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Editor - Captain F. W. Farrar, MC, USN

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NOTE

Naval Reserve medical officers (lieutenant commander and below) on inactive duty are needed to volunteer for active naval service for assignment to duty for a period of one or two years with the U. S. Air Force. See Medical News Letter of 7 April 1950 for information, or contact the office of the commandant of your naval district.

Experiences with Unilateral Prefrontal Lobotomies for Pain: On the basis of encouraging reports from other surgeons, unilateral leucotomy, rather than bilateral leucotomy, was carried out in 16 cases of intractable pain. Patients selected for this study included those in a wide age scale as well as patients with malignant and nonmalignant lesions. In 4 cases, the pain was associated with lesions involving cranial nerves. Two paraplegic patients whose lesions were of the cauda equina suffered from severe radicular pain. One of these incurred his injury from multiple shrapnel wounds, and roentgenogram revealed numerous metallic fragments, as well as extensive trauma to the upper lumbar vertebrae. Twelve patients in the series had advanced cancer with metastases, and one patient suffered from pain associated with severe spasticity incident to congenital diplegia.

Although the general condition of several of these patients was poor, operation was accompanied by very little shock with the single exception mentioned below, and supportive measures were not required. In 5 instances, the procedure was carried out under local anesthesia.

The first patient in the group was operated upon in the sitting position with the thought of minimizing bleeding and cerebral edema. His condition was poor and he died during operation, apparently as a result of cerebral anoxemia. All subsequent operations were done with the patient supine with the head slightly elevated. The superior approach was used with a scalp incision to expose the coronal suture 3 cm. lateral to the midline. A 1 and 3/4-inch trephine opening was made and after the reflection of a dural flap posteriorly the cortical vessels were coagulated. A cannula was passed to the lesser wing of the sphenoid bone to establish a track for the frontal lobe incision. The plane of this incision thus extended from the coronal suture (usually about 13 cm. posterior to the glabella) to the posterior margin of the lesser wing of the sphenoid bone, in most cases just entering the tip of the lateral ventricle. The cut was made under direct vision using a small suction tip and lighted retractor. Inferiorly and medially the incision reached the gray matter and it was carried laterally from 4 to 5 cm.

In the first 9 patients, no special effort was made to cut the superior lateral quadrant. This was in part the result of an impression that the medial portion of the incision was the most vital, and in part the mechanical result of making an incision from a superior approach with a straight instrument. In an effort to improve results, the frontal lobe incision was enlarged to include the superior lateral quadrant by using a curved probe and carrying the section to the gray matter. In the last 7 cases, the lobotomy was carried out on the left side in this manner.

In the first 9 cases, the results of unilateral lobotomy were somewhat disappointing. Only one patient obtained complete relief which persisted until

her death 1-1/2 months later. This result was particularly impressive in view of a spinal metastasis with accompanying kyphosis and severe root pain. The relief in most of the remaining 8 of these first 9 cases was complete for the first week, following which narcotics had to be resumed. In 2 cases, more prolonged but only partial relief was obtained. Five patients required additional surgical procedures to control their pain, including lobotomy on the remaining side in 2 instances; following these operations, relief of pain without the use of narcotics was obtained.

The last 7 patients, all treated by nearly complete left frontal lobotomy, obtained very satisfactory relief of pain.

Following unilateral lobotomy, fairly marked mental changes were usually observed for about from 7 to 10 days. These included moderate mental dullness, loss of inhibitions, flattening of affect, impairment of recent memory, and dissociation of anxiety from pain. Even during this period, however, incontinence of urine or feces occurred in only one patient in this group. In several of the patients the improvement in morale was striking, and it was accompanied by an improved appetite and gain in weight. Withdrawal symptoms were not observed, even though most patients had been accustomed to large doses of narcotics. In some patients, the resumption of a normal mental status was accompanied by the reappearance of pain.

In the 16 patients in this series, 2 developed superficial infections (which soon healed), as a result of scratching the wounds, and one had 2 generalized convulsions within the first 4 days after operation. The latter patient was placed on dilantin therapy and has had no further seizures. EEG postoperatively revealed random spikes over the operated frontal lobe.

Unilateral leucotomy presents certain advantages over the bilateral operation; the operative shock is negligible, which permits its use even in debilitated patients, the postoperative convalescence is short, and the mental changes are mild and temporary. Four patients examined with a battery of mental tests showed no significant changes between the pre- and postoperative studies. (J. Neurosurg., March '50, S. N. Rowe and J. B. Mayer)

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Condensed Report of Surgery of the Stomach and Duodenum at the Mayo Clinic for 1948: A total of 1,091 patients were operated upon in 1948 for benign or malignant lesions of the stomach and duodenum with a hospital mortality rate of 3.8 percent. In 1947, 1,054 patients were operated upon with a hospital mortality rate of 3.1 percent. A total of 1,276 surgical procedures were performed in 1948 and 1,257 in 1947. Fewer vagotomies alone were performed in 1948 than in 1947 for benign ulcers.

Malignant Lesions of the Stomach. In 1948, 200 gastrectomies were performed for malignant neoplasms of the stomach; 174 were partial gastrectomies, 166 for carcinoma and 8 for sarcoma, with a mortality rate of 6.9 percent; and 26 total gastrectomies, 23 for carcinoma and 3 for sarcoma, with a mortality rate of 15.4 percent. The mortality rate in these 200 cases was 8 percent. In 1947, there were 125 partial gastrectomies and 19 total gastrectomies. The 200 gastrectomies performed in 1948 were in the 325 patients who underwent operation for malignant gastric lesions, a resectability rate of 61.5 percent. In 1947 the resectability rate in a similar group was 53.8 percent.

At the Clinic, partial gastrectomy has been preferred to total gastrectomy if it is possible to remove tissue well beyond the lesion by partial gastrectomy, if microscopic examination at the time of operation shows that at least 2 inches of tissue has been removed beyond the uppermost limit of the lesion, and if there is a cuff of duodenum beyond the point of possible extension of the malignant lesion.

Benign Gastric Ulcer. In 1948, 155 patients were operated upon for gastric ulcer; there were 129 in 1947. Partial gastrectomies were performed on 148 patients. In 25 of these 148 patients, both gastric and duodenal ulcers were present and were counted in the gastric ulcer group.

There were 2 deaths in the cases of gastric ulcer, making a surgical mortality rate of 1.3 percent; in 1947 the surgical mortality rate was 1.6 percent. With these mortality rates for partial gastrectomy for gastric ulcer, and with the excellent results from this procedure, it is almost the ideal operation. The possibility of error because certain malignant ulcers of the stomach will simulate benign lesions clinically and roentgenologically is a good argument for advising surgical treatment for all patients who have chronic recurring gastric ulcers, especially if the gastric acids are low and the patient is beyond middle age. In spite of this argument, the statistics show that only 60.4 percent of all patients with gastric ulcer who came to the Clinic in 1948 were operated upon.

Duodenal Ulcer and Gastrojejunal Ulcer. Although vagotomies were done in 68 cases for inflammatory lesions of the stomach or duodenum, vagotomy alone was done in but 3 of the 429 cases in which operation was performed for duodenal ulcer, a rate of 0.7 percent. In 1947, of the 442 patients operated upon for duodenal ulcer, 16 or 3.6 percent underwent vagotomy alone. Among the patients with ulcer, 36 had gastro-enterostomy with vagotomy and 6 had gastric resections and vagotomies. Partial gastrectomy was performed in 75.7 percent of the cases of duodenal ulcer and gastro-enterostomy in 9.8 percent.

Vagotomy and Recurring Ulceration or Hemorrhage. At present the greatest field of usefulness of vagotomy is in the treatment for recurring ulcer after adequate partial gastrectomy, i.e., when more than half and preferably,

two thirds of the stomach has been removed. Vagotomy is also useful in certain cases of recurring ulcer, gastrojejunal or jejunal, of small size which have developed after gastro-enterostomy. However, healing may cause obstruction; if the ulcerating lesion of the gastro-enteric stoma is very large this possibility is accentuated if, as the result of the gastro-enterostomy and before the gastrojejunal ulcer developed, healing of the duodenal ulcer was such that contracture of the duodenum at the site of the healed duodenal ulcer would be followed by an obstruction there as well as at the gastro-enteric stoma. In 1948 vagotomy was employed for 18 (33.3 percent) of the 54 patients operated on for gastrojejunal ulcer. However, several of the surgical staff believe that removal of the gastro-enteric stoma and the recurring ulcer, together with adequate gastrectomy, whenever it can be done without inordinate risk, is the preferable procedure because the results have been so satisfactory in a large series of cases studied after the passage of from 5 to 10 years. Priestley and Gibson recently studied 103 cases of jejunal ulcer for which partial gastrectomy had been performed at the Clinic from 5 to 10 years previously. Excellent results had followed the operation in 87.4 percent of cases and the hospital mortality rate following this type of operation was 2.9 percent. Priestley and Gibson found that the results of vagotomy in such cases in the period of 3 or 4 years which have elapsed since operation were almost equal to those of partial gastrectomy. These investigators pointed out, however, that the average time for the appearance of recurring ulcer after gastro-enterostomy was 3 and 1/2 years; this indicates that more time will have to elapse before it can be determined whether vagotomy in cases of gastrojejunal ulcer, or in association with gastro-enterostomy for duodenal ulcer, is followed by permanently excellent results or whether recurrent ulcers will develop. The results of vagotomy in the treatment for recurring ulcer after adequate partial gastrectomy also have been investigated. Of 24 such patients, Priestley and Gibson found that 19 (79.2 percent) had excellent results; this appears better than the 57 percent excellent results following a second resection in 18 similar cases.

The increasing interest in the surgical treatment for acute massive hemorrhage from peptic ulceration has led to a question concerning the results of vagotomy in such cases. A study was made of a group of 30 patients in whom various degrees of bleeding occurred as one of the symptoms of peptic ulceration. These 30 cases were part of the group of 177 cases in which vagotomy was performed alone or with other procedures on the stomach. Of the 30 patients, 26 had no further bleeding after vagotomy. However, these patients have been observed for only a short period (from one to 4 years since operation). It must be emphasized that in most of these 30 cases either gastro-enterostomy or partial gastrectomy was performed at the same time as the vagotomy or before it. In the cases in which partial gastrectomy with simultaneous vagotomy was carried out, the ulcer was usually removed. If vagotomy was done for bleeding recurrent ulcers in cases in which gastro-enterostomy or partial gastrectomy had been done previously, the changes

in gastric physiology and chemistry effected by the previous operations consist principally of reduction of gastric acidity. This change then is a contributing factor to the benefit obtained from the vagotomy. This opinion is substantiated by the fact that in 2 of the 7 cases in which the gastro-enteric continuity was restored to normal after removal of the gastrojejunal ulcer, and vagotomy was performed, the duodenal ulcer recurred. In both, results of the insulin tests were negative.

Cause of Hospital Deaths After Operations on the Stomach and Duodenum, 1948

Cause	Number	Per cent
Peritonitis	11	26.1
Pulmonary embolism	9	21.4
Pneumonia	9	21.4
Coronary thrombosis; cardiac failure	3	7.1
Empyema	2	4.8
Cerebral hemorrhage or infarction	2	4.8
Generalized carcinomatosis	1	2.4
Hepatic metastasis	1	2.4
Hepatic necrosis	1	2.4
Gastro-intestinal hemorrhage	1	2.4
Intestinal obstruction	1	2.4
Shock	1	2.4
Total	42	100.0

Causes for Hospital Deaths. The causes of death are tabulated in the table. All known methods of prevention and treatment concerning pulmonary embolism and pneumonia, as well as the other listed causes of death, were used. The varying resistance of tissues to infection and to vascular lesions is difficult to measure and sometimes to control regardless of the treatment instituted. (Proc. Staff Meet. Mayo Clin., 15 March '50, W. Walters et al.)

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Cytologic Diagnosis of Cancer in a General Office Practice: This study was carried out between 1 January 1948 and 7 May 1949 in the Bingham Associates Laboratories of Pathology, Holyoke Hospital, Holyoke, Mass. It was undertaken because it afforded an opportunity to evaluate the method in a fairly large and nonselected group of patients coming to the practitioner's office and at the same time to study and evaluate the pitfalls of the method in a general hospital laboratory. Simultaneously, an attempt was made to determine the value of the cytologic method in the diagnosis of early cancer which might escape detection by conventional histological procedures.

With rare exceptions, all smears were obtained from patients entering the practicing physicians' office for a general physical examination. The smears were fixed and stained by Papanicolaou's method.

During this study, a total of 1,721 cases came to the authors' attention. The number of smears examined was between 1,900 and 2,000. The majority of smears were vaginal (3 were breast smears), a few were made directly from the cervix, and all were taken on the patient's first visit to the doctor's office. In the entire series, the smears were reported as positive in 47 cases

(2.7 percent) and as negative in 1,674 cases. An attempt was made to follow up all cases, but this was possible only in a fraction of those cases reported negative.

In analyzing the 47 cases reported as positive, 26 were confirmed as malignant by biopsy, curettage, or other conventional histopathological methods; 2 patients did not avail themselves of further examination. The smears obtained from these 2 patients were sent to other cytologists and the diagnosis was confirmed as positive. The material brought to the laboratory for study in one case, early in the investigation, was reported as positive and was ultimately found to come from a patient in whom carcinoma of the cervix of the uterus had been irradiated 11 years previously. At the time the smears were studied, no evidence of carcinoma was found clinically or by biopsy. Eight cases were proved negative by biopsy or curettage and the 10 remaining patients did not avail themselves of further examination.

As time went on and with the experience gained in the study, it was found that mistakes in interpretation and diagnosis made earlier could be avoided. This led to a recent rechecking of all the positive smears. On review, all smears previously reported as positive and confirmed by biopsy or curettage were again so diagnosed. Special attention was paid to the 10 cases in which no follow-up was available. On review, 3 of these were considered negative; all 3 had been first viewed in the early days of the study. The remaining 7 cases were considered doubtful or classified in Class III as suggested by Papanicolaou. Because none of the patients concerned was available for a follow-up, no conclusions regarding accuracy on the final diagnosis is possible.

Of the 26 proved positive malignant tissue growths in this study, 13 were squamous cell carcinoma of the uterine cervix, 10 were adenocarcinoma of the body of the uterus, and 3 were carcinoma of the breast.

This study leaves little doubt that considerable experience is necessary before adequate and accurate diagnosis can be guaranteed and that the primary responsibility for the examination and possible screening of all cytologic smears must be shifted from purely professional personnel to responsible and adequately trained technicians. Although it appears definitely advisable that the ultimate diagnosis of a malignancy rest with a physician trained in cytology, it seems hardly possible to find the necessary professional staff to carry on this task.

The results obtained in the survey serve to indicate that once experience has been gained, accuracy in diagnosis becomes fairly dependable. Although little harm may be done in reporting a smear positive, even if biopsy or curettage fails to show any evidence of cancer, a negative report on a smear coming from a patient suffering from a malignant growth would be a definite fallacy. It is for this reason that in reporting findings to physicians, attention was drawn

to the fact that a negative report did not exclude cancer and that the history, clinical findings, and other means of diagnosis should exclude such a possibility. Therefore, it seems that although there is a definite value in cytologic methods of diagnosing the presence of a malignant growth early, they should still be regarded as an aid in the diagnosis and not as a diagnosis in themselves. Their great value seems to lie in their availability in the office, the ease with which the smears can be prepared, the rapidity with which an initial interpretation is possible (thus preventing or hastening hospitalization of the patient for further biopsy or curettage), and the relatively low cost of the procedure.

No attempt is made to evaluate the ultimate accuracy in diagnosing cytologic smears, because there could be no follow-up in most of the cases reported as negative. However, the fact that in a series of 1,721 patients entering a doctor's office, in most instances not because of indication of cancer, but for a general checkup, 47 were considered suspicious and 28 actually found to be suffering from malignant growths not only warrants the continuation of such a service to the physician and the patient, but also makes it mandatory for the pathologist to familiarize himself thoroughly with these methods of diagnosis. All new laboratory aids in the diagnosis of malignant tissue growths should be thoroughly studied and evaluated by the pathologist and provided to the patient if they are found to be of value. (Surg., Gynec. & Obst., April '50, W. Kaufman and H. R. Fiege, Jr.)

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A Clinical Evaluation of 3,500 Vaginal Cytologic Studies: The authors undertook a study to ascertain what degree of clinical usefulness vaginal smears might be to them in diagnosing cancer of the female genital organs. This report concerns a summation of the results from 3500 vaginal cytologic studies which were classified as negative (classes I and II Papanicolaou) and as positive (classes IV and V). Those classified as suspicious (class III) are to be considered in a later report.

Smears were collected, fixed, and stained according to the method advocated by Papanicolaou, using EA36 instead of EA50, and aqueous alum hematoxylin rather than Harris hematoxylin. All smears reported positive in this study have adequate tissue correlation. Approximately 25 percent of the negative smears have tissue correlation, the rest having been accepted as clinically benign (on the basis of clinical follow-up through the private gynecologists and the clinic service), with the exception of 9 cases which are reported below as false negatives. Competent examiners employed diagnostic technics in addition to the smear during the one or more pelvic examinations on each patient. No smears were accepted as proved positive, false positive, or false negative without adequate tissue confirmation, with the exception of those of 2 patients, now dead, who had known carcinomas with vaginal stenosis.

The 3,500 cytologic studies being considered are tabulated below:

Smears reported Class I or II	3,407 or 97.4 percent
Smears finally proved benign	3,415 or 97.6 percent
Smears reported Class IV or V	83 or 2.6 percent
Smears finally proved malignant	85 or 2.4 percent
Total	3,500

It will be noted that 3,407 smears were classified as negative and 93 as positive, whereas after complete clinical and/or tissue study it was decided that 3,415 patients did not have a malignant growth and 85 patients did have a malignant growth. This makes an over-all incidence of 2.4 percent of malignant growths in this series. There were 93 cases called positive by smears, of which 17 were subsequently placed in a false positive category by failure to recover malignant tissue. Of the 3,407 smears reported as negative, 9 patients were found to have malignant growths. These 9 false negatives out of 85 clinically proved carcinomas, represents an error of 11 percent. This indicates that if a patient has a genital tract cancer, there is an 89 percent chance of detecting it by vaginal smear. On the other hand, 17 false positives out of 93 smears called positive means that any given patient with a positive smear has an 82 percent chance of harboring cancer, and an 18 percent chance of having a benign lesion. This fact alone places a grave responsibility upon the clinician to confirm a positive smear diagnosis by biopsy or curettage before radical surgery or radium therapy is contemplated. It is similarly the practitioner's duty to use means in addition to the smear for the establishment of a pelvic diagnosis, because the smear alone actually misses 11 percent of the malignant lesions.

The greatest source of error in the category of malignant lesions was derived from endometrium; there was failure to diagnose adenocarcinoma when present in 5 out of 18 cases, and it was diagnosed as present in 6 cases in which subsequently a benign endometrial lesion was diagnosed. On the basis of 18 proved adenocarcinomas in this series, the error was 27.8 percent false negatives. On a basis of 19 cases called adenocarcinomas, 6 cases, or 31.6 percent, proved to be false positives. Diagnosis in squamous carcinoma shows a much greater accuracy than in adenocarcinoma of the endometrium; there were only 11 false positives out of 74 cases called squamous carcinoma by smears for a false positive error of 14.9 percent. Elimination of its presence also presents a smaller false negative error than for adenocarcinoma of the endometrium; there were 4 false negative smears out of 67 cases proved squamous carcinoma for a false negative error of 5.9 percent.

Of the 17 false positive smears obtained, each of the patients concerned had an evident lesion. Of the 85 proved cases of malignant growth in this series, 20 cases, or 23.5 percent, were detected by vaginal smear. There would have been no immediate follow-up in these cases without the positive

smear. Two were cases of adenocarcinoma, and 18 were cases of squamous carcinoma. One of these patients, from whom a routine vaginal smear was taken, was completely asymptomatic. Biopsies done on the basis of the positive smear report revealed a squamous carcinoma in situ of the cervix.

Seventeen of the 85 proved malignant lesions were recurrent in patients following radiation therapy. Of these 17, 13 (76.5 percent) were detected by smear. This demonstrates another valuable use of the vaginal smear.

For the sake of statistical analysis, only the first set of smears obtained from any patient was considered for this series. The set includes a vaginal smear, a cervical smear, and a cervical surface biopsy using the Ayre spatula. On actual clinical application of the technic in some instances several repeat smears were taken. In one case, a false negative smear was followed a few days later by a frank positive, thus indicating that in the clinical application of vaginal cytology repeat smears offer a higher degree of accuracy than controlled studies would indicate, and can be obtained with little or no inconvenience. In this study, no patient had either a positive cervical smear or cervical surface biopsy without a positive vaginal smear.

The statistical analysis could be made to show less error on the false negative side if terminal postradiation carcinomas and if other cases in which it is manifestly impossible for exfoliated tumor cells to appear in the vagina, such as cervical stenosis with pyometra and adenocarcinoma, were eliminated. Two patients died of extensive pelvic carcinoma without a residual local lesion. One patient, treated with radium many years ago for adenocarcinoma of the endometrium, developed complete cervical stenosis along with adenocarcinoma and a rhabdomyosarcoma of the uterus. In fairness to the vaginal smear technic, these errors should not be considered to detract from the general clinical value of the procedure, any more than the absence of carcinoma in a biopsy would invalidate this procedure because of poor sampling or inaccessibility of the lesion. Also, improperly taken smears or smears taken following a douche or vaginal examination, yielding false negative results should not be charged against the accuracy of vaginal cytology. For the purpose of this statistical study, however, no allowance has been made for this. A notable example is a patient with squamous carcinoma of the cervix in whom the pipette was inserted for only a few centimeters. Because of a positive biopsy, a properly taken repeat smear was examined, revealing large quantities of tumor cells.

In this series only one of the 9 false negative smears has by re-examination of the initial smear revealed any atypical cells suggestive of carcinoma. This smear was from a patient with a bizarre acanthoma of the endometrium containing unusual cells. The cells in the smear closely resembled those in the curettings from this patient and those found in a distant metastatic focus. Were such cells to be seen again, it is not unlikely that the same false negative error would be made.

The authors conclude that the vaginal smear is a valuable adjunct in the diagnosis of pelvic disease. It is helpful both in the malignant and nonmalignant aspects, but it in no way has come to be used as a substitute for the routine pelvic examination, biopsies, and curettage when indicated. The follow-up of postradiation malignancies appears to be another value of the vaginal smear, as well as the occasional incidental detection of a carcinoma in an otherwise clinically benign case. (Am. J. Obstet. & Gynec., April '50, N. B. Reicher et al.)

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Preliminary Report on the Effects of Cortisone and ACTH in Periarteritis Nodosa and Cranial Arteritis: Cortisone has been administered to 3 patients with periarteritis nodosa and 2 patients with cranial arteritis; ACTH has been given to 2 patients with periarteritis nodosa. Clinical diagnoses were confirmed histologically by biopsy. Treatment has been continuous or intermittent from 3 weeks to 4-1/2 months. Dosage schedules have varied depending on clinical and biochemical response and results of follow-up biopsies. All 7 patients experienced prompt subjective relief after receiving the hormones; fever subsided within from 24 to 72 hours, and sedimentation rates decreased to normal more gradually. Partial relapses occurred in 5 patients after withdrawal of the hormones, followed by improvement when treatment was resumed. The other 2 patients are still receiving their initial course of hormonal therapy. The 3 patients with periarteritis nodosa who received cortisone were critically ill when treatment began. Despite initial improvement, 2 died in cardiac and renal failure; the other has severe and progressive hypertension. The 2 patients who died were observed for 75 and 146 days, and received a total of 3.625 and 13.35 Gm. of cortisone, respectively. Necropsy showed complete healing of all arterial lesions. However, in the process of healing, fibrous obliteration of the lumens of these vessels had occurred, resulting in widespread visceral infarction. The adrenal glands of the patient who received the larger amount of cortisone were atrophied.

Some evidence of undesired effects from cortisone administration developed in most patients during treatment. Profound disturbances of plasma electrolytes occurred after prolonged administration of cortisone in the 2 patients who died, but have not been observed in the other cases; it is impossible to assess the relative role played by the hormone and by the antecedent renal disease in the production of this complication. (Proc. Staff Meet. Mayo Clin., 15 March '50, R. M. Shick et al.)

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Cold Pressor Test Follow-up Study for Seven Years on 166 Officers: In 1940 certain cumulative experience in the medical literature indicated that the cold pressor test could be used to differentiate normal individuals from prehypertensive individuals with normal blood pressures. Accordingly, the cold

pressor test was administered to 186 flying and nonflying officers at Wright Field. In this test, the subject reclined for 5 minutes or longer, until his blood pressure stabilized; his right hand was immersed in ice water at 4° C. for one minute and then removed; and blood pressure on his left arm was taken 30 seconds and 60 seconds after the hand was immersed and again 60 seconds after it was removed. The cold pressor test index was defined as the difference between the resting systolic blood pressure and the highest systolic blood pressure subsequently recorded during the test. When the testing was performed it was proposed that if these findings could be substantiated on flying officer personnel, the cold pressor test could be added to the collection of selection and classification technics of aviation medicine.

In 1947, a team of clerks in a follow-up study located the medical files of 166 of the original 186 officers, and the annual physical examination blood pressures were transcribed for each subject. All medical records on each subject, sick calls, hospitalizations, proceedings of retirement boards, etc., were examined for evidence of cardiovascular disease during the follow-up period. Pertinent clinical remarks and data were abstracted.

The age, resting blood pressure, cold pressor test, and flying time constitute the relevant test variables recorded in 1940. The annual blood pressures from 1941 through 1947 and the cardiovascular history constitute the relevant follow-up variables.

From an analysis of the data it was found (1) that the cold pressor test index is not correlated with measures of hypertensive tendency, with age, with flying time, or with basal blood pressure, (2) that the basal diastolic and systolic pressure, and the tendency to increase in systolic pressure in later life, are correlated with age, (3) that the basal diastolic pressure is relevant to trends in diastolic and systolic pressure in later life, and (4) that the number of hours a career pilot has flown is not correlated with hypertensive tendencies, provided he has passed careful physical examinations annually.

In a way, this study may be considered as a preliminary report based on the experience of a 7-year follow-up. Perhaps in 10 or 20 more years a final report on these same subjects, with new data and a re-examination of the statements made here, should be prepared. Moreover, it should be emphasized that the data of this investigation were observed on a highly restricted part of the general population because candidates for pilot training were carefully selected, and also during their careers, the subjects of this study had to maintain high physical standards to remain on flying status. These negative findings do not constitute conclusive disproof of the cold pressor test in general application. (Am. Heart J., April '50, H. G. Armstrong and J. A. Rafferty)

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Relaxed Inguinal Ring Follow-up Study: A study was made to determine whether a relationship exists between the presence of a relaxed inguinal ring and the subsequent development of hernia. Prior findings by other investigators have been contradictory; there has even been marked disagreement in the definition of what constitutes a relaxed inguinal ring. In this study, a ring which comfortably admitted an adult index finger was considered to be relaxed.

The material for this study was gained from reviewing 4,000 health records at a large university. The majority of the physical examinations had been made by four surgeons during 1937, 1938, and 1939. Relaxed subcutaneous rings had been recorded as present in 392 of the 4,000. A group of 392 men not having relaxed rings examined during the same period was selected at random from the same 4,000 records, and served as the control group. Those in both groups were then contacted by letter between 9 and 11 years from the date of examination and asked whether or not they had developed a hernia, and if so, on which side. The ages of the group at the time of examination ranged between 17 and 26 years, with by far the largest group in the 18-20 year range.

Of the 392 persons with relaxed rings, 211 had bilateral relaxation, 82 had right-sided relaxation, and 99 had left-sided relaxation. Those men with unilateral relaxation often had the opposite ring questionably somewhat lax. The high incidence of bilaterality supports a thesis that a relaxed subcutaneous inguinal ring is a result of a general body diathesis and not a result of any difference in descent of the testicle from the abdomen to scrotum.

Replies were received from 274 of the 392 with relaxed rings. Hernias had developed in 14 of the 274 during the period of from 9 to 11 years since the examination. Replies were received from 273 of the 392 who had had normal rings. Hernias had developed in 8 of the 273 during the same period of time. Because the follow-up was so nearly equal, the results in the 2 groups may be directly compared. On analysis, however, it is found that the difference between the occurrence of hernia in the study group and the control group is not statistically significant.

The authors conclude that the results of this study support their impression that relaxed subcutaneous inguinal rings *per se* are of no great significance. (Ann. Surg., April '50, L. K. Ferguson and M. W. Wolcott)

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Caution Concerning the Use of the Miller-Abbott Tube: Surgeons have reported many good results from the use of the Miller-Abbott tube for the prevention and cure of intestinal obstruction. However, this tube should not be used as a cure-all; it should be reserved only for those cases in which there

are definite indications for its use. The passage of this tube through the intestinal tract is not without its dangers. The mercurial tip or metal tip has its advantages and disadvantages. With these tips the tube will progress more rapidly along the course of the intestinal tract, but there is danger of scarring of the mucous membrane and even perforation of the intestinal tract. Perforations of the intestinal tract from use of the Miller-Abbott tube have been reported. Also, on the author's service, in a patient who was operated upon for carcinoma of the colon by means of a Mikulicz procedure, it was deemed advisable to pass the Miller-Abbott tube. The patient did well for 2 days and then developed signs of great abdominal distress with symptoms of peritonitis which resulted from multiple perforations of the small intestine. On another service in the same hospital a Miller-Abbott tube was responsible for intestinal obstruction in a child 2 and 1/2 years old.

In the majority of cases it would be better to perform an operation to relieve the obstruction and not put the patient in jeopardy on account of the blind and at times traumatic course the Miller-Abbott tube takes in its passage down the intestinal tract. A simple colostomy is a safer and better procedure. If the Levin or Rehfuss tubes fail to produce results in a badly obstructed patient, it would be better to perform an appropriate operation to relieve the obstruction rather than resort to the use of the Miller-Abbott tube. (Editorial, Am. J. Surg., April '50, M. Behrend)

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Uses and Precautions Concerning Chlordane Insecticide: See BuMed Circular Letter No. 50-40 on page 20.

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Research Data on Atomic Radiation Effects Available: The Navy's experimental research data concerning certain effects of atomic radiations upon living tissue are being made available to civilian physicians and medical officers of the armed services and other United States agencies under a program announced by the Bureau of Medicine and Surgery. Study sets of pathological slides and appropriate literature prepared by the Naval Medical Research Institute, Bethesda, Maryland, have been sent to naval hospitals throughout the country. These study sets concern lesions produced by total body ionizing radiation. The tissue sections were prepared from swine which had been exposed to one million- and two million-volt x-rays. The response of the tissues of these animals to x-radiation is comparable to the response of tissues in man from atomic bomb radiations.

This study material was originally scheduled just for the use of medical officers of the Navy. However, because this material is not generally available in hospital laboratories, and because the developments in the use of atomic energy have made it mandatory for all physicians to be familiar with the syndrome of severe total body radiation injuries, the Navy decided to make some of the Institute's experimental material available for dissemination to civilian physicians and doctors in other U. S. Government services.

The commanding officer of each naval hospital has been instructed to arrange with the local county medical society, other U. S. Government agencies in their areas, and commanding officers of Armed Forces reserve components for interested physicians to join with Navy doctors in the use of this study material. It is hoped that by making the material available to these physicians through the naval hospital in their immediate locality some of the doctors' problems will be overcome, such as extensive travel and loss of time from practice to gain access to similar material at some other distant institution.

The study material is considered to be of interest and value to the practicing physician as well as to pathologists. The study material, however, does not replace or supplement any established course concerning the effects of atomic radiation.

Future plans for supplying additional study material will depend upon the degree of success realized from use of the present material and the measure of interest manifested by those in a position to benefit from it.

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Graduate Training for USN Dental Officers: See BuMed Circular Letter 50-42 on page 23.

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Special Course of Instruction in Sanitary Science for Military Personnel: The Bureau of Medicine and Surgery announces that the Special Course in Sanitary Science for Military Personnel will be given again during the coming academic year at the University of California, Berkeley, California. A limited number of officers of the Medical Service Corps and commissioned warrant officers of the Hospital Corps, regular Navy, will be selected to attend. Two classes will be convened, the first during the fall semester of 1950 and the second during the spring semester of 1951. Each session will include instruction in sanitation, rodent control, and venereal disease control; and will be followed by 2 weeks of practical field application.

Requests are desired from interested personnel and should reach the Bureau of Medicine and Surgery (Attention Code 72) prior to 1 July 1950 for the first session and prior to 1 December 1950 for the second session in order to receive consideration. Requests may be made by dispatch if the time element involved indicates such action, but must be confirmed by a following letter. (Professional Div., BuMed)

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Medical Corps Civilian Intern Training Program: Authority has been received to appoint 265 civilian doctors as lieutenants (junior grade), in the Medical Corps of the U. S. Naval Reserve and order them to active duty for the purpose of pursuing their intern training under auspices of the Navy Department in the civilian hospitals and medical centers which the doctors themselves have already chosen, and for the purpose of securing the services of these doctors for 2 years on active duty thereafter.

Important advantages will accrue to prospective candidates who decide to avail themselves of this important opportunity. The basic pay of a lieutenant (junior grade) without prior military service is $249.38 per month. (This amount will be substantially increased for those who have had prior military service.) In addition to this basic pay, liberal allowances are made for quarters and subsistence in cases in which these are not furnished in kind by the civilian hospital. Married interns may draw the quarters allowance even when quarters are furnished to them by the hospital if the quarters are not adequate to house both the officer and his dependents. In addition to his pay and allowances, the newly appointed intern will receive the following monetary benefits:

(1) A uniform allowance of $250.00
(2) Reimbursement for costs of travel of his dependents, if any, from officially designated home of record to permanent duty station (the civilian hospital in which he has arranged his internship)
(3) Reimbursement for costs of shipment of household effects from officially designated home of record to permanent duty station
(4) A cash travel allowance of 8 cents per mile is furnished the newly appointed officer for his own transportation, based upon the shortest route of travel from the locality where orders are delivered to his station of duty

After completion of internship and during the subsequent period of active duty, those who participate in this program will be entitled to an additional compensation of $100.00 per month specifically authorized by the U. S. Congress for medical and dental officers.

During their period of active duty, the doctors who participate in this program will enjoy the privileges and prerogatives of a commissioned officer in the United States Navy. They will be able to observe the Navy Medical Corps at first hand and will be able to form an intelligent opinion concerning the desirability of a naval career. If they should later decide to remain in the Navy, all the time accrued in this program will count for both pay and retirement purposes.

Interested candidates are urged to submit their applications promptly through the nearest Navy Recruiting Station and Office of Naval Officer Procurement. The prospective candidate must be a graduate of an approved medical school, must have contracted for a rotating internship of 12 months' duration (or be in the second year of a 24 months' internship, one year of which must be rotating) at an approved hospital or medical center, must be able to meet the eligibility requirements for initial appointment; and must agree to continue to serve on active duty within the Naval Establishment for at least 24 months after completion of the training in the civilian institution. Candidates may obtain information concerning the nearest Navy Recruiting Station and Office of Naval Officer Procurement by writing to the Bureau of Medicine and Surgery, Attention Code 34, Navy Department, Washington, D. C.

All members of the Medical Department, regular and Reserve, active and inactive, are urged to call this program to the attention of senior medical

students with whom they may come in contact. Successful procurement of the required number of participants in this program is vitally necessary because it will materially assist in providing an adequate number of medical officers for the operating forces. (Personnel Div., BuMed)

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BUMED CIRCULAR LETTER 50-35 14 April 1950

From: Chief, Bureau of Medicine and Surgery
To: All hospitals, all dispensaries, all activities having dispensary facilities, and DMO's

Subj: NAVMED-I; Modification of Reporting Instructions

Refs: (a) BUMED C/L 46-132
(b) BUMED C/L 49-14
(c) BUMED C/L 47-144
(d) Par. 5119, MMD 1945
(e) BUMED C/L 49-72
(f) BUMED C/L 50-28 which enclosed SecDef memorandum to Secretaries of Army, Navy, and Air Force of 27 Jan 1950; subject, Nomenclature and definitions pertaining to fixed medical treatment facilities

This letter (1) cancels references (a), (b), (c), (d), and (e); (2) states that further submission of NAVMED-103 is not required; and (3) gives instructions in accordance with the enclosure of referenc (f) for submitting NAVMED-I (Weekly Report of Patients) to be submitted by hospitals weekly and by all dispensaries having bed capacities as defined in enclosure of reference (f) monthly.

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BUMED CIRCULAR LETTER 50-36 17 April 1950

From: Chief, Bureau of Medicine and Surgery
To: Commander in Chief, U. S. Atlantic Fleet
Commander in Chief, U. S. Pacific Fleet
Fleet, Force, Type & Area Commanders, Atlantic & Pacific Ocean Areas
Commandant, Marine Corps

Subj: Venereal Disease; Use of Oral Penicillin as Additional Prophylaxis for Prevention of

Encl: (1) Outline of use of oral penicillin as additional prophylaxis and reporting instructions

1. The National Research Council Subcommittee on Venereal Disease has recently made the following recommendation to the Armed Forces:

"That, for the prevention of gonorrhea, oral penicillin, e.g., a single 250,000 unit tablet, be administered under supervision on request when the man first reports for prophylaxis after exposure."

This measure replaces only the chemical prophylaxis of gonorrhea. Whether or not it affords protection against syphilis has yet to be determined. There is a fair probability that it will do so in cases where the number of invading spirochetes is small, but fail when the number is large. The use of soap and water is essential, and the use of the condom is still recommended for definitive prophylaxis.

2. Sufficient evidence has now been obtained from field studies to warrant use of oral penicillin by larger numbers of personnel as an additional prophylaxis. Accordingly, the use of this additional prophylaxis is authorized for all naval and Marine Corps personnel on ships and stations in the following areas:

a. European - Mediterranean
b. Japan
c. Philippines
d. China
e. West Indies

3. Enclosure (1) is an outline of the use of oral penicillin and reporting procedures required for use in the above areas. The fleet, force or area commanders desiring to use this drug in the above areas should initiate requests by letter or despatch to the Bureau of Medicine and Surgery giving the following information:

a. Area of expected operation
b. Names of ships or stations where drug is desired
c. In the case of ships, duration of expected operation in the area
d. Date the drug is required

4. In all areas where practicable, it is desired to have a central control and distribution point in the area. All unused tablets shall be returned to this distribution point when the vessel leaves the area. C. A. Swanson

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BUMED CIRCULAR LETTER 50-37 17 April 1950

From: Chief, Bureau of Medicine and Surgery
To: Distribution List

Subj: Rocky Mountain Spotted Fever

1. It is not the policy of the Bureau of Medicine and Surgery to employ mass vaccination against Rocky Mountain spotted fever. The risk of contracting Rocky Mountain spotted fever is considered to be minimal except for those persons required to work daily in tick-infested areas. Careful searching and removal of ticks following possible exposure in wooded areas is a reasonable preventive measure for the casually exposed. Antibiotics are available which provide specific therapy for Rocky Mountain spotted fever, thereby reducing the severity of the illness to such a degree as to barely justify immunization of those for whom the probability of acquiring the disease is considerable.

2. The utilization of Rocky Mountain spotted fever vaccine should be limited to military personnel and civilian employees subject to continuous exposure to ticks in wooded areas and areas where heavy undergrowth exists. Individuals casually exposed to ticks in such areas should not be considered as needing a routine type immunization against Rocky Mountain spotted fever.

3. Dependents seeking immunization should be advised that Rocky Mountain spotted fever vaccine is not completely effective, and sole reliance for protection of individuals should not be placed upon it. Instead, instruction should be given in the methods of avoiding ticks and their removal from the body. Dependents should be advised that there is some risk of severe reactions which is not usually offset by the relatively remote probability of contracting a disease for which very effective treatment is now available. If they still desire immunization, it may be performed if vaccine is on hand for use as in paragraph 2, above, until existing stocks of presently available vaccine are exhausted or if vaccine is furnished by them.

4. Requests for Rocky Mountain spotted fever vaccine should be addressed to the Bureau of Medicine and Surgery (Attention: Code 7211), and should be supported with data indicating the numbers of personnel to be immunized and the type of occupation in which they are engaged. C. A. Swanson

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BUMED CIRCULAR LETTER 50-38 17 April 1950

From: Chief, Bureau of Medicine and Surgery
To: All Naval Hospitals

Subj: Discharges from the Sick List of Individuals Waiting to Appear or Who have Appeared Before a Physical Evaluation Board

This letter states that in order to evaluate the status of the retiring procedures and ascertain their impact on the hospital patient load, addressees are directed to furnish BuMed with certain information relating to those individuals discharged from the sick list after an appearance before a Clinical Board which recommended appearance before a Physical Evaluation Board.

BUMED CIRCULAR LETTER 50-39 18 April 1950

From: Chief, Bureau of Medicine and Surgery
To: All Medical and Dental Officers, Inactive, U. S. Naval Reserve

Subj: Armed Forces Medical Journal; Distribution of

1. At present, the Armed Forces Medical Journal is being distributed to all medical and dental officers of the Naval Reserve.

2. In the interest of economy the Bureau plans to distribute the Journal only to those medical and dental officers of the inactive Naval Reserve who desire to receive it.

3. Therefore, please fill out and return the attached form to the Bureau of Medicine and Surgery, Department of the Navy, Washington 25, D. C. If a reply is not received by 30 June 1950, your name will be removed from the mailing list. C. A. Swanson

Note: A copy of this letter with the attached form will be mailed to the addressees with the May issue of the Armed Forces Medical Journal.

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BUMED CIRCULAR LETTER 50-40 19 April 1950

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Chlordane Insecticide; Uses and Precautions

1. Chlordane is a halogenated hydrocarbon. It is a poison which, from the acute standpoint, affects mainly the central nervous system. In animals, other clinical manifestations noted were liver damage, inanition, ataxia, convulsions, collapse and sudden death after repeated exposure. Its chronic toxicity by dermal application through multiple exposures is approximately four times greater than that of DDT with moderate irritation to the skin and evidence of systemic absorption. It has been reported that the acute oral toxicity of chlordane to rats is one-half that of DDT, while its chronic toxicity is at least three times that of DDT. In actual use, as a 2-percent solution, its toxicity would be about equal to 5 percent DDT solutions.

2. Insecticide, liquid, containing 2 percent chlordane (for residual roach and ant control) military specification of 2 January 1950 MIL-I-15051 (ships) is

available under the following Bureau of Supplies and Accounts General Stores Stock Numbers: 51-I-155-375 - 1 gallon container, 51-I-155-385 - 5 gallon container.

3. Chlordane is recommended for use in the control of roaches and ants indoors and for ant and fly breeding areas out of doors. It is not recommended for mosquitoes, bed bugs, clothes moths, silver fish, and insects for which other standard Navy insecticides are in use.

4. For the control of roaches, application of chlordane solution, 2 percent by weight in deodorized kerosene, should be made at approximate rate of one gallon per 1,000 linear feet of cracks and crevices or one pint per 125 lineal feet. The best way to gauge the proper amount of chlordane (2 percent formulation) is to spray until surfaces are wet without runoff. The spray should be applied freely to cracks, crevices, niches, and spaces in bulkheads and equipment where roaches harbor.

5. For ants indoors, 2 percent chlordane in kerosene oil should be applied to areas frequented by ants, particularly to wall cavities from which ants emerge. Their runways and nests should be sprayed outside and beneath the buildings. Oil solution applied at the rate of from 1 tablespoon to 1 pint poured directly on the ant hills is effective against subterranean species. Oil solutions should not be sprayed directly on vegetation because of their tendency to burn plants. Carpenter ants may be eradicated with chlordane if their galleries are treated.

6. For the control of flies out of doors, their breeding and resting places should be sprayed thoroughly. A dosage of 100 mg. of chlordane per square foot (1-1/4 quarts to 250 square feet) applied to the surface of fly-breeding media should give good control of larvae present at the time of treatment. This procedure is recommended only where DDT is failing to give adequate control.

7. Precautions

a. Chlordane shall not be used in rooms such as bedrooms, playrooms, nurseries, etc., if extensively occupied by children under two years of age because of increased susceptibility of young animals to the fumes of this material which are given off for an extended period of time. The toxicity of chlordane fumes to humans has not yet been fully evaluated.

b. Chlordane shall not be used as (1) a space spray; i.e., spraying the air in a room for flying insects, or (2) as a fog because of the danger of inhalation and the explosive hazard (with fogs) and (3) for the reason given in (a) above.

c. Chlordane shall not be used for residual treatments which cover extensive indoor surfaces such as entire bulkheads and overheads, as is frequently done with DDT, because of prolonged fumigant action.

d. Contamination of food, foodstuffs, and utensils shall be prevented by protective covers and proper direction of sprays. Prepared food and foodstuffs in movable utensils should be removed prior to treatment. Meat blocks, food preparation tables, and similar nonmovable items should be covered so as to prevent contamination with spray. Do not spray chlordane solutions directly on packaged foodstuffs.

e. Regulations of the Food and Drug Administration prevent the use of chlordane as a residual spray for fly control in dairy barns.

f. In case of spillage on skin, immediate washing with soap and water is necessary. Operators should wear appropriate protective clothing (such as overalls) which can be changed after spraying operations. Extreme precautions should be taken against accidentally getting the material in the eyes when spraying an overhead section with an extension on the spray nozzle.

g. Respirators for protection against chlordane fumes have not been developed. Respirators approved by the Bureau of Mines for use around organic solvent vapors, similar to Mine Safety Appliances Company, Chemical Cartridge Respirator (Catalogue No. ED43798) although satisfactory protection against organic vapors may not protect against Chlordane. Hence, it is necessary that extreme care in the form of ample ventilation be taken in its application.

h. Precautions must be taken to eliminate the hazards of fire created by the use of kerosene solutions. C. A. Swanson

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BUMED CIRCULAR LETTER 50-41 20 April 1950

From: Chief, Bureau of Medicine and Surgery
To: All Naval Hospitals

Subj: Pathological Slide Study Sets on Ionizing Radiation Lesions; Use of by Civilian Physicians, Regular and Reserve Medical Officers of the Armed Forces, and Federal Agencies

Ref: (a) CO NMRI ltr NH6-1-NM 007 039 JLT:vcc dtd 5 Apr 1950 to CO, Naval Hospitals

Encl: (1) Copy of Press Release dtd 26 Apr 1950 in relation to reference (a)

This letter directs addressees to make the subject pathological slide study sets available to civilian physicians. to regular and Reserve medical officers of the Armed Forces, and to physicians of other Federal Services. (A note from copy of the press release appears on page

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BUMED CIRCULAR LETTER 50-42 24 April 1950

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 Circular Letter No. 49-71 of 13 June 1949

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:

Course	Place	Duration	Commences	Billets	Vacancies
General Postgraduate Course	U.S.N. Dental School	6 mos	Jul 1950	16	0
Specialized Course on Prosthodontia	U.S.N. Dental School	6 mos	Jul 1950	*2	0
Specialized Course on Oral Surgery	U.S.N. Dental School	6 mos	Jul 1950	*2	1
Dental Internship	U.S.N. Dental School and 6 Naval Hospitals	12 mos	Aug 1950	Varies	Varies
Oral Surgery Residency	Naval Teaching Hospitals	12 mos	Jan 1950	3	1
Prosthodontia Residency	Major Prosthetic Activities	12 mos	Jan 1950	3	1
Pathology Residency	U.S.N. Medical School	12 mos	Jul 1950	1	1
Long Specialty, Research and Science Courses#	Civilian Schools	9 to 12 mos	Varies	4	0
Prosthodontics (Denture)	Civilian Schools	9 to 12 mos	Sep 1950	2	0
Oral Surgery	Civilian Schools	9 to 12 mos	Sep 1950	1	1

Course	Place	Duration	Commences	Billets	Vacancies
Periodontics	Civilian School	9 to 12 mos	Sep 1950	1	0
Oral Medicine	Civilian School	9 to 12 mos	Sep 1950	1	1
Oral Diagnosis & Roentgenology	Civilian School	9 to 12 mos	Sep 1950	1	1
Public Health Dentistry	Civilian School	9 to 12 mos	Sep 1950	1	1
Short Postgraduate & Refresher Courses	Civilian Schools & Professional Societies	Varies	Varies	Not limited	Not limited
Dental Material Research	National Bureau of Standards, Washington, D.C.	12 mos	Jul 1950	2	0
Logistics Course	Naval War College, Newport, R. I.	10 mos	Jul 1950	1	0
Industrial College Armed Forces Course	Industrial College Armed Forces, Washington, D.C.	10 mos	Aug 1950	1	1
Amphibious Warfare Senior Course	Marine Corps Schools, Quantico, Va.	9 mos	Sep 1950	1	1
Armed Forces Staff College Course	Armed Forces Staff College, Norfolk, Va.	5 mos	Sep 1950	1	1

*Candidates will be selected from among officers who have attended the General Postgraduate Course at the U. S. Naval Dental School.
#Oral Pathology, biochemistry, bacteriology, research

3. GENERAL POSTGRADUATE COURSE AT U. S. NAVAL DENTAL SCHOOL. Dental officers are eligible to apply for assignment to this course of instruction upon completion of at least one tour of duty at sea or outside the continental limits of the United States. Classes for this course convene in January and July of each year. This course is designed to acquaint experienced dental officers with the latest advances in the various branches of dentistry and naval dental administration. Officers who were originally appointed in the regular Navy in the grade of lieutenant (junior grade) after 1 January 1944 are required to complete this course before they may be considered for long specialized graduate or postgraduate courses or for naval dental residencies. Exceptions may be made to this requirement in cases of dental officers having exceptional qualifications.

4. SPECIALIZED COURSES AT U. S. NAVAL DENTAL SCHOOL. These courses provide advance training in prosthodontia and in oral surgery. Candidates for specialty training may be selected from among dental officers attending the current General Postgraduate Course on the basis of demonstrated ability and interest in such

training. Other dental officers who have completed the General Postgraduate Course during a previous period may also apply for these courses.

5. NAVAL DENTAL INTERNSHIP PROGRAM. This program, which is designed to meet the American Dental Association standards for rotating dental internships, is available to recent graduates in dentistry. Six months of training is given at the U. S. Naval Dental School and another six months at one of the following teaching naval hospitals: St. Albans, N. Y., Philadelphia, Pa., Portsmouth, Va., Great Lakes, Ill., San Diego, Calif., Oakland, Calif.

6. NAVAL DENTAL RESIDENCY 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 12 months spent in the General and Specialized Courses at the U. S. Naval Dental School, provides dental officers with two years of formal specialty training. The candidates for naval dental residency training may be selected from among the dental officers who satisfactorily complete the training in a specialized course at the U. S. Naval Dental School. Dental officers who complete long courses in civilian colleges also may request assignment to naval dental residency training, especially if such training is necessary to complete requirements for graduate degrees.

7. LONG SPECIALTY, RESEARCH, AND SCIENCE COURSES IN CIVILIAN SCHOOLS. Subject to the needs of the Navy and the funds available, courses of instruction in all dental specialties, dental research, and basic sciences which are offered by civilian teaching institutions are available to officers of the Naval Dental Corps. The length of these courses may be one academic year or one calendar year. Detailed directions for applying for assignment to these courses may be found in paragraphs 1325 and 1326, Manual of the Medical Department. Applications should show that candidates possess special aptitude and sufficient experience to obtain full benefit from advanced specialized instructions.

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 in the vicinity of their duty stations. When applications are submitted and approved in accordance with BuMed Circular Letter 48-4, 5 Jan 1948, tuition and other fees will be paid from BuMed training funds. However, funds are not available for travel and per diem expenses of officers authorized to attend these short courses.

9. DENTAL MATERIAL 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. Only candidates who have special aptitude in this field are considered for this advanced instruction.

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 BuPers, 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 BuPers, 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 BuPers, 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 is established to prepare experienced officers for the exercise of command and the performance of joint staff duties on the 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 BuPers for that purpose, from applications which are received in that Bureau. C. A. Swanson

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BUMED CIRCULAR LETTER 50-43 24 April 1950

From: Chief, Bureau of Medicine and Surgery
To: Ships and stations having a representative of the Medical Department on board

Subj: Instructions Governing Individual Statistical Report of Patient ([illegible]-F), (NAVMED-P-1313)

Ref: (a) BuMed C/L 49-154 of 18 Nov 1949

Encl: (1) Copies of subject publication

1. Reference (a) is hereby cancelled. Enclosures (1) and (2) of reference (a) shall be destroyed upon receipt of this letter as they are superseded by enclosure (1) hereto.

2. These instructions embody numerous changes from reference (a), and their careful study is required in order to effect correct reporting on NAVMED-F. Attention is directed particularly to Articles 23-204(1) and 23-204(4) which include changes necessitated by the implementation of Title IV of the Career Compensation Act of 1949. Strict compliance with these requirements is necessary in order to permit completion in the Bureau of the records of patients separated from the service for physical disability.

3. From examination of F cards received in the Bureau, it is apparent that there is misunderstanding in some quarters with respect to certain aspects of the new procedure. The following points are re-emphasized:

a. In every instance block 10 of NAVMED-F should be completed. The activity to be reported therein is that activity to which the individual was attached for personnel accounting purposes at the time he came upon the sick list. This block should also show the date of his being taken up on the sick list from a duty status. (See Article 23-206(3) and examples.)

b. For each diagnosis taken up as AD (Additional Diagnosis), or ACD (Admitted Contributory Disability), there shall be shown in block 14 the preceding or primary diagnosis as well as the one taken up as AD or ACD. (See Articles 23-202(3)(e) and 23-202(6)(d) and examples 8, 9, and 11.)

c. For each diagnosis disposed of as C (Diagnosis Changed), the diagnosis to which the change was made shall be shown (Article 23-204(2) and examples 8, 9, and 11).

d. It is not necessary to make a change of diagnosis or to submit NAVMED-F for patients going on convalescent or sick leave, but the number of days and the inclusive dates of such leave shall be shown on NAVMED-F covering the period during which such leave occurred (Article 23-206(3) and examples 3, 6, 9, and 11).

4. Activities requiring additional copies of enclosure (1) should address requests to the Bureau of Medicine and Surgery. C. A. Swanson

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BUMED CIRCULAR LETTER 50-44 26 April 1950

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

Subj: BuMed Circular Letters; Cancellation of

This letter states that the following BuMed circular letters have served their purpose and are therefore canceled: 47-27, 79, 118, 157, and 166; 48-29, 60, 71, 79, 99, 108, and 137; and 49-16, 49-58, and 49-139.

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NAVY DEPARTMENT
BUREAU OF MEDICINE AND SURGERY
WASHINGTON 25, D. C.

OFFICIAL BUSINESS

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