whom the response to transorbital lobotomy is considered unsatisfactory after 3 months. Failing any improvement on shock therapy a second transorbital lobotomy is performed. (Am. J. Psychiat., Dec. 1951, W. W. Wilson, A. R. Pittman, R. E. Bennett & R. S. Garber)

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Revised SHIGELLA Classification and Serologic Identification

A series of shipboard epidemics of bacillary dysentery that have occurred during the past twelve months have demonstrated the continued presence of factors that could bring about repetitions of the disastrous outbreaks of this disease which occurred in Leyte Gulf, Tokyo Bay and elsewhere. A brief review of the situation was given in the Medical News Letter for 15 June 1951, Volume 17, Number 12, which provided certain essential information for guidance of medical officers. Official revisions relative to classification of the Shigella group and serologic identification of the organisms are now presented in order that those concerned may be informed of recent developments.

Classification and nomenclature of the genus Shigella were modified early in 1951 by the Shigella Commission of the Enterobacteriaceae Subcommittee of the International Association of Microbiologists. An abbreviated listing of the serologic types of the group with revised and previous nomenclature is given below.

	Nomenclature	
	Previous Type	Current Type
Group A (dysenteriae)	S. dysenteriae	S. Dysenteriae 1
	S. ambigua	S. " 2
	Sach's Q 77[1]	S. " 3
	Sach's Q 1167	S. " 4
	Sach's Q 1030	S. " 5
	Sach's Q 454	S. " 6
	Sach's Q 902	S. " 7
Group B (Flexneri)	S. flexneri I	S. flexneri 1a
	S. " II	S. " 2a
	S. " III	S. " 3
	S. " IV (Boyd 103)	S. " 4a
	S. rabaulensis	S. " 4c
	S. flexneri V (Boyd P 119)	S. " 5
	S. " VI (Boyd 88)	S. " 6
	S. " VII	Variant "X"
	S. " VIII	Variant "Y"

Group C (Boydii)	S. flexneri IX (Boyd 170)	S. boydii 1
	S. " X (Boyd P 288)	S. " 2
	S. " XI (Boyd D 1)	S. " 3
	S. " XIV (Boyd P 274)	S. " 4
	S. " XIII (Boyd P 143)	S. " 5
	S. " XII (Boyd D 19)	S. " 6
	S. etousae (Lavington strain)	S. " 7
Group D (sonnei)	S. sonnei	S. sonnei

It may be noted S. alkalescens is not given type status in the above list; organisms of this species, together with those previously designated as S. dispar (S. ceylonensis and S. madampensis) have been excluded from the genus Shigella and are currently classed together as the Alkalescens-Dispar (A-D) group and are considered to be aberrant coliforms.

Discontinuation of the commercial manufacture of monovalent serums for the typing of Shigella strains has rendered it necessary to make these items non-available for general distribution. New preparations of Shigella Grouping Serums are available, however, as Navy items upon requisition to the Naval Medical Supply Depots at Oakland, California and Edgewater, New Jersey. Stock numbers for these items are: Group A, Shigella dysenteriae, No. 1-608-670; Group B, Shigella flexneri, No. 1-608-675; Group C, Shigella boydii, No. 1-608-680; Group D, Shigella sonnei, No. 1-608-685; and, Group E, Alkalescens-Dispar Group, No. 1-608-665. Specific, monovalent serums for the serologic type identification of organisms tentatively classed as Shigella by use of the grouping serums are restricted to use by the Central Coordinating Agency on Diarrheal Diseases in the Navy. Representative strains of such organisms isolated aboard ship or by other field activities should be forwarded to the Naval Medical Research Institute in accordance with the Medical News Letter item mentioned above and Bureau of Medicine and Surgery Circular Letter 47-62. Data relative to cultures submitted, as requested in the two references above, are required in studies directed toward better prevention and control of bacillary dysentery. It is intended that reports of Shigella type identification shall adhere to the new, official nomenclature listed above. (Central Coordinating Agency on Diarrheal Diseases in Navy, NMRI & Prev. Med. Div., BuMed)

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Retrograde Milking; An Adjunct in Technic of Embolectomy

In a previous article reporting a successful case of saddle embolus of the aorta treated by embolectomy it was stated, "It seems reasonable to suppose

that clots in the smaller vessels and portions of the main clot in the larger vessels might be 'milked' proximally to the site of embolectomy by wrapping the leg firmly from the toes upward with a wide Para rubber bandage." In a recent successful femoral embolectomy it is believed that the outcome was largely due to recovery of additional clot by this maneuver after the main clot and its tail thrombus had been extracted.

The success of embolectomy depends upon early and adequate operation more than any other factor. In discussion of postembolic vascular changes, Linton states that the spasm distal to the main embolus interferes with circulation in the branches and collateral vessels and the resulting stasis sets the stage for further thrombosis. At first the tail thrombus and its branches do not completely fill the vascular lumen. It is surrounded by a film of liquid blood and can be withdrawn without fragmentation by gentle traction. Its complete removal can be verified by demonstrating the smooth intact wet rounded end. Intact emboli have been removed which, together with the attached tail clot measured 65 and 82 cm.

At a later stage, clotting of the liquid blood increases the size of the thrombus so that it completely fills the artery, and finally becomes adherent as anoxic changes occur in the intima. It is then that attempts to withdraw the clot often result in fragmentation and incomplete removal. The combination of mechanical obstruction due to portions of unremoved clot and vasospasm may interfere sufficiently with restoration of circulation so that antispasmodics and anticoagulants cannot overcome this barrier to normal circulation.

A major problem in peripheral embolectomy, therefore, is removal of portions of clot which do not come away with the embolus. The list of instruments and maneuvers advocated for this purpose include according to Andrews and Harkins, alligator forceps, Babcock's vein probes, uterine sounds, ureteral catheters Merke's corkscrew probes. They state that they could find no report where large urethral catheters had been used to remove additional clot, a method they used. After passing the catheter into the vessel a clamp was placed on the end of the catheter and the suction caused by the withdrawal of the tightly fitting catheter extracted additional portions of clot proximal to the arteriotomy wound. No mention was made of a method whereby clots distal to the arteriotomy wound could be recovered.

Linton states that if a secondary thrombus has formed distal to the embolus it is best removed by milking upward, this presumably being a sort of stripping procedure of the exposed vessel. If it has extended distalward for a considerable distance, suction with a well lubricated catheter may be resorted to, but usually in such cases it is impossible to remove the clot completely and restore circulation. In the late cases, even when the artery itself has been cleared, there may be enough smaller emboli and clot fragments blocking the terminal vessels to make restoration of circulation only partial.

The necessity for adequate removal of distal clot prompted Lund to use retrograde irrigation in a case of brachial embolus. After removing the embolus from the brachial artery, he opened the radial artery and by flushing

proximally recovered an additional "small thrombus." Linton used the flushing maneuver described by Lund in performing an embolectomy of the popliteal artery. After removal of the embolus a good flow of blood came from the proximal part but none from the distal. The posterior tibial artery was exposed at the ankle and into it a 2 percent solution of sodium citrate was injected. Although many pieces of clot were recovered from the popliteal arteriotomy the solution remained clear, indicating that the distal secondary thrombus had extended into the branches to such an extent as to block all of them. Clearing the lumen of the main vessel will not restore circulation if the branches and collaterals are obstructed. The method of retrograde milking described herein has the advantage of removing clots by external pressure not only from the main vessels but from the branches as well. Its success will be largely determined by the degree of fixation of the thrombus, a factor beyond control.

The possibility of concurrent venous thrombosis in cases of peripheral arterial embolus may be considered a serious objection to recovery of clot by retrograde milking because of the risk of pulmonary embolus. The period of bed rest, often in a semi-reclining position, and the tendency to limit fluid intake in cardiac patients favor intravenous clotting. Yet McClure and Harkins in their series of peripheral emboli found but one instance of concurrent thrombosis. They state, however, that it is well known that many of the patients with peripheral embolism die later from pulmonary emboli. Haimovici in his extensive study of the problem, concluded that when concurrent venous thrombosis did occur it was because of contiguity, an inflammatory process spreading from the region of the involved artery to the immediately adjacent vein rather than by continuity through the capillary bed to the venous side.

In order to guard against dislodging a venous clot by retrograde milking there appears to be no objection to occluding the accompanying vein by ligation or temporarily closing it off during the retrograde milking, then opening the vein to make certain that no clot has been dislodged.

In addition to removal of clot formed after the embolus has occluded a large vessel such as the femoral artery, retrograde milking may be useful in bringing unattached emboli centrally from small vessels or from those inaccessible or unsuitable for arteriotomy.

The location of the popliteal artery, the fact that it cannot be mobilized without sacrificing some of its important collateral branches, and the fact that closure of the arteriotomy and often vasospasm may seriously constrict the lumen of the vessel combine to make this procedure unsatisfactory in many instances. In addition, the prone position is at least undesirable for a patient recovering from an exacerbation of heart disease and who may be obese. For these reasons it is suggested that an embolus thought to be located at the popliteal level might be milked up to the level of the femoral area, and exploration through an arteriotomy be done at that level. (Ann. Surg., Dec. 1951, J. L. Keeley & J. A. Rooney)

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Clinical Evaluation of "Diphenylpyraline" as an Antifungal Agent

Carson and Campbell reported that "diphenylpyraline" (1-methyl-piperidyl-4 benzhydryl ether) had marked in vitro antifungal action against a group of organisms, including Trichophyton rubrum, Microsporum gypseum, M. lanosum, Epidermophyton floccosum and Candida albicans. These authors enthusiastically suggested that clinical corroboration should be attempted. In response to this suggestion, a therapeutic trial was carried out.

The mode of administration of "diphenylpyraline" was limited to topical application. The active agent was incorporated in 2 separate vehicles, the selection of which was guided by the physical state of the eruption. In wet, oozing, inflammatory eruptions, 2 % "diphenylpyraline" soaks were used, the diluent in all instances being ordinary tap water. In dry eruptions, an ointment was applied which consisted of 2 % "diphenylpyraline" in a standard ointment base. This preparation was colorless, odorless, nonstaining and water-washable.

A series of 103 patients with various fungal infections of the glabrous skin, nails and scalp were treated with topical applications of 2 % "diphenylpyraline."

Clinical diagnosis of all cases included in this study had been confirmed by microscopic or culture technics. As a control measure, the preparation minus the active ingredient was used on corresponding infected skin areas. Routine patch testing was done on 50 patients.

The data obtained in this preliminary study on "diphenylpyraline" suggest the following conclusions:

1. The local irritant effect is substantially nil. One patient of a series of 103 reported discontinuing use of the drug after the first application because of ensuing local erythema. No other suggestive evidence was noted in the series.

2. The drug has a low order of sensitization. There were no positive reactions to patch tests on 50 patients and no evidence of sensitization in 103 patients using the drug topically.

3. "Diphenylpyraline" produces dramatic results in tinea pedis, many cases of the disease having been heavily treated in the past with the usual variety of antifungal agents.

4. Tinea cruris, tinea corporis, tinea axillaris, tinea capitis (M. lanosum) and tinea versicolor are benefited almost as well as tinea pedis, i.e., clinical responses were excellent.

5. The drug produces little or no change in tinea capitis due to M. audouini and in onychomycosis due to Trichophyton rubrum. However, the latter organism when causing tinea pedis or tinea axillaris was inhibited with the use of this drug.

6. Favorable results obtained in 2 patients with monilial intertrigo suggest that further study in moniliasis may be of value.

7. This preliminary study aids in confirming the enthusiastic in vitro results reported by Carson and Campbell. Fully established conclusions require further corroboration. (A. M. A. Arch. Dermat. & Syph., Dec. 1951, O. Sokoloff)

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A New Improved Eye-Particle Remover

In removing foreign bodies from the eye a piece of cotton wrapped around a wooden swab is most frequently used to remove the particle.

The author describes a new improved eye-particle remover which will reduce to a minimum the ocular irritation due to removal of foreign bodies from the eye. To facilitate the removal of metallic particles from the eye, an Alnico No. 5 magnet attracting these metallic particles is incorporated in the instrument.

In order to reduce the pressure and consequent injury to the sensitive tissue, the idea was developed of transferring this pressure from the eye to a spring, or a series of springs, on the wire loop itself. After testing of various types, the ideal construction, causing the least amount of ocular irritation and, at the same time, functioning properly, was found to consist of a double loop of wire placed on two sides of the loop adjacent to the magnet.

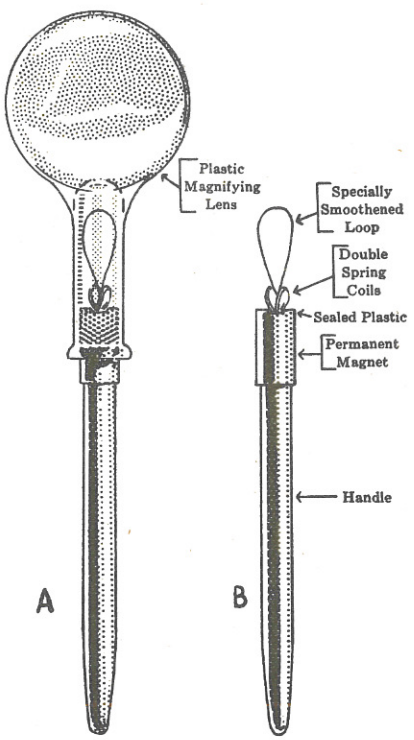

Fig. 2.—*A*, eye-particle remover closed; *B*, eye-particle remover open.

Figure 2A shows the eye-particle remover closed; B, the eye-particle remover open.

The plastic magnifying lens will not break when dropped and has a magnifying power of 18 D. The stem of the magnifying lens protects the wire loop, and the magnifying lens helps to locate the particle. The specially smoothened

rounded-wire loops are constructed of a rustproof material so that they can be sterilized. The loop is held firmly in place by having its open ends bent beneath the magnet, while the magnet and the wire loops are held in position by heat sealing the plastic handle.

The longer a foreign body remains in the eye, the more damage will result and the more difficult it becomes to remove the substance. Consequently, the eye particle should be removed as soon as possible. For large, deeply embedded metallic particles, larger magnets should be used. The eye-particle remover here described is a useful instrument to have on hand for removal of both metallic and nonmetallic superficial foreign bodies. If the particle happens to be magnetizable metal, the magnet attracts the metal and facilitates its mechanical removal by the loop. If the foreign body is not metallic, the specially smoothened, spring-constructed wire loop will mechanically remove the particle with the least amount of trauma. (A. M. A. Arch. Ophthal., Dec. 1951, J. B. Biederman)

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Second Courses of Antirabies Vaccine

It has been reported that 4 deaths have occurred among persons receiving a second series of the usual antirabic vaccine, even though administered many years subsequent to the first series. The question of the best course to follow in such instances is now receiving a great deal of attention.

Public Health authorities advise the following procedure in such circumstances:

1. An attempt should be made to obtain rabbit antiserum and if available it should be used. Rabbit antiserum should be used rather than sheep antiserum which is highly anaphylactogenic.

2. In the event rabbit antiserum is unobtainable, the patient should be given an intradermal skin test using 1/10 cc. of the usual antirabic vaccine, diluted one-to-one with salt solution. If this does not show any sensitivity, the regular antirabic treatment should be instituted. The skin tests proposed, however, do not concern the sensitivity to paralytic manifestations; they merely deal with the immediate sensitivity to the protein in the vaccine.

3. If, as the treatment progresses, any symptoms of sensitivity, such as urticaria develop, a shift should be made to a canine type of vaccine, starting out with a dose of 1/4 cc., an equivalent of 1 to 2 cc. of the ordinary vaccine.

4. Should the medical advisor so desire, he could start out with the canine type, although this does not insure against any adverse reaction. However, the sensitivity of the usual vaccine is on a species basis, the usual vaccine being prepared from rabbits. (Deputy and Assistant Chief of Bureau)

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From the Note Book

1. Secretary of Defense Robert A. Lovett has announced the appointment of Dr. Melvin A. Casberg as Vice Chairman of the Armed Forces Medical Policy Council to be effective January 1, 1952. As the Council's first Vice Chairman, Dr. Casberg will serve as the principal assistant to the Chairman, Dr. W. Randolph Lovelace II. On August 1, 1949, Dr. Casberg was appointed Dean of the St. Louis University School of Medicine. He resigned from this position to accept the Vice Chairmanship of the Armed Forces Medical Policy Council. Since 1949, Dr. Casberg has also served as a surgical consultant to the Surgeon General of the Army. He is a diplomat of the American Board of Surgery, a fellow of the American College of Surgeons, a fellow of the American Medical Association, and a member of many other medical and surgical societies. (PIO, Dept. Def., 19 Dec. 1951)

2. Rear Admiral Bertram Groesbeck, Jr., MC, USN, Assistant Chief of the Bureau for Aviation and Operational Medicine, represented the Navy at the Joint Convention of the Speech Association of America, American Speech and Hearing Association, American Educational Theater Association and the Committee on Debate Materials and Interstate Cooperation (NUEA), December 27-29, at Chicago, Illinois. (PIO, BuMed, 19 Dec. 1951)

3. Commander Bruce Canaga, MC, USN, who is attached to the American Embassy, Moscow, Russia, successfully passed the first part of the American Board of Internal Medicine while on duty in Moscow. (Pers. Div., BuMed)

4. A monograph on Epidemic Hemorrhagic Fever has been published by Dr. C. L. Mayer, Chief of Division; the Editor of the Index-Catalogue of the Library of the Surgeon General's office of the Army. The monograph brings together the scattered data recorded in foreign publications (Japanese and Russian) and coordinates the results of about 15 years of investigation carried out by these 2 nations.

5. The Public Health Service has announced that the increase of 7,500 tons of carbon steel and 150,000 pounds of copper wire mill products in the 1st quarter of 1952 allocation of controlled materials by DPA will permit release of approximately 50 of the 230 projects which have been deferred because of an insufficient allocation of material. The total amounts of materials alloted to the Public Health construction for the 1st quarter of 1952 are: Steel 71,285 short tons, copper 2,733,000 pounds, aluminum 400,000 pounds. (PIO, PHS, 30 Nov. 1951)

6. Close to 10,000,000 persons in the United States today have some form of heart or blood vessel disease. (The American Heart, Fall, 1951)

7. A blood pump has been developed by Jan Petri of the American Optical Company, Southbridge, Mass. The new device can pump a pint of blood into veins or arteries within 1 and 1 1/2 minutes. (Science News Letter, 8 Dec. 1951)

8. A preliminary report on the use of gelfoam as a dural substitute is in the Journal of Neurosurgery, November 1951, W. G. Scheuerman, F. Pacheco, & R. A. Groff.

9. A Department of Defense PIO release reports that an alarming high rate of dysentery among Chinese and Korean POWs has been reduced 75 % by a team of Army, Navy and Civilian medical experts. (BuMed. Prev. Med. News Letter)

10. Further studies and experience with 40 patients having incomplete septic abortions indicate that it is logical and safe to perform D & C with a sharp curet when using ultra-violet blood irradiation therapy as a protective measure. (Am. J. Surg., Dec. 1951, E. W. Rebbeck)

11. Changes in the Foreign Quarantine Regulations regarding members of the psittacine bird family include (1) removal of the 8-month minimum age limit on birds imported for use by zoos and research institutions; (2) a reduction from 2 years to 4 months in the time birds imported as pets must be in the owner's possession prior to entry into this country; (3) removal of the requirement that imported pet birds must be transported to the owner's residence immediately upon arrival in this country; and (4) the addition of a requirement of an affidavit that birds imported as pets are not to be resold and that no other birds have been brought into the country as pets by the owner in the preceding year. (PIO, FSA, PHS, 15 Dec. 1951)

12. The National Research Council has prepared a selected list of Insecticides, Rodentcides and Fumigants used in Public Health Activities. This is a list of 8 pesticides, which play an important role in public health, and gives their synomyms or trade names, chemical names, formulae, and notes on their mammal toxicity. (National Research Council, Div. of Med. Sciences)

13. Twenty-two patients with Dupuytren's contracture, 18 patients with Duplay's syndrome, 3 patients with Peyronie's disease, and 3 patients with lumbago were treated with mixed natural tocopherols. Sufficient clinical improvement was obtained to warrant this therapy. (A. M. A. Arch. Surg., Dec. 1951, C. L. Steinberg)

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BUMED CIRCULAR LETTER 51-157 10 December 1951

To: District Medical Officers (Except 10, 14, 15 and 17); River Command Medical Officers, Potomac River Naval Command and Severn River Naval Command; Staff Medical Officer, Naval Air Training Command; Surgeon, Marine Corps Schools, Quantico, Virginia; Senior Medical Officer, Marine Corps Recruit Depot, Parris Island, S. C., Commander Service Force, U. S. Atlantic Fleet and Commander, Service Force, U. S. Pacific Fleet

Via: Commandants, Chief of Naval Air Training; Commandant, Marine Corps Schools, Quantico, Va., and Commanding General, Marine Corps Recruit Depot, Parris Island, South Carolina

Subj: Form NavMed-590; Combined Report of Enlisted Hospital Corps; modification of

Ref: (a) BuMed Circular Letter 50-137
(b) BuMed ltr, BUMED-344:dl, P16-3/MM of 5 January 1951

1. Please modify subject report as follows:

In line 12 add "Enlisted Hospital Corps ratings who have completed twenty-four (24) months on current tour of shore duty".

2. Present supplies of subject report are to be changed accordingly and utilized. Future printings will have the above change incorporated as well as corrections referred to in reference (b).

B. Groesbeck Jr.
Acting

The above letter will not be printed in the Navy Department Bulletin.

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BUMED CIRCULAR LETTER 51-158 11 December 1951

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations Having a Representative of the Medical Department of the Navy on Board

Subj: Health Records; noncompliance with instructions concerning

Ref: (a) Ch. 16, Health and Identification Records, ManMed Dept
(b) Art. 3-15(8), ManMedDept

(c) Pars. 1363.3 and 1363.4, ManMedDept, Rev. 1945
(d) BUMED Cir Ltr No. 50-64

1. Through inspection reports and other sources, my attention has been called to many instances of noncompliance with Manual of the Medical Department instructions concerning the custody and maintenance of the Health Records. Following are a few specific instances that examplify noncompliance with instructions:

a. NAVMED-H-2 (Physical Examination and Identification Records).--At one activity 15 percent of the Health Records inspected had no entries on the reverse of the NAVMED-H-2 to indicate the existence or nonexistence of marks and scars. (See art. 16-35, ManMedDept.)

b. NAVMED-H-3 (Immunization Record).--The reactions to cowpox vaccinations were not entered on the NAVMED-H-3's in 50 percent of one activity's Health Records. (See Art. 16-43, ManMedDept.)

c. NAVMED-H-4 (Dental Record).--During the month of August, at one particular air station, 280 persons reported without a NAVMED-H-4 (Dental Record) in their Health Record. (See Arts. 3-15(8), 16-18(1); pars. 1363.3, 1363.4 (Rev. 1945); and art. 16-17(4) of the ManMedDept. In brief, these references require that: (1) when an individual is to be transferred, the dental officer shall forward the NAVMED-H-4 (Dental Record) to the individual who has custody of the Health Record; (2) the medical officer or other person who has custody of the Health Record shall be responsible for the inclusion of a current NAVMED-H-4 when the Health Record is transferred; (3) when patients are sent to another activity for dental treatment, their NAVMED-H-4's shall be sent in advance or accompany them, and then, when the treatment has been completed or terminated, returned for inclusion in the Health Record; and (4) when the NAVMED-H-4 is missing from the Health Record, the medical officer shall inform the dental officer in order that a new one may be made without delay.)

2. It is imperative that all cognizant personnel comply with the provisions of references (a) through (c) to assure that all Health Records are compiled, maintained, transferred, and disposed of in accordance with current instructions. Corrective action must be taken where indicated. In accordance with article 16-17, Manual of the Medical Department, the medical officer shall institute a system whereby each Health Record, upon receipt, is checked for completeness.

3. All Health Records shall be checked annually to see that they are complete and up to date. Simple color signals should be used to indicate which individuals will require immunizations either during the current or the ensuing year. Reference (d) requires that annually, on 1 September, the service records be verified and reconciled with pay records and Health Records. When the Health

Records are pulled for this cross-record verification, the addressees may find this date also to be an opportune time to make the annual check of the Health Records.

4. Article 16-17(1) (the last sentence) is being modified to require an annual check of Health Records.

5. This letter shall be considered canceled after appropriate compliance action has been taken.

H. L. Pugh

The above letter will not be printed in the Navy Department Bulletin.

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BUMED CIRCULAR LETTER 51-159 14 December 1951

From: Chief, Bureau of Medicine and Surgery
To: All U. S. Naval and Marine Corps Aviation Activities

Subj: U. S. Navy air controlman (AC) and U. S. Marine Corps aviation control tower operator, MOS 6711, and aviation controlman, MOS 6719, physical requirements for

1. Physical requirements to be met by U. S. Naval and Marine Corps personnel applying for or holding ratings of U. S. Navy air controlman (AC) and U. S. Marine Corps aviation control tower operator, MOS 6711, and aviation controlman, MOS 6719, are hereby established.

2. U. S. Navy air controlman (AC) and U. S. Marine Corps aviation control tower operator, MOS 6711, and aviation controlman, MOS 6719, or candidates for those ratings shall meet the physical standards as now prescribed for general service with the following additional requirements:

a. Articulation: Speak clearly and distinctly without accent or impediment of speech which would interfere with radio conversation. Voice must be well modulated and pitched in medium range. Stammering, poor diction, or other evidences of speech impediments which might become manifest or aggravated under excitement shall be cause for rejection.

b. Vision: Not less than 20/50 in either eye, corrected to 20/20.

c. Color Vision: Must be able to distinguish red from green from white both clear and fogged.

d. Depth Perception: Average depth perception of 30 mm, or a Verhoeff score of 16/24, with or without correction.

e. Diplopia: No diplopia in any meridian within 35 degrees (50 cm at 75 cm distance) from central point of fixation.

f. Hyperphoria: Shall not exceed 1 diopter at 20 feet.

g. Esophoria: Not more than 10 prism diopters at 20 feet; any amount of esophoria present at 20 feet must be balanced by an equal amount of prism divergence.

h. Exophoria: Not more than 5 prism diopters at 20 feet.

i. Accommodation: Not less than 3 diopters: with correction if any.

j. Field of Vision: Normal.

k. Hearing: Not less than 8/15 whispered voice, each ear, nor a loss greater than 25 decibels in either ear in frequencies 256, 512, 1024, and 2048.

1. Eyes, Ears and Nose: There shall be no pathology present.

3. Except when administratively impracticable, physical examination of U. S. Navy air controlman (AC) and U. S. Marine Corps aviation control tower operator, MOS 6711, and aviation controlman, MOS 6719, shall be conducted by a U. S. Naval flight surgeon or aviation medical examiner. Each individual so rated must be examined every 12 months. The results of each physical examination shall be entered in the special duty abstract of the individual's health record, and the commanding officer concerned shall be notified of the results of the examination.

4. Subsequent to hospitalization for major illness or injuries, U. S. Navy air controlman (AC) and U. S. Marine Corps aviation control tower operator, MOS 6711, and aviation controlman, MOS 6719, will submit to a physical examination and must satisfy the above standards prior to their return to duty.

5. Promulgation of the information contained in this letter in Chapter 15 of the Manual of the Medical Department (Revised) is pending.

H. L. Pugh

The above letter will not be printed in the Navy Department Bulletin.

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BUMED CIRCULAR LETTER 51-151 20 November 1951

From: Chief, Bureau of Medicine and Surgery
To: All Dental Officers

Subj: Graduate and postgraduate training for dental officers, U. S. Navy

Ref: (a) BuMed Cir Ltr No. 51-19

1. Reference (a) is hereby canceled and superseded by this letter.

2. The following graduate and postgraduate training is available to officers of the Dental Corps, U. S. Navy: (Less Schedule) (See Medical News Letter Vol. 18, No. 11)

3. Naval Dental Intern Training Program.--This program which is designed to meet the requirements of the American Dental Association for rotating dental internships, is available only to graduates in dentistry of the current year in which the internship is started. Six months of training is given at the U. S. Naval Dental School, National Naval Medical Center, Bethesda, Maryland, and another six months at one of the following teaching Naval Hospitals: St. Albans, New York; Philadelphia, Pennsylvania; Portsmouth, Virginia; Great Lakes, Illinois; San Diego, California; Oakland, California; and Chelsea, Massachusetts.

4. General Postgraduate Course at the U. S. Naval Dental School.--This course is designed to acquaint experienced naval dental officers with the latest advances in the various branches of dentistry and naval dental administration. Dental officers are required to complete this course before they may be considered for naval dental residencies and specialized courses. Exceptions may be made to this requirement in cases of dental officers having exceptional qualifications.

5. Naval Dental Residency Training Program.--Each residency is designed to provide opportunity to acquire proficiency in a specialized field of practice or research and the educational background for continued development in a special field. This period of training in addition to the six months General Postgraduate Course plus one of the Specialized Courses at the U. S. Naval Dental School provides dental officers with three or more years of formal training. The residencies in oral surgery are given at all teaching Naval Hospitals. Residencies in prosthodontia are given at the following major dental prosthetic activities: U. S. Naval Dental Clinic, Brooklyn, New York; Naval Gun Factory, Washington, D. C.; U. S. Naval Training Center, Great Lakes, Illinois; U. S. Naval Training Center, San Diego, California; U. S. Naval Training Center, Bainbridge, Maryland; U. S. Marine Corps Recruit Depot, Parris Island, South Carolina; U. S. Naval Station,

Treasure Island, California; U. S. Naval Dental Clinic, Pearl Harbor, T. H.; U. S. Naval Dental Clinic, Marine Barracks, Camp Joseph H. Pendleton, Oceanside, California. The residency training in oral surgery and prosthodontics is for an initial period of 12 months. However, the resident may, at the end of the eighth month, submit a request to the Bureau for an additional year of residency training. Such a request will be given consideration by the dental residency board in accordance with current and future needs of the naval service for specialists in oral surgery and prosthodontia who have completed advanced training of two years in a specialty. Pathology residencies are available as listed in the table in paragraph 2 of this letter.(For table see News Letter, Vol. 18, No. 11)

6. Specialized Courses at the U. S. Naval Dental School.--These courses provide advanced training in prosthodontia and in oral surgery. Candidates for these courses are selected from among dental officers who have completed dental residency training of a minimum of twelve months and who have demonstrated unusual ability in such training.

7. Long Specialty Courses in Civilian Schools.--During the present emergency and until such time as conditions again permit, these courses will not be made available to officers of the Naval Dental Corps.

8. Short Postgraduate and Refresher Courses.--Dental officers are encouraged to apply for short postgraduate and refresher courses given by civilian colleges and professional societies whenever such courses are available within reasonable travel distance from their duty stations. When applications are submitted and approved in accordance with BuMed Circular Letter No. 50-136, 8 December 1950, and the dental chapter in the Manual of the Medical Department, tuition and certain fees related to the courses will be paid from BuMed training funds. However, funds are not available for travel and per diem expenses of dental officers authorized to attend these short courses.

9. Dental Materials Research Training at National Bureau of Standards.--This training offers opportunity for participation in dental research projects under the guidance of the staff of the Dental Materials Section of the National Bureau of Standards, Washington, D. C., which includes one or more American Dental Association Research Fellows. Candidates for this advanced instruction should have special interest or aptitude for investigative work in dental materials.

10. Logistics Course, Naval War College, Newport, R. I.--This course is given to prepare experienced officers for high level functions of logistics planning, operational logistics, air logistics, and logistics administration. Ordinarily, announcement of the grades of officers eligible to attend this course are made in the Navy Department Bulletin. The candidate is determined each year by a selection board, which is convened in the Bureau of Naval Personnel, from the applications which are received in that Bureau.

11. Industrial College of the Armed Forces, Washington, D. C.--This is a course for experienced officers. Its purpose is to train officers of the Armed Forces in all aspects of procurement, planning, and economic mobilization; to evaluate the economic war potential of foreign nations; and to study the social, political, and economic impact of war. Announcement of this course ordinarily appears in the Navy Department Bulletin. The candidate is determined each year by a selection board, which is convened in the Bureau of Naval Personnel, from the applications which are received in that Bureau.

12. Amphibious Warfare School, Senior Course, Marine Corps Schools, Quantico, Virginia.--This course is designed primarily to cover the conduct of air-amphibious operations employing battalions, regiments, divisions, corps, and corresponding aviation organizations contained within the Fleet Marine Force. Instruction is designed to produce troop commanders on battalion and regimental levels and executive staff officers (and assistants) on all levels. Naval officers are selected for this training by a board, convened in the Bureau of Naval Personnel, from applications which are received in that Bureau. Announcement of this course is ordinarily made in the Navy Department Bulletin.

13. Armed Forces Staff College, Norfolk, Virginia.--This course prepares experienced officers for the exercise of command and the performance of joint staff duties on theatre and major joint task force levels, to insure proper coordination and team work of officers of the Armed Forces, and to foster mutual confidence and understanding among the Services. Announcement of this course is ordinarily made in the Navy Department Bulletin. Candidates are selected by a board, which is convened in the Bureau of Naval Personnel for that purpose, from applications which are received in that Bureau.

14. Radiological Defense.--Chemical Warfare and Associated Subjects.--This course is designed to train officers to adequately fill minor radiological defense billets, afloat and ashore. It includes the latest developments in chemical warfare and the theory and principles of radiological defense, plus the practical use of radiological defense instruments. Applications for this course are made to the commanding officer of the activity conducting the course.

H. L. Pugh

The above letter will not be printed in the Navy Department Bulletin.

The Postgraduate Training in Periodontia and Oral Medicine, New York University College of Dentistry (News Letter, Vol. 18, No. 11, page 23) is not available at this time to Dental officers on active duty.

BUMED CIRCULAR LETTER 51-160 20 December 1951

From: Chief, Bureau of Medicine and Surgery
To: Holders of the Manual of the Medical Department and the Bulletin of Bureau of Medicine and Surgery Circular Letters

Subj: NAVMED-H-10, Sick Call Treatment Record

Ref: (a) Art. 23-252, Sick Call Log, ManMedDept
(b) Advance Change 1-6, ManMedDept

1. The bound-book-form Sick Call Log (reference (a)) is being replaced by a new individual Health Record sheet, NAVMED-H-10, Sick Call Treatment Record. The new NAVMED-H-10 will provide a continuous record, by individual name, of all sick-call treatments.

2. The instructions and procedures for maintaining the NAVMED-H-10 are given in reference (b).

3. The NAVMED-H-10 form is available from the district publications and printing offices. Activities furnishing sick-call treatments shall requisition their requirements immediately. It is recommended that the quantity to be ordered in the initial requisition equal approximately 25 percent of the total number of personnel aboard or 25 percent of the total number of military personnel dependent upon the activity for sick-call treatment.

4. The new recording procedure shall be placed in effect as soon as the NAVMED-H-10 forms are received after which time the Sick Call Logs shall be transferred to the Naval Records Management Center, 605 Stewart Avenue, Garden City, Long Island, New York.

H. L. Pugh

The above letter will not be printed in the Navy Department Bulletin.

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BUMED CIRCULAR LETTER 51-161 21 December 1951

From: Chief, Bureau of Medicine and Surgery
To: All Medical Department Activities and Facilities Having Medical Department Officer Personnel Aboard

Subj: Guide for Junior Medical Department Officers (NAVMED 1331, 1951); distribution of

1. The GUIDE FOR JUNIOR MEDICAL DEPARTMENT OFFICERS is now available for distribution to recently appointed and all new officers of the Medical Department. District medical and dental officers and commanding officers of naval hospitals have been given individual copies for their information.

2. Since indoctrination of junior medical officers, medical service corps officers, and nurses is conducted primarily at naval hospitals and the National Naval Medical Center, and the indoctrination of junior dental officers is conducted primarily at recruit training centers, the East Coast Publications Distribution Center has been instructed to ship 100 copies to each hospital, the U. S. Naval Medical School, the U. S. Naval Dental School, and the School of Hospital Administration at Bethesda, Maryland; the Marine Corps Recruit Depots at Parris Island, South Carolina and San Diego, California; and the U. S. Naval Training Centers at Great Lakes, Illinois, and San Diego, California.

3. It is realized that a supply of the publication will also be required by other medical and dental activities ashore and afloat which have on board junior officers and other recently appointed officers who entered the Navy during the past year. These activities are directed to determine the number of Medical Department officers aboard who were commissioned during the past year, and to request the appropriate number of copies of subject publication from the nearest publications distribution center.

4. Senior Medical Department officers, particularly those with the Fleet and at major medical and dental shore activities (aside from hospitals), are requested to call the attention of their personnel to the Guide and its significance for naval officers.

5. This letter is canceled when no longer needed by the addressee.

H. L. Pugh

The above letter will not be printed in the Navy Department Bulletin.

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BUMED CIRCULAR LETTER 51-162 26 December 1951

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations having accommodations for in-patients

Subj: Register of patients; instructions concerning

Ref: (a) Art 23-303, item 38, ManMedDept
(b) Art 23-303, item 617, ManMedDept
(c) Art 23-222 (4), ManMedDept

1. Reference (a) directs that the Register of Patients, NAVMED HF-39, shall be transferred to the Naval Records Management Center at Garden City 2 years after book is filled.

2. Reference (b) directs the patient's jacket or clinical record to be transferred from the medical activity to Naval Records Management Center at Garden City 2 years from date of last admission.

3. Accordingly, when a Register of Patients, NAVMED HF-39, is not ready to be retired at the time the concerned clinical records are retired to the Naval Records Management Center, the relevant alphabetical section only of the Register shall be reproduced and sent as a finding medium for use at the Record Center.

4. Since the Admission Record, NAVMED-1285, provides a permanent record of all persons treated in the medical activity, reference (c) is hereby canceled.

H. L. Pugh

The above letter will not be printed in the Navy Department Bulletin.

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