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Vol. 40

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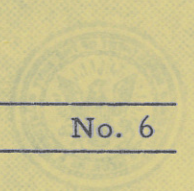
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Change of Address

Please forward changes of address for the News Letter to: Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda 14, Md., giving full name, rank, corps, and old and new addresses.

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The issuance of this publication approved by the Secretary of the Navy on 28 June 1961.

Football Injuries - A Symposium

From the University of Michigan Medical Bulletin 28: 257-264
July - August 1962

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DORIN L. HINERMAN, M.D.

This symposium on football injuries was part of an all day meeting at the University of Michigan on September 16, 1961, in response to requests from team coaches throughout Michigan. It was arranged by William Bender Jr, Associate Editor, University of Michigan Medical Bulletin, and Warren Spragg, Coach, Romulus High School.

These introductory remarks are presented in order to point out major health problems that confront physicians, trainers, coaches, parents, school administrators, and everyone involved in sports. They are published in the Medical Bulletin so that physician readers may be alert to the ever increasing interest in these health problems, and to review some aspects of professional practice in the care of athletes. This symposium—one of a rapidly increasing number of such meetings—reflects the mounting interest in better prevention and care of athletic injuries. More and more, physicians will be asked to participate in such discussions and to take an active role in local sport programs, often with a rather superficial knowledge of the special problems of sports medicine.

The author's thoughts and philosophy presented in this article are based on a limited experience as a trainer for a football team, followed by 20 years of on-the-spot observations as a physician.

Athletic injuries are most common in football and other contact sports. Primarily, they involve young people, but persons of all age groups may be seriously affected. Unnecessary permanent physical disabilities all too often result from untreated or inadequately treated injuries. It is inconceivable that athletic contests should be sponsored in which our most physically talented young athletes lack prompt and thorough medical care if they are injured. Yet, many athletes are unattended by either a physician or a well trained medical assistant such as a trainer. It is estimated that at least three of every four football players receive significant injuries during a playing season; each injury should be thoroughly examined and treated if sponsors are to conserve health and prevent unnecessary disability or even mortality.

There is a gradually developing awareness of the need for what the writer terms a "health team" consisting of physician, trainer, and coach who work in

unison for a common cause. Ideally, every athletic team should have a designated physician who has had some experience in athletics or in sports medicine. He should be sufficiently interested in athletics to find out the many special and peculiar problems of the trainer, the coach, and the athlete which have a bearing on health. The physician should have an intimate knowledge of the state of health of each person in the program and, preferably, he should be present or immediately available during periods of contact drills or scrimmage, just as during a regulation game.

The trainer must be a well trained physiotherapist with experience in athletic health programs, aware of the physical and mental attributes of each player, and have complete rapport with each player, coach, and physician. On many occasions, the physician is dependent upon the trainer to point out the mechanisms and other factors which were at play when the physical trauma occurred. A good trainer functions as a confidant to athletes; he serves as an intermediary among athletes, coach, and physician; he can detect and manage early phases of injury; and later he can serve effectively in the rehabilitation of the injured athlete.

Obviously, the coach's main purpose is to train athletes to perform duties as part of a team effort. Necessarily, his attention is also focused on the health of the players. The coach, an integral part of the health team, must have the unqualified assistance of the trainer and physician to be certain that he is adequately protecting the health of his players.

The health team obviously detects any abnormality which is present before training begins. By discovering injury at an early stage before inflammatory reactions and muscle spasms obscure the nature of the injury and by seeing that prompt and thorough treatment is instituted, the period of convalescence is minimized. Every effort should be made to effect complete rehabilitation of the injured.

Perhaps a more important concern of this health team would be the prevention of injury. Such prevention has lagged well behind the pace of scientific progress. At least two major important areas are: More fully protective devices, and maintenance of physical and mental fitness or conditioning.

Given a group of normal healthy athletes at the beginning of the season, coaches and trainers should build a well conditioned team able to cope with the exigencies of a season of competition. Well developed and well trained muscles are in themselves excellent protection against injury. The rate of injury is increased by excessive fatigue.

All players should be rigidly taught the methods of injury prevention: how to position their bodies to receive physical force, how to fall, how to carry themselves, and other preventive measures. The present system severely limits the number of days and hours of practice, and frequently tempts the coach to take shortcuts and to gamble that luck will be with him because he does not have sufficient time to instill the fundamentals of the game, let alone injury prevention. Those persons responsible for such limitations would not knowingly subject themselves to such a risk. The physician frequently encounters young athletes who have been subjected to trauma in earlier life in unsupervised or

poorly supervised programs in which they were not exposed to the teaching of injury prevention. Such programs are also likely to provide poor medical care and poor rehabilitation. The end result is a compounding of errors leading in many cases to needless disability. Such athletes who continue in competitive sports are injury-prone because of their physical handicaps.

In maintaining physical fitness, the physician must keep in mind the fact that, unlike most patients, the football player is a finely tuned, carefully coordinated machine with well balanced muscular tone. Physicians have a tendency to advise bed rest in almost every form of treatment, but in the case of the athlete this may prove to be more damaging than the original injury. A few days of bed rest will destroy muscle tone and the fine tuning which has taken many weeks to develop. Often, coaches and trainers are under extreme pressure to return an injured person to competition after days of bed rest, but without a necessary period of reconditioning. As a result, he is liable to more serious injuries that may lead to permanent disability, even with proper treatment. Moreover, the coach is often under pressure to return an injured player to active competition before a suitable examination. The physician must temper his treatment with a knowledge of all these factors.

Other areas which are receiving attention but where sufficient progress is lacking are the development of protective devices, essential rules, and their enforcement. The beautiful glistening plastic devices are hard and unyielding; sometimes they become vicious weapons. It behooves the health team to demand better protective equipment, better rules, and enforcement of these rules if unnecessary athletic injuries are to be prevented.

In summary, a carefully coordinated health team of physician, trainer, and coach can work as one to accomplish: (1) improvement of screening procedures for detection of abnormalities before the prospective athlete enters the season; (2) provision of training for prevention of injury; (3) development of better equipment and rules for playing the game; (4) earlier and more pain-taking treatment of injuries; (5) effective rehabilitation of the injured; and (6) reduction of the incidence of prolonged or permanent disability from contact injuries.

Panel Discussion

Many questions were raised, and keen interest in athletic injuries indicated by the audience which was composed almost entirely of coaches, trainers, and officials. Questions were answered by the guest discussants.

What types of mouth guards are useful for preventing jaw and dental injuries and how may such guards be obtained?

Dr. James R. Hayward: The Michigan State Dental Association in cooperation with local dentists is offering its assistance in the construction of mouth guards and encouragement in the use of them by football players. In general, the better mouth guards are lightweight, close-fitting, not bulky, and have no disagreeable taste. These improved mouth guards must be specially fitted

to each player. Another type of mouth guard that can be supplied to the players at less expense is made of materials which allow a "do it yourself" fitting and give effective protection. The best advice to coaches and trainers is to enlist the cooperation and advice of the local dental group who may in turn wish to obtain information and cooperation from the dental schools and the Michigan State Dental Association.

Is the face protector on the helmet effective in reducing dental, jaw, and facial injuries?

Dr. Richard C. Schneider: Although the face guard on the helmet definitely reduces injuries to the jaw and face, other types of injuries may be produced by the face guard. If the face guards of two players override, direct injuries to the nose and face may be produced. If the helmet is forced off, the player's own face guard may cause an injury or the chin strap may produce injuries to the nose. Most important, however, the helmet face guard may serve as a lever by which an injury may occur to the blood vessels of the neck, the base of the brain, and the spinal cord.

Should a physician be present at all team scrimmage sessions as well as on the field during the games?

Dr. Schneider: In most towns it is not practical to have a physician present at every scrimmage. However, an effective substitute can be arranged by contacting the team physician and alerting his office during team scrimmage sessions, so that he can make himself available for consultation at short notice.

Should taping of the ankles be a routine procedure?

Dr. Robert W. Bailey and Dr. Alfred W. Coxon: Accumulated experience has shown that routinely taping the ankles does not reduce the number of injuries. Blisters of the skin, muscle strains, and knee pain may be the consequence of excessive or incorrect taping. Routine taping of the ankles is probably advisable for the player who is "loose-jointed or hyperelastic" or for the player who has suffered repeated sprains, in which case tape is not applied directly to the skin but may be applied over a stocking material.

Is the high football shoe superior to the low shoe?

Dr. Bailey: I do not believe the high shoe is superior to the low shoe in preventing injury to the ankle. The size of the cleat is probably more important in this type of injury since the cleat fixes the foot firmly to the ground when force is applied to the leg, thereby preventing elasticity in the system. The old style pyramidal cleat, by allowing movement of the foot under force, prevented unnecessary sprains. My advice would be to avoid the use of unusually long or sharp cleats whenever possible.

What is the best way to treat the unbroken blister and the denuded blister?

Dr. Coxon: If the blister is unbroken, the skin should not be removed but the fluid should be drained by using sterile technic with a needle and syringe

or by making a small incision at the base. The roof of the blister supplies additional protection and hastens healing. Because blisters on the feet are caused by friction between the shoe and particular areas of tender skin by wrapping, by padding, or by including a metatarsal bar in the shoe, the points of support between the foot and the shoe can be changed so that the blister area is no longer receiving friction. Improving the fit of the shoe then is most important in healing blisters if the boy is to continue to play. We treat denuded blisters by applying an antibiotic ointment or cleaning the area with alcohol, covering it with a sterile dressing, and relieving the area of friction by modifying the fit of the shoe. Taping to skin may increase the incidence of blisters, particularly early in the season.

How might a coach or trainer recognize an injury to the spleen?

Dr. H. Marvin Pollard: If the tear in the spleen is small or the injury is a bruise, the symptoms of severe pain under the lower edge of the ribs on the extreme left followed by the development of shock may be delayed for many hours. If the bruise or laceration is large, symptoms will develop almost immediately. Splenic injury requires prompt investigation and treatment in the hospital. The player who demonstrates these symptoms should be placed on a stretcher under precautions for shock and removed to the hospital. The injury is treated by removing the spleen after which the player suffers no handicap. Slow bleeding from the spleen may be difficult to detect but the eventual development of weakness, dizziness, profuse sweating, and fainting in association with pain in the spleen area will cause the coach, the trainer, or the player's parents to recognize the seriousness of the situation and consult a physician.

How should impetigo be treated?

Dr. Pollard: Impetigo is best treated by ointments under the advice of the family physician. Of more importance, however, is that the boy under consideration be removed from practice until the skin condition has cleared. The possibility of local spread or contagiousness is present in this situation.

Should all nose injuries be managed as serious injuries?

Dr. Schneider: Common nosebleeds that result from lacerations of the lining of the nose are not serious unless they are accompanied by a distortion of the bony structure of the nose which will interfere with the player's breathing. More serious nose injuries may occur with a fracture along the base of the skull. A clear watery fluid dripping from the nose may indicate that the membranes around the brain which contain cerebrospinal fluid have been torn, allowing the escape of this fluid. Injuries to the bony structures of the nose and the floor of the skull should be considered serious medical problems.

Recently I went out to an injured player and was disturbed by a deep snoring sound which he made as he lay on the field. What might have been the cause of this?

Dr. Schneider: Snoring results from an obstruction in the airway and may have been the result of temporary unconsciousness which allowed the tongue to fall into the posterior part of the nasopharynx. When associated with heavy secretions, the tongue blocks the airway and produces the snoring sound.

What are some of the general rules for evaluation of head injuries?

Dr. Schneider: A player who is rendered unconscious or becomes disoriented or confused, should be removed from the game and examined. If he has loss of memory for the events immediately preceding the injury, if his disorientation is prolonged, if he develops a true convulsion, or if serial medical examinations show progressive loss of neurologic function, he will require further examination, observation, and perhaps surgical treatment. If there is no loss of memory, or muscle function and sensory function, or if disorientation is transient, we would advise that the boy be removed from the game and observed until it is possible to ascertain the extent of injury before he is allowed to resume play.

What about persistent headaches after head injuries?

Dr. Schneider: When there is no neurologic evidence of associated damage but the headaches persist, an electroencephalogram (EEG), or brain wave analysis, may be done. If this examination shows progressive deterioration or if the abnormal pattern persists, it may be advisable for the boy to discontinue playing football. However, approximately 8% of normal persons have an abnormal EEG. If a boy in this 8% of usually "abnormal" EEG group happens to get bumped on the head, he will probably be advised to discontinue playing football, but the role of his injury in increasing the abnormality of his EEG is problematical.

What is the cause of most football deaths?

Dr. Schneider: About 80% of fatal injuries in football are the result of damage to the brain and spinal cord. Extradural hematoma, a clot between coverings of the brain and skull, results from laceration of the middle meningeal artery and in a rapid accumulation of blood outside the membranes which protect the brain. A subdural hematoma, which is a collection of blood between the membranes of the brain, usually results from laceration of a connecting vein at the top of the brain and develops more slowly than the extradural hematoma. Both forms of intracranial hematoma can be managed surgically with generally good results. Patients with bleeding within the brain, bleeding from or plugging of the basilar artery at the base of the brain, and bleeding around the upper spinal cord do poorly under even the most expert neurosurgical care. If extradural and subdural hematomas are associated with bleeding elsewhere in the brain, the prognosis is much poorer.

Are the deaths which result from head and cord injuries immediate?

Dr. Schneider: Over the last year, about half of the deaths in football from brain and cord trauma occurred within 24 hours. Generally, those deaths

which occur within a short period of time could not have been prevented by neurosurgical care. An important point is that we cannot reduce the number of deaths in football by more aggressive neurosurgical treatment. Attention must be given to improving the game and to the protective equipment worn in the game.

What factors make an individual player prone to head and spinal cord injuries?

Dr. Schneider: The players with weak neck muscles or with long thin necks are poor risks. Good vision and a complete visual field may help a player avoid serious injury by allowing him to meet a tackle or a block in an advantageous position. If the player is in good condition, has a sturdy neck, and can anticipate impact, he may reduce the chance of injury. Another important factor in the production of head injuries as well as injuries to the spinal cord is the design of the football helmet.

How does the helmet produce injuries to the head and spinal cord?

Dr. Schneider: When force is applied upward to the end of the long lever which the helmet face guard presents, the neck is hyperextended and the posterior rim of the helmet is driven into the spinal cord. This combined trauma may produce dislocations of the vertebra, damage to the vasculature, or lacerations or transections of the spinal cord. If rotary torsion is applied to the helmet face guard, injuries to the carotid arteries may occur.

Are face-fitting, molded protectors such as hockey goalies wear valuable to the football player?

Dr. Schneider: These devices are too rigid and, unless they fit properly and are perfectly padded, they may be displaced causing serious injuries to the nose and other bony prominences of the face.

Would a "break-away" face guard on the helmet be valuable?

Dr. Schneider: A break-away guard might be driven into the eye or cause some serious lacerations and, considering present materials, would probably be a poor device.

What should be the "on the field" approach to the knee injury?

Dr. Bailey: Because these young players are usually in good health, fractures to the knee are uncommon. The damage is usually to the ligaments which relate the parts of the knee or to the cartilages of the knee surface. The knee has moorings at the sides and also has the cruciate ligaments at the center. Like the elbow, the knee is capable of flexion and extension but, unlike the elbow, the knee can rotate somewhat which allows the player to change direction quickly. If the supporting ligaments are torn, a specific instability and local pain at the site of the injury are usually produced. If the meniscus is torn, the "locked knee," limited in flexion and extension, may be produced. If bleeding occurs within the knee, examination should not be delayed, but should be carried out immediately after the game. Perhaps it may be necessary to remove the blood from the knee space to allow a proper

examination. It is advisable to check players for knee injuries immediately after the game and to carry out necessary examinations at that time.

Can an operation on a damaged knee reliably return a player to full activity?

Dr. Bailey: The answer to this question depends partially on the extent and type of the injury, but we may say that while many players are able to return to full activity, the trouble-free knee may not be attained in every case and some players may have to quit the game.

What criteria may be used to decide the time for the player with an injured knee to return to play?

Dr. George H. Koepke: It is imperative that the injury be thoroughly understood before returning him to play. If the knee appears quite normal, is stable and painless, it may be reassuring to demonstrate that he is asymptomatic after lifting a quadriceps boot weighing at least two-thirds his normal quadriceps weight approximately 20 times. For the high school boy, this may be about 35 pounds.

Is there such a thing as the injury-prone player?

Dr. Schneider: Yes. The boy who does not actually wish to play football but is under pressure from his family or from his schoolmates to participate tends to have a high incidence of actual physical injuries as well as a slow rate of recovery. In addition, he may be subject to other symptoms, such as headaches which may be due to psychic tension.

How can coaches and trainers work with physicians in reducing the incidence of injuries in football?

Dr. Dorin L. Hinerman and Dr. Schneider: In addition to teaching players proper technics and promoting top physical conditioning, the coaches can assist the medical profession in the reduction of football injuries by taking an interest in the development of football equipment, modifications of the rules, and in the study of methods for reducing injuries. For example, in a recent study of the role of the football helmet in the production of face, brain, and spinal cord injuries, the earnest cooperation of many coaches and trainers has led to some worthwhile recommendations for changes in this piece of equipment. These changes may take us back to the days when equipment which might cause injury to other players was ruled off the field.

NOTE: There is a great deal of football played in Navy and Marine Corps activities. It is considered that this excellent symposium report is quite timely, inasmuch as the fall football season is upon us and will last for approximately 4 months. Readers are referred to the Protective Mouthguard Program at the U. S. Naval Academy, reported in the U. S. Navy Medical News Letter, Vol. 40, No. 2, pps. 23-24.

—Editor

Recognition and Treatment of
Potentially Fatal Asthma*

Ronald Feldman MD. Ann Int Med 57:29-33, July 1962.

It has frequently been stated and taught that bronchial asthma is not a lethal illness. The author's experience has led him to question this concept, and a review of the literature reveals that death from asthma is not rare. This report is based on 12 cases of the syndrome of fatal asthma and includes 2 patients who were resuscitated from near fatal episodes. In the past 10 years, reviews have been published in many countries indicating that asthmatic deaths may occur in any age group, in males as well as in females, and in patients with extrinsic as well as intrinsic asthma.

Pathology

The pathology of fatal asthma is admirably presented in two recent papers by Bohrod and Williams. Bohrod writes, "The gross appearance of the lungs leads to the inevitable conclusion that dyspnea, anoxia, and death were the result of plugging of the bronchi by thick, tenacious mucus plugs." All authors agree that widespread airway occlusion is distinctive and characteristic. Whether there is also spasm of the bronchial musculature is uncertain, but all reports emphasize the mechanical obstruction of the lungs. Some cellular reaction occurs in the medium and small bronchi but not in the respiratory bronchioles. Both Williams and Leopold have pointed out that asthma is not ordinarily associated with changes in the alveoli.

Other pathologic findings, not confined to fatal asthma, include (1) a thick hyaline membrane composed of material positive to periodic acid-Schiff stain on and beneath the basement membrane of the bronchus; (2) increased mucin production in lining cells which are converted to mucus-producing goblet cells and in the greatly hypertrophied bronchial glands; and (3) varying degrees of squamous metaplasia. In the present series of 8 patients studied at necropsy, all revealed the characteristic pathology.

Incidence

The author's material is taken from 16,000 admissions to the adult and pediatric medical services and the nontuberculous chest service of the Bronx Municipal Hospital Center between January 1957 and May 1961. More than 500 asthmatic patients had a total of 700 admissions. Fifty-one died of all causes, 11 of these from asthma. Another patient died in August 1961 and is included in this report. Two patients who were successfully resuscitated are also included. Of nearly 1000 asthmatic patients reported from Peter Bent Brigham Hospital, Boston,

* From the Department of Medicine, Albert Einstein College of Medicine, and the Bronx Municipal Hospital Center, Bronx, N. Y.

Mass., 7 died of asthma. All were women between the ages of 24 and 67. Reports of other series are comparable.

Clinical Course

In the author's series of 12 fatal cases and 2 survivors, patients ranged in age from 4 to 72 years. There was no patient with a significant allergic history, although many fatalities are recorded with extrinsic asthma. Unlike many previous series, the present group includes several elderly males. A family history of asthma was present in 6 of 8 early onset cases (below age 40) but in only one of the 6 late onset cases. This point has been emphasized in earlier reports.

It has been suggested that the use of steroids may contribute to a fatal outcome. Because the incidence of death is much the same as before the advent of steroids, and 2 of the author's patients had not received steroids before the fatal paroxysm, it seems unlikely that death is related to steroid therapy. All patients developed severe asthmatic symptoms some time before the fatal episode. Death from asthma is extremely rare in patients who have not had repeated bouts of status asthmaticus.

Treatment

Case reports of 2 patients successfully resuscitated from near fatal episodes are appended to this report. Tracheostomy to remove thick, tenacious mucus was essential. Hugh-Jones described a patient who was comatose with a carbon dioxide tension of 130 mm Hg. She was treated with tracheostomy, and after thick rubbery secretions were removed she made a rapid recovery.

Endotracheal intubation and pressure breathing have been effective in 5 reported cases. However, as has been emphasized, patients with the syndrome of fatal asthma develop thick secretions. Brown was able to achieve adequate air exchange through an endotracheal tube only after the instillation of trypsin to thin the secretions. The author found—as did Hugh-Jones—that after tracheostomy, secretions could be aspirated and air exchange could be reestablished.

The author now estimates the arterial carbon dioxide tension of every asthmatic patient who is admitted. If, despite therapy, the patient continues to have dyspnea and hypercapnia, and particularly if the wheezing begins to diminish despite progressive deterioration, tracheostomy must be performed. The use of enzymes appears to be promising and will be further evaluated.

Summary and Conclusions

Bronchial asthma terminates in a fatal paroxysm in 1 to 3% of hospitalized cases. The pathologic picture is unique and suggests that death results from bronchial obstruction by mucus plugs. Measurement of the arterial carbon dioxide tension may serve to predict the potentially fatal paroxysm, and tracheostomy may be a life-saving procedure in patients with progressive hypercapnia.

Cold Agglutinin Disease*

Stephan E. Ritzmann MD, and William C. Levin MD. Texas Rep Biol Med 20:236-250, Summer 1962.

Among the cryopathies, idiopathic cold agglutinin disease presents a well recognized entity. It is characterized by severe cold sensitivity, hemolytic anemia, hemoglobinuria, and jaundice. The etiology is unknown. Its relation to certain paraproteinemias has not been definitely established and, until recently, there existed no effective form of treatment (1).

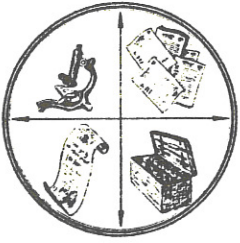
The cold agglutinin macroglobulins from two patients with this disorder have been investigated and these studies suggest that cold agglutinin disease is a variant of macroglobulinemia Waldenström. To express this point differently, it is possible that both syndromes are simply clinical variants of the same underlying disease process.

Clinically, cold agglutinin disease appears to be indistinguishable from macroglobulinemia Waldenström except for the added features of paroxysmal hemolytic anemia, jaundice, and hemoglobinuria due to increased cold agglutinin activity usually precipitated by exposure to lowered temperature. The symptoms, such as general weakness, weight loss, and frequent increased susceptibility to infections, are similar to those observed in macroglobulinemia Waldenström. On physical examination, other similarities are observed: i. e. discrete lymphadenopathy, splenomegaly, osteoporosis, and others, with the added features of paroxysmal jaundice, hemolytic anemia, and hemoglobinuria due to increased cold agglutinin activity. The marrow picture in cold agglutinin disease is characterized by the presence of mast cells and large numbers of lymphoid reticular elements, with marked pleomorphism, many naked nuclei, and the presence of transitional stages between lymphocytic, plasmocytic, and reticulum cells. These cells are indistinguishable from those seen in macroglobulinemia Waldenström.

The clonal selection theory of antibody formation may explain the existence of a spectrum of specific individual antibodies contained within the beta-2-M immunoglobulins. Cold agglutinin disease could thus be caused by an uncontrolled malignant proliferation of the cold agglutinin specific clone within the beta-2-M globulin range. Macroglobulinemia Waldenström, in which a diffuse clinical spectrum is exhibited, may be considered the prototype of primary macroglobulinemia. It appears that cold agglutinin disease has more circumscribed clinical manifestations. Other types or variants may be encountered in the future and characterized according to specific macromolecular antibody which is pathologically increased. Immunologically, functional differentiation of all cases of primary macroglobulinemia is suggested.

* From the Department of Medicine and the Hematology Research Laboratory, University of Texas Medical Branch, Galveston, Texas.

1. ———: Effect of mercaptanes in cold agglutinin disease. J Lab Clin Med 57:718, 1961.



MISCELLANY

National Medical Audiovisual Facility

A central audiovisual function has been established for the U. S. Public Health Service at its Communicable Disease Center in Atlanta, Ga. The former Audiovisual Section has been newly designated the National Medical Audiovisual Facility. It will have responsibility for (1) development, production, acquisition, distribution, and utilization of medical motion pictures and other audiovisual forms; (2) maintenance of the National Medical Motion Picture Archives; (3) dissemination and exchange of scientific and other medical film information important to progress in medicine and public health; (4) encouraging the development and production of medical films and other audiovisuals; and (5) stimulating a speed-up in the circulation of medical knowledge on a national and international basis through audiovisuals.

Concerning the role of the newly designated facility, Dr. James Lieberman, Director, said, "Communications problems in the life sciences can be met realistically through maximum use of existing national resources. This facility will join with public and private groups in all parts of the nation to help effect audiovisual communications among medical and scientific communities and between these groups and the public."

Dr. Lieberman emphasized that internationally, as in the past, the facility will give assistance within the limits of its resources. Films will continue to be sent in small numbers to foreign countries where customs regulations permit. Recently, a study of international exchange of medical motion pictures was undertaken by the Communicable Disease Center.

Another recent development was transfer of the National Medical Motion Picture Archives from the National Library of Medicine in Washington, D. C., to the Facility in Atlanta. The Archives will be maintained and enlarged to form a working record of outstanding early and contemporary medical-health films for on-premises screening.

The National Medical Audiovisual Facility is housed in a four-story, modern building especially designed for audiovisual activities—the only such installation within the Public Health Service. It houses two stages, a sound recording and reproduction unit, graphic arts and exhibit units, a still photograph reference and cataloging activity, and motion picture and still photograph processing laboratories.

* * * * *

U. S. Army Citations for MSC Officers

The Army Commendation Medal has been awarded to each of the following Medical Service Corps Officers of the U. S. Navy. Their citations read:

"CDR Robert W. Swanson, 222 761, MSC, U. S. Navy is cited for meritorious achievement for the period 11 July 1958 to 1 June 1962. As Liaison Representative between the Bureau of Medicine and Surgery, U. S. Navy, and the U. S. Army Biological Laboratories, Fort Detrick, Maryland, CDR Swanson was instrumental in laying the groundwork for Navy and Army Joint testing of Biological Weaponry and concepts. By combining his detailed knowledge of the Biological Laboratories' programs and objectives with his knowledge of Navy procedures and personalities, he was able to surmount the many obstacles in the way of establishment of intra-service coordination in the field of Biological Weapons. The basic agreements and procedures established by CDR Swanson in this area will greatly reduce the time required for planning and execution of joint Biological programs which may arise in the future. His professional competence, ingenuity, diplomacy, and resourcefulness resulted in the development of a strong and most enviable relationship between the U. S. Army and the U. S. Navy. He displayed able and competent leadership, and was instrumental in achieving maximum cooperation and integration of BW research and development programs of the U. S. Navy, the U. S. Army Biological Laboratories, and the other Armed Services. As Commanding Officer of the U. S. Naval Unit, Fort Detrick, Maryland, CDR Swanson served in a highly commendable manner. He exhibited a high standard of personal conduct and gained for himself respect and admiration from both civilian and military personnel of this command. His enthusiastic, dignified, and cooperative discharge of duties at Fort Detrick, Maryland, reflect great credit upon himself, the U. S. Navy, and the Armed Services."

"LCDR Gordon W. Werner, 521 123, Medical Service Corps, U. S. Navy, is cited for outstanding service from 1 May 1958 to 6 November 1961 as Bio-Chemist and Medical Effects ABC Warfare Instructor, U. S. Naval Unit, U. S. Army Chemical Corps School. During this period, LCDR Werner, through his experience and professional competence, was called upon to present to Army Troops of the U. S. Army Chemical Corps Training Command a continuing program of personal hygiene. Showing outstanding initiative and devotion to duty, he developed a use of live nerve agents on animals for presentation to Army and Navy students, thereby adding realism and a practical application of an outstanding teaching technique for students. In addition, he was responsible for coordinating the efforts of the Naval Unit for development of the Alpha Field on this installation. He participated in, and was an active member of, the military and civilian community which fostered good public relations and encouraged a wholesome social atmosphere. His notable achievements have materially assisted and improved the operations of the U. S. Army Chemical Corps School and reflect great credit on himself and the U. S. Navy."

Military Entomologists Conduct Fourth
Annual Training Program

The Fourth Annual Training Program in Military Entomology was presented recently at the U. S. Naval Medical School, National Naval Medical Center, Bethesda, Md., where these special courses are sponsored. Prepared and conducted by the Armed Forces Pest Control Board, this symposium functioned primarily as a working conference. With the attendees working on committees with assigned problems in Military Entomology, contributions of the 25 participants were outstanding. Field trips to the U. S. Army Environmental Hygiene Laboratory, Army Chemical Center, and to the Entomology Research Section, U. S. Department of Agriculture, included excellent briefings on up-to-date research in pertinent fields.

The announcement of a new mosquito species in Hawaii introduced the subject of Quarantine in the Military Entomologist's responsibilities. Formal lectures, demonstrations, and exhibits combined with the working committee's studies were climaxed on the closing day under the title, "Military Entomology in the Future." Military Entomology was described as including the study and control of: (a) vectors and pests of medical importance, (b) household pests, (c) pests of stored products, (d) pests of wood (including fungi and marine borers), and (e) pests of vegetation.

With fewer than 150 Armed Forces Entomologists on active duty with approximately 3 million military personnel and an estimated 30 billion dollar investment in structures, materials, and property, future Military Entomology will include more research, intensified training in personnel protection, space entomology, a center for data processing of pertinent military entomological information, and increased acceptance of Military Entomology as a distinct science.

It is well recognized that the achievements of these dedicated specialist officers of the Medical Service Corps of the Army, Navy, and Air Force have had an important bearing on the successful pursuit of military objectives of the United States. Their consultative role in logistic planning is essential when the prevention of insect borne diseases must be accomplished to keep combatant personnel operationally effective.

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Announcement of New HC Training Film

Teaching hospital corpsmen the precise skill of suturing will be greatly aided now that a new Navy film on the subject has been released. Emergency Medical Care: Suturing (MN-9482), a 32-minute color picture, first defines the kinds of wound that a corpsman may suture and those for which he must call on a medical officer. Within the scope of the first, the film proceeds to a detailed demonstration of the hows and whys, taking up the following points: cleansing the wound, controlling bleeding, administering local anesthetic, debriding; placing interrupted subcutaneous and skin sutures; dressing the wound; treating sutured

wounds for hematoma and infection; and removing sutures. Both picture and narration are emphatic on the matter of aseptic procedure throughout.

All steps described are demonstrated on actual cases, selected to show a variety of conditions including wounds on the face. Most of the photography is in very large close-ups, and animation supplements the live scenes to explain certain procedures, for example, the use of both subcutaneous and skin sutures in closing gaping wounds, and the placing of sutures to prevent inversion of tissue edges. Emphasis gained by repetition is a valuable feature of this film. Repeatedly, it shows and describes the technics of tying, setting knots, and spacing sutures, and explains why each of these operations demands the corpsman's care.

Prints of Emergency Medical Care: Suturing are being distributed to Naval hospitals, Hospital Corps Schools, and Field Medical Service Schools. If a print is not available through your usual source, address inquiry to Officer in Charge, Training Film Distribution Unit, Bldg. 94, U. S. Naval Station, Anacostia, Washington, D. C. Civilian organizations may borrow prints by request to the Director, Audiovisual Division, U. S. Naval Medical School, Bethesda, Md.
(From: Audiovisual Training Section, BuMed)

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Safeguards for Visitors

The July-August issue of The JAG Journal includes an article by a Navy Commander which is a definitive guide to shipboard safety with regard to visitors. CDR William H. Thornton USN, writing on Shipboard Accidents - Injuries to Visitors and Other Invitees, states, "Danger areas such as brows, coamings, ladders, and foreign matter on deck or defects in the deck itself, account for about 70% of all shipboard accidents involving members of the public."

CDR Thornton who recently completed a tour of duty with the Admiralty Division in the Office of the Judge Advocate General cautions commanding officers that the volume of admiralty accident reports increases appreciably after each Armed Forces Day or other occasion when large numbers of ships are open to the public.

"Safety-consciousness" is important for several reasons. The primary one is saving a prospective victim considerable pain and suffering. Shipboard accidents also add extra burdens to the command concerned. Detailed reports must be prepared, statements obtained from witnesses and, in many cases, an investigating officer appointed. Also of importance is the detrimental effect these incidents have on the Navy's public relations program.

—CHINFO News Letter, Vol. XIV, No. 9, September 1962

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Occupational Health Research - PHS

The Division of Occupational Health of U. S. Public Health Service announced on 30 August 1962 that eight new research grants in the field of occupational health have been awarded following approval by the National Advisory Council, a body of non-Federal scientists and public representatives. Support for these grants during this fiscal year totals approximately \$190,000. The Division is currently supporting a total of seventy-seven research grants in the amount of approximately \$1.6 million for this fiscal year.

Subject areas of some of the latest research grants reflect the need for knowledge of effects on health to keep pace with new technologic developments. One project will study the metabolism of boron which is used as a high energy propellant in missile systems.

Another grant concerns environmental health studies of magnetic amplification by stimulation of electromagnetic radiation (MASER), and light amplification by stimulation of electromagnetic radiation (LASER). This is a revolutionary development whereby light is greatly amplified by squeezing it into the heart of a device and firing it out in an extremely narrow intense band. The beam is capable of cutting diamonds, tungsten, stainless steel, and other hard metals difficult to machine by ordinary methods. The nature of the emission is such that this device seems likely also to find wide application in new communications systems. Use of these devices presents a potentially serious occupational health hazard, especially to the eye and skin.

A list of all active research grants in occupational health is available upon request from the Research Grants Administrator, Division of Occupational Health, Public Health Service, Washington 25, D. C.

—From: Dept of HEW, Public Health Service

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Copper Poisoning - A Report by USAF

An outbreak of serious illness at an Air Force base in the western part of the United States was found to be due to metal poisoning manifested by nausea and vomiting. The illness appeared to have resulted from the silver plating wearing off a communion decanter, exposing the copper base to the corrosive action of grape juice used in the service. Toxicologists at the Sixth Army Laboratory found that after one hour of contact with the worn vessel, the grape juice had a copper content of 830 to 840 p. p. m. at pH of 3.1.

A directive was issued by the Chief of Air Force Chaplains advising that similar vessels be inspected for wear, and if necessary be resilvered, or to substitute glass decanters as a replacement.

—From: USAF Medical Service Digest,
Vol. XIII, No. VIII, August 1962

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From the Note BookIndoctrination Course for Medical Officers -
Officer Candidate School, Newport, R. I.

Because of the large turnover of medical officers on active duty each summer, it has been necessary in the past to assign some officers to operational billets with a minimum of military indoctrination. However, the urgent need for replacements at sea and at isolated stations has dictated that indoctrination time be short.

In 1962, for the first time, through the combined efforts of the Chief of Naval Personnel, Chief of the Bureau of Medicine and Surgery, the Commanding Officer, U. S. Naval Officer Candidate School, Newport, R. I., the Commanding Officer, U. S. Naval Hospital, Newport, R. I., and the staff of the Commander, Cruiser Destroyer Force, U. S. Atlantic Fleet, a formal indoctrination course was established at OCS Newport, R. I. The curriculum was designed to acquaint newly reporting officers with the responsibilities of a naval medical officer and to furnish indoctrination into the military aspects of Navy life. There were 44 officers in attendance at the 3-weeks course.

The course was well received by the students who had only high praise for their instructors. It is planned that next year this training at Newport will be expanded to include more indoctrinees and, it is hoped that a similar course can be established on the West Coast. —Professional Division, BuMed.

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SecNav Appoints New Head of Medical Service Corps. The Secretary of the Navy, the Honorable Fred Korth, on 4 September 1962, announced the appointment of CDR Robert S. Herrmann, Medical Service Corps, USN, as Head of the Navy's Medical Service Corps. CAPT Leo J. Elsasser who is retiring from active duty in October will be relieved by CDR Herrmann.

As Head of the Medical Service Corps, CDR Herrmann will serve as a Division Head under the Chief of the Bureau of Medicine and Surgery. The 1300 members of the Corps serve in administrative capacities at Navy medical activities and also perform duty in such allied medical fields as toxicology and clinical psychology. CDR Herrmann is presently assigned in the Bureau of Medicine and Surgery as Assistant to the Director, Medical Service Corps Division, for Medical Allied Sciences Officers, and as Head of the Clinical Psychology Section, Neuropsychiatry Branch of the Professional Division.

Handbook of the Hospital Corps, U. S. Navy - Change in Price. Effective on 17 August 1962, the subscription rate of this publication has been changed. The old rate was: \$10.00 Domestic, \$2.50 additional for foreign mailing (back issues will be furnished). The new rate is: \$13.00 Domestic, \$3.50 additional for foreign mailing. Single copies will not be sold.

—Supt. of Documents, Government
Printing Office, Washington 25, D. C.

Space and Astronautics Orientation Course

This course has been established to give senior officers of the Navy a better understanding of this new technology, its application to naval warfare, and its important role in national defense. The course is in consonance with the Navy's global mission and emphasizes the significant impact of astronautics on sea power. It is primarily designed for those senior officers who have not had the opportunity to gain knowledge of astronautics and current Space Programs. A highlight of the course is a visit to the space vehicle launch and control facilities at Point Arguello Naval Mission Facility and at Vandenberg Air Force Base.

- Location U. S. Naval Missile Center, Point Mugu, Calif.
- Duration of course Four days (Tuesday - Friday)
- Convening dates of course.. 6 November 1962
13 November 1962
4 December 1962
11 December 1962
- BuMed Quota ONE, each class
- Deadline Date to apply 6 weeks in advance of convening date
- Eligibility Rank of Commander and above. TOP SECRET security clearance required.

Requests should be forwarded in accordance with BuMed Instruction 1520.8 and comply with the deadline dates indicated above. All requests must indicate that a security clearance of TOP SECRET has been granted to the officer requesting attendance, and if Bachelor Officers' Quarters are desired.

—Training Branch, Professional Division, BuMed

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LT Nelson Represents U. S. Navy at WHO Conference. LT Paul E. Nelson MSC USN of the Navy Medical Neuropsychiatric Research Unit, San Diego, represented the U. S. Navy at the Conference on Medicine and Public Health in the Arctic and Antarctic sponsored by the World Health Organization in Geneva, Switzerland, August 28 - September 1, 1962. LT Nelson was invited to present a paper on the psychological and social aspects of life in the Antarctic. His paper, "Human Adaptation to Antarctic Station Life," discussed studies now in progress of the effects of personality attributes, social histories, work roles, leadership, and physical environment upon emotional, work, and social adjustment of men wintering over at the four U. S. Antarctic stations.

NOTE: The citation which follows was presented to CDR Heyward E. Hall by COL Frank M. Townsend, MC U. S. Air Force, Director of the Armed Forces Institute of Pathology, on behalf of the Surgeon General, U. S. Army, for the Secretary of the Army. —Editor

CDR Hall Presented Army Commendation Medal

Commander Heyward E. Hall, Medical Service Corps, United States Navy, is cited in recognition of his exceptionally meritorious service as Budget and Management Officer, Armed Forces Institute of Pathology, Washington, D. C., from July 1959 to June 1962. During this entire period of service, CDR Hall displayed an unusual amount of initiative, enthusiasm, industry, and determination in accomplishing all of his duties. His thorough knowledge of fiscal administration enabled the Armed Forces Institute of Pathology to expand its services, without a comparable increase in funds, through more efficient management supervision. His analytical approach to budgetary problems and his considered solutions effected appreciable savings in funds. He gave unstintingly of himself beyond normal duty hours to insure superior accomplishment of the mission. His cooperative and receptive attitude, meticulous attention to detail, so essential in fiscal matters, and his keen desire to render the best possible service, won for him the admiration of all with whom he came in contact. Commander Hall's outstanding performance of duty reflects great credit upon himself, the Armed Forces Institute of Pathology, and the Navy Medical Service.

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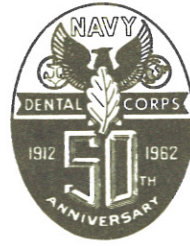
Honor for LCDR McIlraith. At its last meeting, the American Board of Radiology voted to grant LCDR James D. McIlraith MSC USN its certification in Radiological Physics. The certificate is effective as of June 1962.

NOTE: LCDR McIlraith is to be congratulated upon attaining such high standards of proficiency in this exacting and increasingly important specialty. It relates directly and operatively to the medical allied science aspects of diagnostic and therapeutic Roentgenology, radium therapy, clinical use of radioisotopes, and to the nuclear propulsion program of the U.S. Navy. Prior to completion of his applied Radiological Physics training on the Radiology Service of the U.S. Naval Hospital and in the Department of Nuclear Medicine of the U.S. Naval Medical School, NNMC, Bethesda, Md., LCDR McIlraith obtained the Master of Science degree in his specialty from Columbia University, New York City.

—Editor

Washington (AFPS). Navy recruiters set new records in fiscal year 1962 when 102,000 male recruits were accepted for enlisted service. On an individual basis, the recruiters averaged 45 men during the year. Based on the four-year average enlistment, each was responsible for obtaining 180 years of service for the Navy.

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DENTAL**SECTION**

Safelights Reconsidered

A. Porter, S. Sweet, DDS, F. A. A. O. R., X-ray Technical Services, Eastman Kodak Company, Rochester, N. Y. Dental Radiography and Photography, 35(2):39-45, 1962.

The safelight lamp in the processing room is more important today than ever before because of the increased sensitivity of the new x-ray films. With proper safelighting even these new "faster" films can be handled in light we can see by. Some processing rooms are so bright that you could read the small print of a newspaper. Others are so dark and gloomy that you might as well be working in total darkness. Neither condition is necessary or correct for x-ray film processing.

The intensity of the illumination is partially controlled by the wattage of the bulb. Direct illumination with the light shining downward requires a smaller bulb than indirect in which the light is reflected from the ceiling. This is most important with fast film, such as Ultra Speed.

With two lamps at the same distance, one having a 7-1/2 watt bulb and the other a 10, the intensity of the 10-watt bulb will naturally be greater than that of the 7-1/2. If 2 safelights are used, both of which are individually safe, the area of overlap of the beams at the working surface may not be safe.

The recommended distance for safelight lamps is 4 feet above the working surface. Never shorten this distance unless compensation is made by using a bulb of lower wattage. The inverse square law applies to safelight illumination. In brief if we have X intensity at 4 feet, we will have 4X intensity at 2 feet, and 1/4X intensity at 8 feet. This should be remembered if you wish to alter the distance from safelight to film. With Ultra-Speed film, the safelight lamp must be at least 4 feet above the workbench.

The intensity of the illumination varies with distance and also with the wattage of the bulb. For instance, the intensity is the same when a 15-watt is used at 6 feet, a 10-watt bulb at 5 feet, and a 7-1/2 watt bulb at 4 feet. The correct intensity can be obtained by adjusting either the distance or the bulb wattage or both.

The effect of safelight illumination on film is a cumulative one; therefore, the time of exposure is an important safety factor. Prolonged exposure to safelight illumination will result in fogged film, even if the safelight is safe for a short time. How long can film be exposed to safelight illumination before fog becomes apparent? The answer to this question must be determined in the processing room.

Faulty safelights can also be the cause of unwelcome fog on radiographs. Sometimes bulbs of too high wattage will give off sufficient heat to damage the filter, upsetting its color balance.

Although basic recommendations can be made, each processing room is an individual problem. Safety depends on many factors, each of which must be analyzed. Remember, there is no such thing as an absolutely safe safelight. Test your safelights routinely to be sure that they are not lowering the quality of your radiographs.

A simple method of checking the safety of safelight illumination is as follows: Remove a dental x-ray film from its packet and lay it on the working surface of the bench beneath the safelight lamp. Place a small coin on the film. Expose it to the safelight illumination for exactly one minute. Then process the film in the usual manner. After the film has cleared in the fixing bath, examine it before an illuminator. If you can see the outline of the coin, your safelight is not safe.

To correct this problem, you must either replace the bulb with one of lower wattage or raise the safelight lamp higher from the working surface. After you have made the correction, retest the new setup for safety in the same manner.

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The Most Important Dimension

George M. Hollenback, Journal of Southern California State Dental Assn. 24:48-49, 1961. Dental Progress 2(4): 55/287, July 1962.

It has long been appreciated that in proximal cavities the contact point must be properly restored. If this is not done derangements of a serious nature occur. This is particularly true in the case of the anterior teeth. The structure of the dental arch is usually of such a nature that when the mesiodistal diameter of the anterior teeth is not maintained, the anterior portion of the arch will collapse. The teeth remain in close contact regardless of the fact that their contours may have been largely destroyed and with the continuing loss of the mesiodistal dimension this phenomenon will continue. This unfortunate consequence is serious. The interdental papilla will be completely destroyed. During this process infection gains entrance, thus a serious pathologic lesion follows. With the loss of the interdental papilla, deterioration of the alveolar process will occur, thus these lesions become very destructive. Separation of the teeth is difficult or impossible as the dental arch has accommodated itself to these abnormal positions of the anterior teeth, thus a condition is established which cannot be successfully remedied. The pathologic process continues and in course of time the teeth are lost from the effects of periodontal disease. What a tragedy this is and how unnecessary! If proper attention is given to carious lesions in their incipiency and well-made gold foil restorations placed, this condition will never ensue.

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A Study of the Technique of Root Canal Therapy

Kensaku Suzuki, Imao Sunada, Wataru Nagasawa, Department of Operative Dentistry, School of Dentistry, Tokyo Medical and Dental University.
J Dent Res 41(3): 508-509, May-June 1962.

An apparatus for enlarging the root canals by a slowly rotated, engine-driven reamer has been devised. The rotation of the reamer is automatically stopped just when the tip of the reamer reaches the apical end. Sunada reported the method for accurate measurement of the canal length based on the fact that the electric resistance between the periodontal space and the mucous membrane is almost the same. The principle of this apparatus is a combined application of Sunada's findings with a special contra-angle, to which the attached reamer operated in the same way as the usual hand reamer. With this apparatus, 136 teeth were treated; the canals were enlarged to the apex. Formocresol was applied to them and sealed with zinc oxide and eugenol cement at the first visit. An average of only 1.1 treatments per tooth was necessary to achieve negative cultures of the canals. Very few teeth became more painful or elongated.

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Personnel and Professional Notes

Training Affiliation Established Between Georgetown University and U. S. Naval Dental School. A contract that establishes a close academic relationship between the Graduate School of Georgetown University and the U. S. Naval Dental School, NNMC, Bethesda, Md., was formalized recently in the office of the Surgeon General of the United States Navy. Those present at the ceremony were Rev. Joseph F. Cohalan, S. J., Vice President in Charge of Medical Center Affairs and Rev. James B. Horigan, S. J., Dean of the Graduate School, Georgetown University. Representing the United States Navy were the Surgeon General, RAdm Edward C. Kenney, MC, USN; RAdm Curtiss W. Schantz, DC, USN, Assistant Chief, Bureau of Medicine and Surgery (Dentistry) and Chief of the Dental Division; and Capt Arthur R. Frechette, DC, USN, Commanding Officer, U. S. Naval Dental School.

Under the terms of the contract Georgetown University will grant a total of twelve hours' credit toward a Master of Science degree for certain basic science courses offered in the ten-month General Postgraduate Course given at the Naval Dental School. The courses will be offered jointly by the two institutions. They will be taught by members of the faculty of Georgetown University and by staff members of the Naval Dental School. The latter have been appointed as lecturers on the Dental Faculty of the University.

The courses for which credit will be granted under the new contract are Anatomy, Biochemistry, Research and Biostatistics, Microbiology, Pathology, Pharmacology, and Physiology. Staff members of the Naval Dental School who have been named as lecturers are Capt Henry H. Scofield, DC, USN;

Capt Gordon H. Rovelstad, DC, USN; Cdr Louis W. Wachtel, MSC, USNR, and Lt John S. Lindsay, DC, USN. Staff members of Georgetown who will teach at the Naval Dental School are Walter C. Hess, BS, PhD; Mortimer Lorber, BS, DMD, MD; John L. Nemes, BS, MD, PhD; Roy E. Ritts, Jr., AB, MD, and Othmar C. Solnitzky, AB, MA, PhD, MD.

Consummation of this contract marks the most recent development in the beneficial relationship that the Naval Dental School has long enjoyed with various educational institutions in the Washington, D. C. area.

New Standardized Dental Item.

<u>FSN</u>	<u>Nomenclature</u>	<u>Unit Issue</u>	<u>Unit Price</u>
6520-823-8172	Bur, Dental Excavating, Angle Handpiece, Tungsten Carbide #557 6's	Pkg	\$2.60

Voluntary Retirement as of 1 August 1962.

Capt Earl V. Gerglund DC USN	26 years	NAS Miramar, Calif.
Capt Gerald H. Bonnette DC USN	22 years	NH Portsmouth, Va.
Capt Edward A. Gargivlo DC USN	20 years	NH Philadelphia, Pa.
Capt Harvey S. Johnson DC USN	21 years	NH Chelsea, Mass.
Capt Walter A. Weaver DC USN	20 years	MCAS Cherry Point, N. C.
Capt Robert B. Wolcott DC USN	21 years	ADCOM Great Lakes, Ill.
Capt Bruce H. Carney DC USN	20 years	NH San Diego, Calif.

3rd Dental Company Is Division Champion. The 3rd Dental Company softball team, representing Headquarters Battalion, 3rd Marine Division, on 21 July 1962 completed the softball play-offs to become the 3rd Marine Division Champions.

The team began in Battalion competition and won the privilege of representing Headquarters Battalion in the Sports Task Organization by winning 12 games and losing 1. While representing Headquarters Battalion, the 3rd Dental Company team proceeded to become number one in the Sports Task Organization by winning 4 games and dropping 1.

Moving up to Division level of competition, the 3rd Dental Company, again representing Headquarters Battalion, won 4 games straight, 3 games being shut-outs by the strong right arm of Chief Dental Technician Jack Douglas. The 3rd Dental Company, being the smallest Company in the Division but playing mighty big softball, is now the 3rd Marine Division Champion.

The Commanding Officer, Capt Meredith M. Mead, DC, USN, seems to be the "good luck charm" for Dental Company teams. As Executive Officer, 2nd Dental Company in 1957, he provided his loyal support to that Company's softball team while Chief Douglas pitched his team to the 3rd Marine Division Championship. Members of the 3rd Marine Division Championship team are: J. H. Douglas, B. N. Miller, R. E. Clowes, F. N. Ballinger, M. F. Wilson, J. M. Jordan, M. Lewandowski, J. H. Crotz, J. R. Ammons, J. N. Docter, R. R. Reschke, G. Ault, and R. G. Hanks.

Captain Sherman Named Acting Chairman. Capt Granville Sherman, Jr., DC, USNR, member of Naval Reserve Dental Co 6-12, Memphis, Tenn., has been named Acting Chairman of the Department of Pedodontics at the College of Dentistry of the University of Tennessee and Acting Director of the Educational Project in Children's Dentistry. Dr. Sherman is Associate Professor in the Department of Operative Dentistry and is also Director of the Special Program of Chairside Assisting for Dental Students. In his new position, Dr. Sherman will continue with his Chairside Assisting Program, and will also incorporate it into the pedodontic program.

Captain Kyes Selected for Rear Admiral. Navy Capt Frank M. Kyes, Director of Dental Activities of the 9th Naval District with offices at Great Lakes, Ill., was selected for promotion to the rank of Rear Admiral in the Navy Dental Corps. A native of Parker, South Dakota, Capt Kyes entered the Navy Dental Corps in 1936. He became Director of Dental Activities and Dental Reserve Program Officer of the 9th Naval District in December 1961.

Navy Dental Officer Saves Japanese Boy. The value of periodic review of life saving procedures became stark reality to personnel of the U. S. Dental Clinic, Yokosuka, Japan, recently.

Lt Wayne J. Toth, DC, USN, was swimming at Nagi Beach, Yokosuka, when he noticed a swimmer repeatedly ducking his head under the water and calling out in Japanese. The youth was wearing an under-water face mask and at first he appeared to be playing and attracting attention.

Lt Toth investigated when the young swimmer kept his head under water for what seemed a long time. After touching the boy's head and receiving no response, he pulled the boy's head above the surface and immediately struck out for shore.

On shore Lt Toth forced the mouth open, checked for obstacles that would affect normal breathing and administered mouth-to-mouth resuscitation. The boy began to breathe after about five minutes of treatment.

Japanese police wrapped the boy in blankets and took him to a hospital in Yokosuka where he was reported to be in good condition, but still under observation.

Several weeks previous to the incident all military personnel of the U. S. Naval Dental Clinic participated in a review of mouth-to-mouth resuscitation procedures as part of the normal indoctrination and training program to maintain and increase professional proficiency.

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Whatever there is of greatness in the United States, or indeed in any other country, is due to labor. The laborer is the author of all greatness and wealth. Without labor there would be no government, and no leading class, and nothing to preserve.

—U. S. Grant



PREVENTIVE MEDICINE

Paralytic Shellfish Poisoning from Oysters - California

Morbidity and Mortality Weekly Report, Epidemiological Report, 11(32):
256, August 17, 1962.

The first incident in California of shellfish intoxication following the ingestion of oysters has been reported by the California Department of Public Health.

Four residents of Solano County became ill on August 1 with tingling of the lips, numbness of the extremities, muscular incoordination and difficulty in walking. They had consumed raw oysters purchased the same day from a restaurant on the coast about 50 miles north of San Francisco. The oysters had been harvested from a commercial oyster bed in Drakes Bay, Marin County.

Samples of the oysters were examined by the California State Department of Public Health, Division of Laboratories, on August 3 and were found to contain 9600 mouse units of toxin per 100 grams, or approximately 24 times the maximum safe level of 400 mouse units per 100 grams. (Levels as low as 2400 mouse units per 100 grams have on occasion proved lethal to humans.)

The Health Department prohibited further shipments of oysters from the incriminated bed and all oysters from this bed which had been distributed commercially were recalled. Oysters from nearby Tomales Bay showed toxicity levels of nearly 200 mouse units, somewhat below the symptom-causing quantity. Oysters obtained from other nearby beds showed no toxin.

The toxicity of shellfish on the West Coast usually arises as a result of their consumption of Gonyaulax cantanella, a microscopic unicellular plankton organism. These organisms are sometimes present during the summer months in large numbers and may impart a deep rust color to the sea, the so-called "red tide." A quarantine order is issued annually by the California Health Department prohibiting the sale of mussels and warning against eating the dark meat of clams during the period, May 1 to October 31. Ordinarily, shellfish in bays and estuaries, such as oysters, are less affected by the organism than are those on the open shoreline.

Oysters were first incriminated in outbreaks of shellfish poisoning in British Columbia in 1957 where 34 of 61 cases were attributed to oyster consumption.

Since first recognition of the problem of paralytic shellfish poisoning in 1793, about 800 cases and 175 deaths have been recorded in various parts

of the world. Principally involved have been mussels and soft-shelled clams.* Most cases have been reported from the West Coast including California, Oregon, Washington, British Columbia, and Alaska. Smaller outbreaks have been recorded in Nova Scotia, New Brunswick, Quebec, and Maine.

*Ref. : McFarren, et al. Public Health Significance of Paralytic Shellfish Poison. Adv. in Food Research 10:135-179, 1960.

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Bacterial Diseases

Communicable Disease Center, Atlanta, Georgia. Veterinary Public Health Newsletter, April 1962.

Researchers at NIH Link Eaton Agent to PPLO Microbes

Researchers at the National Institutes of Health have provided evidence that the Eaton agent, recovered in 1944, can cause lower respiratory tract illness in man ("Growth on Artificial Medium of an Agent Associated with Atypical Pneumonia and Its Identification as a PPLO." R. M. Chanock, L. Hayflick, and M. F. Barile. Proceed. Natl. Acad. Sci., Jan 1962, pp. 41-49) They have suggested that the Eaton agent may be a "pleuropneumonia-like organism" (PPLO) rather than a virus. These workers have shown that the agent can be grown on cell-free media. Viruses which are cell parasites cannot so survive.

This is the first PPLO linked with any human disease. The findings represent not only a step toward diagnosis and prevention of this prevalent form of pneumonia but also the "capture" of an agent which may give important information about its kind.

Recent studies have shown that the Eaton agent is associated with at least 90% of pneumonias in which cold agglutinins develop during convalescence, as well as in a significant proportion of cold agglutinin negative pneumonia. In one large Marine recruit population the Eaton agent was associated with 51% of 530 pneumonias occurring over a 16-month period.

For many years PPLO strains other than the Eaton agent have been known to infect man without causing disease. Association with human disease was not entertained, however, until the present study.

The name "pleuropneumonia-like organism" was coined after Pasteur's associates, Nocard and Roux, isolated the prototype organism from diseased cattle in 1898 and could not fit it into any established classification. The prototype PPLO, Mycoplasma mycoides, found in Pasteur's time is responsible for a virulent pneumonia in cattle. Entire herds have been destroyed to avert epidemics with the original bovine PPLO. Other types of PPLO have been found in rats, birds, sewage and various tissue culture cell lines.

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Toxic Pesticides

Anonymous, Florida Health Notes 54(5), May 1962.

Some pesticides are highly toxic to human beings. One drop of tetraethyl pyrophosphate, Parathion or phosdrin concentrate on the skin of a small child will usually be fatal. There is very little chance of saving the life of a child who has spilled a concentrated solution of highly toxic organic phosphate insecticide on his skin.

Ten individuals, most of them small children, lost their lives from contact with the organic phosphate insecticide Parathion in Florida during 1961. A number of children in Tampa took an innocent-looking burlap bag from a trash pile. The bag had been previously placed around a sack of fertilizer taken from a watermelon field in a county and transported to Tampa. The children filled the bag with rags and attached it to their swing around 11:00 a. m. That night around 7:20 one little girl was taken to a hospital and died soon after admittance. Her little brother became ill shortly thereafter and died in the hospital during the night. Three other children who had played on the swing were taken to the hospital but recovered. The burlap bag, upon chemical examination was found to have been contaminated with an oil solution of Parathion, which caused the deaths and acute illness of the children.

A third death was caused by a child contacting 15% Parathion and chlordane dust, which had been applied inside the home by an unlicensed pest control operator who was untrained and offered his services illegally. The most recent death in Tampa occurred in a 17 year old boy, who was handling empty Parathion drums which had not been decontaminated before their sale to a junk dealer. Six other children died from contact with Parathion, which in most cases had been taken into the home.

In a small Florida town, a small child found a bottle partly filled with pesticide, his father (a farm laborer) had brought home and deposited under the stair steps until he was ready to use it on some orange trees. The child opened the bottle and spilled some of it on his body. He was rushed only a few miles to a hospital where complete instructions for treatment for poisoning with the particular pesticide were on the bulletin board of the emergency room. The doctor immediately began the prescribed treatment but all in vain. The child died during the night.

Handling highly toxic pesticide concentrates allows very little margin of error and requires strict adherence to safety precautions. As an example, one fluid ounce of 80% Parathion emulsifiable concentrate contains approximately 28,000 mg of poison. The minimum lethal dose of Parathion for a 154 pound man has been established at approximately 300 mg. Due to the high concentration of poison, all pesticide concentrates should be handled with caution.

Any pesticide will bring about serious illness and, possibly death if consumed by a person in sufficient quantity. However, highly toxic pesticides such as Parathion are not used in the home as are insecticides normally purchased at the nearest supermarket or filling station. But a word of caution is

advanced here: If you spray your kitchen, for instance, with a very heavy concentration of an insecticide, always have some ventilation and do not breathe the fumes for a long period. If your cooking and eating utensils are sprayed, be sure you wash them thoroughly before you cook or serve food in them.

Above all, the greatest hazard you face with home insecticides is in carelessly storing where small children can get to them. Last year there were 425 cases of poisoning by home insecticides, rodenticides and herbicides reported by 18 Poison Control Centers in Florida. Undoubtedly, there were more which were treated by private physicians and which were not reported.

The following additional precautions should always be observed:

(a) Be sure your commercial pest control operator is a State Board of Health licensed operator.

(b) Know the safety precautions that apply to the pesticides you are using. This information can always be obtained by reading the label.

(c) Protective clothing should be worn when handling concentrate materials and when applying highly toxic pesticides. This clothing should consist of rubber or neoprene gloves, water repellent shoes, coveralls, a hat, and a respirator that has been approved for the chemical being used.

(d) It is most essential that the skin be protected from the spray during the operation. Thorough washing with plenty of soap is most important after engaging in spraying or dusting operations. Clothing that becomes contaminated should be removed immediately. Spray-clothes should be changed daily, laundered with an excess of detergent and thoroughly rinsed. Store contaminated spray clothes so that they are not accessible to children. This includes coats, jackets, or shoes that are exposed to pesticides.

(e) Smoking should take place only after washing the face and hands. A complete shower or bath with plenty of soaping should be taken each night after a day's spraying operations in order to minimize the danger of pesticide poisoning.

(f) If pesticide concentrates are spilled on the skin, immediately spray or wash the contaminated area with water, then with soap and water. If the pesticide is a highly toxic material, wash quickly and leave immediately for the hospital. En route sponge contaminated areas of the body with rubbing alcohol, then dry the area quickly with a towel. Moisten the contaminated area with water, and apply baking soda. This procedure will remove and neutralize most of the poison.

(g) All highly toxic pesticides should be kept in a well-ventilated storage place, secured at all times by a lock. Under no circumstances should a highly toxic pesticide be brought into the home. Only household insecticides, such as are sold in garden supply, hardware or food stores, should be kept at your residence. These should be secured in a locked cabinet or closet, and by all means placed out of reach of children.

(h) The disposal of empty containers is important. Drums of 55 gallon or larger should be rinsed thoroughly by a worker wearing protective clothing. If even a few teaspoonfuls of the deadly poison remain in the container and it is upended for shipment or storage causing the poison to contact a person,

it could bring about serious poisoning. The smaller sized drums, of 5 and 10 gallon size, should be punched full of holes and sold only for scrap metal. If this is not done, all too often the smaller containers wind up on farms and at homes as water buckets or feed containers. Law enforcement agents raiding an illegal still in South Florida even found an empty Parathion can being used as a condenser.

(i) Any sacks, rags, or paper material contaminated with a poison pesticide should be burned at least a thousand feet from the nearest house and then buried at least 18 inches deep in the ground. The individual doing the burning should wear a mask and stay out of the smoke.

(j) In metropolitan areas, all disposable metal and glass containers should be thoroughly flushed out with water, punctured or broken, and disposed of by wrapping in paper, tying with string, and placing in a garbage can, or by burying at an approved dump or sanitary fill.

The two major types of pesticides that are available on the market today are chlorinated hydrocarbons, such as DDT, and organic phosphates, such as Parathion. There are many other types. Early symptoms of chlorinated hydrocarbon poisoning are headache, nausea, vomiting and dizziness. Advanced symptoms include prostration and convulsions, followed by coma and death. Early symptoms of poisoning by the organic phosphates are nausea, tightness in the chest, giddiness, cramps, headaches, excessive sweating, twitching of muscles and salivation. Frequently the eyes will have pinpoint, non-reactive pupils. Other symptoms include slowed heartbeat, loss of reflexes, convulsions and coma. There are usually no symptoms or signs until the cholinesterase level reaches approximately 25-30% of normal. Phosphatic poisoning in the early stages is sometimes mistaken for heat exhaustion, severe respiratory infection or asthma.

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Coin-Operated Dry-Cleaning Machines

Theodore J. Elias, Industrial Hygiene Engineer, Division of Industrial Hygiene, Los Angeles County Health Department, Los Angeles, California, 9 June 1962.

During recent years, coin-operated washing machines for washing the family laundry have become increasingly popular. Because of such popularity, coin-operated dry-cleaning units were developed and have been placed in operation. Such "do-it-yourself" dry-cleaning machines pose problems in the protection of the public from hazardous concentrations of the cleaning solvent.

Two types of organic solvents are used by the dry-cleaning industry. Petroleum base solvents, flammable, represented either by 140F solvent or by Stoddards solvent. The second, a synthetic-type solvent, nonflammable, is represented by perchloroethylene. Both types of solvents are toxic with the synthetic solvent being approximately 5 times as toxic as the petroleum base solvent. The mechanism of the "do-it-yourself" unit is similar to that of an

automatic washing machine with electric timers controlling the cycles of operation. The operation cycle consists of agitating soiled clothing in the solvent, centrifugal extraction of the solvent from the clothing and removal of the last traces of solvent from the fabric by drying in a stream of heated air.

Safety devices to protect the public from dangerous concentrations of solvent vapor are built into each unit. The machine is inoperable unless the door through which the machine is charged is properly closed and locked. Once this door has been closed and the operation started, the door remains in a locked position and cannot be opened until the cleaning operation is completed. An integral part of the unit is an exhaust fan which is energized as soon as the door is opened at the end of the cleaning cycle. This fan draws air from the room into the unit and away from the customer to prevent fumes within the unit from escaping through the open door and being inhaled by the customer. A timer setting provides a drying cycle of sufficient length to insure removal of solvent from padding and other retentive portions of the garments being cleaned.

Governmental hygienists, engineers, and chemists, together with fire prevention officials, have incorporated the following as further safety procedures in these installations. The exhausted air from the machine must be vented to the atmosphere and never into an area where it can be mixed with air used for the combustion of gas-fired equipment. A qualified operator must be present on the premises while the unit is in use and protective equipment must be available for use in the event of a mishap or accident with the machine. Detailed operating instructions are to be posted together with procedures to be followed in case of accident or malfunction of the machine. Odorous detergents and odor-masking agents should not be incorporated in the solvent as such odors might cover up a hazardous concentration of solvent vapor in the atmosphere of the operating room. It is also important that a list of articles which should not be subjected to dry cleaning be listed near the unit. Typical of these articles are: sleeping bags, foam, sponge or other stuffed cushions, plastics, rubber, some synthetics, and certain drapery materials.

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Glaucoma

Capt. James M. Woodward, MC, USAF; USAF Hospital, Andrews AFB, Md.
U. S. Air Force Medical Service Digest XIII (V): 19-20, May 1962.

The term "glaucoma" is applied to several separate and distinct conditions of the eye which, however, have one thing in common. This common characteristic is the elevation of the intraocular pressure above a physiologically intolerable level so that damage occurs to the eye. This pressure elevation may be acute and explosively symptomatic as in "angle-closure" glaucoma. It may be insidious and without any obvious symptoms till the ocular damage is rather great as in some "open-angle" ("simple") glaucomas, or its symptomatology

may lie somewhere in between. It is true that there are cases of glaucoma which never appear to have pressure rises exceeding the upper "average normal" limit, but these are extremely uncommon and their detection and diagnosis complex.

Estimates of percentage of the populace afflicted with some form of glaucoma, primary or secondary, vary depending upon the criteria used, the type and location of the population examined, and the like. It may be said that somewhere in the range of 1% of Americans probably has definite glaucoma which is being, or should be, treated. Another segment of the population to be considered, however, is the rather large "suspicious" group which have some of the signs of one of the diseases of this complex. This group has been estimated variously up to 15% of the people.

In general, the detection and diagnosis of glaucoma is best left to the ophthalmologist. The tests which he uses may include indentation tonometry, visual fields, tonography, biomicroscopy, gonioscopy, ophthalmoscopy, aplanation tonography and any of several provocative tests. For obvious reasons, many people will never get to an ophthalmologist and thus some glaucoma suspects will be missed. If some screening measures were done during regular physical examination, the occurrence of missed glaucoma and blindness would undoubtedly decrease.

Screening tests for glaucoma have the same fallibilities as screening measures for detection of other conditions, namely there will be false positives and false negatives. An ideal screening test should be available, easily accomplished, and readily interpretable. Of all the tests for glaucoma, indentation tonometry best fits these criteria.

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Salmonella Infantis Food Poisoning

Morbidity & Mortality Wkly. Rpt., PHS, Communicable Disease Center, Atlanta, Ga., II(28):218, 20 July 1962.

On May 31, 1962, 164 of 177 students and adults (93%) who attended a high school commencement banquet in a Maryland town became acutely ill within 8 to 24 hours following the dinner. The victims experienced a sudden onset of general malaise, abdominal cramps, and severe non-bloody diarrhea; some had nausea and vomiting. There were a few instances of fever of 103° or more. Although 5 were hospitalized there were no fatalities. Most recovered in 1 to 3 days. Thirteen additional cases occurred in 5 families to which turkey from the banquet had been carried.

The menu consisted of salad, cold roast turkey, dressing, hot gravy, candied sweet potatoes, green beans, hot rolls, ice cream cake roll, and iced tea. The food was put on the plates in the kitchen; each person had the full menu set before him. Epidemiologic evidence pointed strongly towards the turkey-dressing-gravy combination as the contaminated items of the menu.

Bacteriologic examination of the turkey and dressing samples yielded Salmonella infantis, the same organism isolated from the stools of 20 of the victims. Of the 3 known food handlers one had eaten some of the turkey during preparation and developed clinical symptoms within 24 hours, with a positive stool culture for Salmonella infantis.

Six turkeys averaging about 20 lbs. each were prepared for cooking on Tuesday, May 29. The turkeys were thawed, washed, and stuffed with a prepared dressing; 5 were baked that afternoon for 5 hours at 325° F, and after a 3 hour cooling period, they were placed in a crowded icebox. The sixth turkey, uncooked, was placed in the freezing compartment of the icebox and was cooked the next day. All 6 turkeys were placed in a large, more adequate icebox in the cafeteria on Wednesday, and were removed at 5:00 p. m. on Thursday, the evening of the banquet, and warmed for serving.

The turkeys had been obtained from a large poultry processing plant in a Western State. This plant slaughters 10,000 turkeys daily from approximately 60 farms in a 150 square mile area. The turkeys were frozen shortly after packing. Because the specific date of slaughter could not be ascertained, it was not possible to incriminate any single flock.

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Erythema Infectiosum

Los Angeles County Health Department, Compton Health District, Wkly. Rpt., 7 and 14 July 1962.

Historical

First described in 1886 as a "peculiarly localized rubella," called erythema infectiosum in 1889, and described as a separate clinical entity in 1896, erythema infectiosum was not given the name "fifth disease" until after the turn of the century. Filatov-Dukes disease was not described until 1900, but probably because of earlier publicity it was called "fourth disease." Early descriptions emanated from central Europe but, since that time, some 60 or more epidemics have been described in the literature all over the world. The first reported epidemic in the United States occurred in 1926.

Epidemiology

Most laboratory attempts to determine cause have been unsuccessful. Three virus isolations have been made, one by Nassi of Italy in 1946, the second was by Payzin of Turkey in 1958 and the third at the Wistar Institute at the University of Pennsylvania in 1956. However, the disease has not been reproduced. Children of school age are especially predisposed but the disease may attack preschoolers and adults. The disease most commonly affects the 4 to 12-year age group. Twice as many girls as boys have the illness. Contagiousness is

high; generally, however, not all the children in a family become infected. The mode of transmission is unknown but is probably by droplet infection. The incubation period has not been definitely established but it has been said to be from 2 to 21 days with an average of 9 to 14 days. The incubation period in the Compton District epidemic of the Los Angeles County Health Department ranged from 4 to 19 days.

Most outbreaks occur in the spring in small epidemics. Some attacks have been reported involving from 10 to an unusual 1,000 individuals. An outbreak reaches a peak by the third or fourth week; it usually declines rapidly, but may last several months. In the Compton episode 2 patients had a recurrence of the rash as late as 10 months after apparent recovery.

Symptomatology

Prodromata are usually absent but when they do occur coryza, mild sore throat, low grade temperature, and cough are experienced. Dizziness is rare. Malaise may last throughout the illness. For purposes of description the rash may be divided into 3 stages. Stage I—A bright pinkish-red erythema appears on both cheeks accompanied by circumoral pallor. At the edges of the sheet of erythema there are bright macules. The erythema may be hot to the touch. It usually lasts 1 to 4 days but may persist much longer. There may be mild redness of the throat and tongue, macules on the palate and enlarged cervical glands. Stage II—Within 24 to 48 hours, if not simultaneously, the rash is noted on the extensor surfaces of the arms and legs. The hands and feet remain free. The rash may occur under the chin, upper part of the chest or back, and on the buttocks. The rash on the extremities lasts, as a rule, up to 14 days. The rash sometimes assumes a peculiar reticulated appearance described as "lace-like." Stage III—This may be called the stage of evanescence for the rash may disappear for hours, days or weeks only to reappear for some unknown reason or from some trauma to the skin such as sunlight, rubbing, hot water bathing, and injections. This stage does not occur in all cases but when it does it may last several months.

Besides the typical rash described, papules, puffiness, scarlatiniform, papulovesicular bullae, and urticarial type rashes have been noted.

Pruritus occurred in 100% of the 1,000 cases reported from Italy in 1950. However in the Compton outbreak, pruritus was unusual, occurring in but 2 of 11 cases.

Diagnosis

This is based on the course, characteristic eruption and the usual absence of constitutional symptoms and complications. One complication not mentioned elsewhere was noted in the Compton episode. One patient who developed cervical adenopathy had one gland the size of an almond which was still present one year later although the other enlargements had long disappeared. It should be noted that if the disease has never been seen, a diagnosis cannot be made on the

presence of one suspected case.

Differential Diagnosis

Erythema multiforme, German measles, measles, roseola infantum, infectious mononucleosis, allergic rashes, scarlet fever and virus rashes should be ruled out.

Treatment

A soothing lotion may be used if pruritus is present. There is no specific treatment.

Special Characteristics

1. The bright red erythema on the cheek similar to "cheeks that have just been slapped. "
2. The lace-like or network-like configuration of the rash on the extremities.
3. The disappearance and recurrence of the rash, hours, days, or weeks later.
4. Relapses as long as several months after apparent recovery.

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Influenza Immunization

Recent patterns of incidence indicate that many outbreaks of influenza A₂ (Asian) will occur in the United States during the 1962-1963 winter season.

Influenza is particularly dangerous to pregnant women, and persons suffering from chronic diseases, especially those with cardiovascular, pulmonary, renal or metabolic diseases, as well as all persons over 45 years of age.

Persons in the above categories should be encouraged to be immunized.

All active-duty military personnel will receive influenza vaccine annually in October and the vaccine will be offered to dependents on a voluntary basis.

(Preventive Medicine Div., BuMed)

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New York State has established a uniform inspection program for meat and meat food products. As of March 1, 1963, the State Commissioner of Agriculture and Markets will have jurisdiction for inspection purposes over all meat and meat food products plants outside New York City except those operating under Federal inspection. Localities currently operating meat inspection programs will continue to do so, and will be reimbursed by the State to the extent of 50% of the net cost of their inspection programs.

(US DHEW PHS Public Health Reports 77(7):565, July 1962)



Did you know:

That foot and mouth disease, or aftosa, is one of the most ruinous of animal diseases? It has ravaged herds all over the world, afflicting cattle, buffalo, camel, sheep, and goat. Losses incurred in Europe as a result of the great outbreak in 1951 amounted to over \$600 million. In many countries, the massive slaughter of animals in infected areas is the usual method of stopping the spread of the disease. This is often combined with vaccination for control. Man is mainly affected by the loss of animal protein in the diet.

That ticks can spread a large number of virus and bacterial diseases among animals, particularly sheep? Some of these diseases, such as Q fever, can also be transmitted to man by infected ticks. Spraying with insecticide will destroy ticks and so limit the spread of the diseases.

That due to a virus disease known as African horse fever, from 2 to 3 hundred thousand horses died in 1960 in an area stretching from Turkey to India? A vaccine exists, but the preparation of 5,000 doses requires as many as 350 white mice. To halt the disease some 13 million horses and mules would have to be vaccinated in the infected territories. The horses of wandering nomadic tribes are often responsible for distributing the infection.

That swine fever, a virus disease, is fatal for about 95% of the animals affected? This fever, introduced from Africa, cost Spain the amount of 500 million pesetas in 1960. One hundred twenty thousand pigs had to be slaughtered in Spain last year. The Portuguese and French borders are severely guarded. The virus can be introduced into neighboring countries by stray dogs or cats, and even by a casual or illegal piece of sausage. Slaughter is still the only available method at the moment to limit this disease.

That a virus disease, known as Newcastle disease, attacks hens, leaving no survivors? In the past 20 years, hundreds of thousands of hens had to be destroyed and mass vaccinations were performed in order to keep this

disease under control and avoid the complete loss of national hen stocks in many countries. A new vaccine has been tried out in Thailand and appears to be holding some promise.

That coconut palms are being attacked by a disease, coco fever, about which very little is known? First, the coconuts fall to the ground, the leaves turn yellow and drop, trunks dry up, and all the trees become petrified. Is it due to bacteria, or to a microscopic mushroom? Is it transmitted by wind, by water, by insects, by man? Solving these questions is essential because the disease is highly contagious and millions of human beings depend on copra for their livelihood.

Bibliography

1. From the World Health Magazine, World Health Organization, Geneva, Switzerland. Special Issue, September-October 1962

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RESERVE



SECTION

THE BERRY PLAN

Armed Forces Physicians' Appointment and Residency Consideration Program (Part II)

6. Participants who are not selected for deferment to complete residency training will be notified during the first week of October. They may accept the post-internship or delayed call to duty or withdraw from the program, according to their desires as expressed in paragraph 4 of the Statement of Preference.

7. It should be remembered that all participants, regardless of whether they desire immediate active duty, delay in call, or deferment to complete residency training, must apply for reserve commissions by 1 December 1962. Failure to apply for a commission by the specified date will be construed to mean that you no longer desire to remain in the program.

8. Physicians deferred for residency training will be ordered to active duty upon completion of their training, to fill positions for which they were selected in the program. Occasionally, because of circumstances beyond the control of the Department of Defense, an anticipated position may not be

available at the time a deferred resident completes his training. In such instances, the military department will notify the resident concerned, with a view toward working out an acceptable course of action. The duration of the period of deferment is generally that required for American Board eligibility.

9. If for any reason training is terminated prior to completion of a residency program either by the physician or the hospital where he is in training, the participant will be brought to duty at the earliest practicable date. All applicants selected for deferment are encouraged to complete all of their residency training before fulfilling their military obligation.

10. Subsequent Deferment: Physicians deferred for residency training in this program will be notified by the service in which commissioned, well in advance of completion of a residency training year, of the status of their deferment for the following year. It is the general policy of the Department of Defense to recommend the deferment of all residents selected in this program for the minimum number of years of residency training required by the specialty boards. Forms relating to the second and subsequent years of deferment will be supplied by the service concerned and should be returned to that service.

11. Military Status: Participants who are selected for deferment in this program, although holding reserve commissions, will retain a civilian type status until such time as they actually enter on active duty. They will not receive pay from the service in which commissioned while in civilian status. Participants may accept the normal stipend paid by the hospital to its residents. It will not be necessary to obtain uniforms prior to entry on active duty.

IV. SUMMARY OF PROCEDURE

A. If you desire active duty immediately after internship or 1 year after internship:

1. Complete and return a Statement of Preference (SD Form 249) by 15 September 1962. (Be sure to check 3a or 3b on the form.)

2. One of the military services will communicate with you regarding application for commission.

3. Complete and return application for commission to the sponsoring service by 1 December 1962. (Indicate on application form the quarter of the year following internship in which you prefer to be called to active duty; your preference will be honored insofar as service requirements permit.)

4. Accept a commission when it is tendered.

B. If you wish to complete residency training before call to active duty:

1. Complete and return a Statement of Preference (SD Form 249) by 15 September 1962. (Be sure to check 3c on the form and list one specialty.)

2. One of the services will communicate with you regarding application for reserve commission. Complete and return application to the sponsoring service by 1 December 1962.

a. If selected for deferment: (1) You will be notified and furnished a "Request for Deferment and Hospital Agreement" (SD Form 247);

complete the form as instructed and return by 1 March 1963; (2) accept a commission when it is tendered.

b. If not selected for deferment: (1) You will be notified.

Accept a commission when it is tendered if you wish to remain in the program. You will be brought to duty according to your preference as expressed in paragraph 4 of the Statement of Preference; (2) If you do not wish to remain in the program you may, of course, decline a commission when it is tendered. (You may withdraw from the program at any time before accepting a commission.)

V. CORRESPONDENCE

A. Correspondence pertaining to the Department of Defense program in general, or to initial acceptance therein, will be addressed to: Assistant Secretary of Defense (Manpower), Attn: DASD(Health & Medical), The Pentagon, Washington 25, D. C.

B. All correspondence pertaining to commissioning, or matters arising subsequent to commissioning, such as status of application for commission, date of call to active duty, or specific assignment, will be addressed to the Surgeon General of the Army, Navy, or Air Force, as appropriate, Washington 25, D. C.

C. Questions concerning individual liability for induction may be answered only by the Selective Service System; therefore, such questions should be addressed to your Selective Service Local Board.

(To be continued)

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