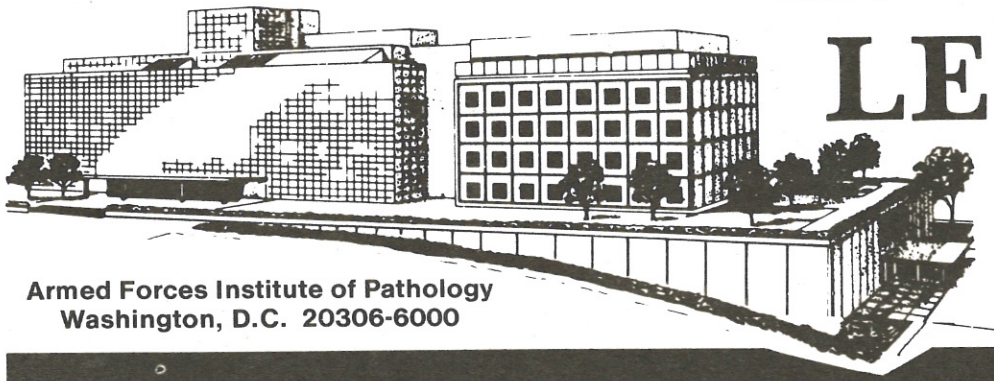
the AFIP LETTER



Armed Forces Institute of Pathology
Washington, D.C. 20306-6000

Vol. 147, No. 4
August 1989

The Director's Message: The Armed Forces Medical Examiner System

A little over a year has passed since the establishment of the Armed Forces Medical Examiner System (AFMES) with its main office at the Armed Forces Institute of Pathology. For many, the DoD Directive establishing the System was viewed as simply a name change for the Department of Forensic Sciences. For others, it was an opportunity, long overdue, to establish a global network which would provide a more uniform product, as well as a quicker response in medicolegal death investigations coming under military jurisdiction. An aggressive recruiting effort has provided an expanded staff assigned to the Armed Forces Medical Examiners' Office (AFMEO), as well as the ability to supplement the education and research efforts. This capacity has been enhanced by a growing involvement in other Federal investigations through a series of memoranda of understanding and Joint Chief of Staff (JCS) cooperation.

During the past year, staff members have participated in a number of high visibility cases including several mass disasters. Teams have traveled to Korea, Germany, England, France, Panama, Peru, and Africa, as well as throughout CONUS. Educational commitments have increased substantially, and research efforts are underway in DNA fingerprinting, criminalistics, mass casualty management, and ballistic trauma. However, based on the total number of cases referred to the AFMEO, a large number of cases continue to be handled locally without the knowledge of the Armed Forces Medical Examiner. Hopefully, the Tri-Service Regulation regarding the Armed Forces Medical Examiner System will be approved shortly and will provide further guidance to local commands. The successful investigations of the turret explosion aboard the U.S.S. Iowa; the aircraft accident in Peru which killed nine persons, including a Drug Enforcement Agent (DEA); and Representative Mickey Leland's ill-fated flight from Addis Ababa, Ethiopia, should allay any concerns about the mission or the capabilities of the Armed Forces Medical Examiner's Office.

A key concern of the AFMEO is that of quality assurance within the Armed Forces Medical Examiner System. This includes credentialing, privileging, and periodic reviews. It is clear that the key to good pathology practice and the lessening

CAPT Glenn N. Wagner, MC, USN, AFMES Deputy Medical Examiner, Medical-Legal Investigations, Team Chief for the recent identification mission to Peru.

Col Brent M. Koudelka, DC, USA, Department of Oral Pathology Chairman, and Col Kenton S. Hartman, USAF, DC, AFIP Associate Director match field dental x-rays to dental charts, at Dover AFB, during the U.S.S. Iowa mass casualty identification mission.

of litigation problems is the development of an adequate, comprehensive, enforceable quality assurance program. Within the AFMEO, quality control systems include group sign-outs, systematic reviews, conferenced communication and an upgraded registry. Work continues on an AFMES data base which is expected to provide epidemiological and demographic data regarding regional forensic problems and trends.

The success of this endeavor will largely depend on local commands being aware of the AFMES and utilizing all resources available [(202) 576-0443 or Autovon 8-291-0443]. The military hospital pathologist plays a critical role in this communication and service effort.

Robert F. Karnei, Jr.
CAPT, MC, USN
The Director

PROFILES

Fifth Distinguished Scientist Department of Radiologic Pathology

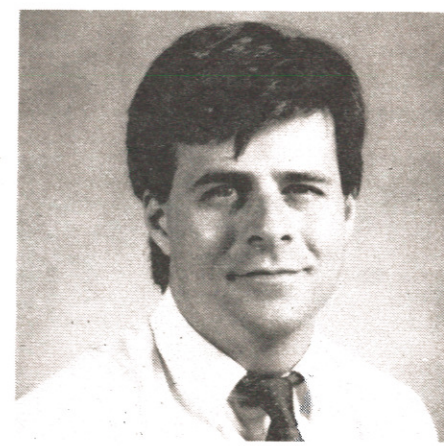
Anne G. Osborn, M.D., is the fifth Distinguished Scientist in the Department of Radiologic Pathology, Armed Forces Institute of Pathology (AFIP) for the academic year July 1, 1989 through June 30, 1990.

Doctor Osborn received a Bachelor of Arts degree in 1965 from Stanford University, Stanford, California. Following graduate study in the Department of Psychology, Harvard University, Cambridge, Massachusetts, she received the degree of Doctor of Medicine from the Stanford University School of Medicine in 1970. Following her residency in diagnostic radiology, Dr. Osborn joined the faculty at the University of Utah School of Medicine, where she has remained since 1974. She was appointed Professor of Radiology in 1982.

Current interests include computer and interactive video applications in neuroradiology instruction. Dr. Osborn is coediting the revision of the neuroradiology section of the American College of Radiology Learning File.

Callender-Binford Fellows

Dr. Andrew Farb comes to the AFIP as a Callender-Binford Fellow from The New York Hospital in Manhattan where he has completed a fellowship in Cardiology. Previous to this, he was a summa cum laude graduate of Dartmouth College. He attended medical school at Cornell University Medical College where he was selected for membership in Alpha Omega Alpha. Dr. Farb then completed a residency in Internal Medicine at The New York Hospital. Between his medical residency and cardiology fellowship, he received one year of training in Anatomic Pathology.



Previous research interests have focused on the pathology of aortic valvuloplasty and electrocardiographic variability of left ventricular hypertrophy. Currently, he is a fellow in the Division of Cardiovascular Pathology, and his research will focus on experimental models of myocardial infarction and reperfusion.

Dena Gomez, M.D., completed a one year fellowship on 30 June and will be extended for a second year. In the past year Dr. Gomez conducted a large study of hemangioendothelioma and angiosarcoma of the liver in children; participated in the development of a major museum exhibit on Growth and Development of the Human Embryo and Fetus; participated in the writing of an atlas of histology and immunohistochemistry of the embryo, fetus, and premature infant; served as a member of the pathology section of an interdisciplinary group studying interstitial lung disease in children. She has also engaged in teaching programs for pathology residents and medical students at George Washington University Medical Center and School of Medicine.

Miguel N. N. Burnier, Jr., M.D., Professor of Pathology & Chairman, Department of Pathology, Sao Paulo School of Medicine, and Director of the Brazilian Registry of Ophthalmic Pathology, will dedicate this next year to investigating lectin staining of uveal melanoma cells, and explore the role of surface carbohydrates in determining the incidence and organ distribution of metastases. Dr. Burnier completed his M.D. and internship at the Parana' School of Medicine (Brazil) in 1974. Subsequently awarded a M.S. in pathology, he was appointed Senior Associate Professor at the Sao Paulo School of Medicine in 1982, and founded the Brazilian Registry of Ophthalmic Pathology in 1985. In 1986, Dr. Burnier received his Ph.D. in Pathology and was the first medical doctor in Brazil to take double boards in pathology and ophthalmology.

AFIP ON THE ROAD

Dr. Leslie H. Sobin, Vice-chairman of the Department of Gastrointestinal Pathology and Associate Director for Scientific Publications, visited Buenos Aires, Argentina in July at the invitation of the Argentine Division of the International Academy of Pathology. He was the featured lecturer at their postgraduate course on gastrointestinal pathology. He covered gastrointestinal carcinoids, the classification of colorectal polyps and pseudoinvasion in intestinal polyps as well as a review of the new WHO histological classification of gastrointestinal tumors. Dr. Sobin also spoke on carcinoid tumors at a meeting of the Argentina Society of Pathology.

Dr. Fathollah K. Mostofi, Chairman of the Department of Genitourinary Pathology, attended the First Mediterranean Congress in Urology, held in Rome, Italy 4-7 July 1989, presenting two invitational lectures.

Our **Armed Forces Medical Examiner** staff have been out more than they've been in this last quarter. Alternating between trips to Western Europe, Dover AFB, South America, and Africa, OAFME pathologists have completed Medical Legal investigations ranging from the U.S.S. Iowa turret explosion to State Department requests for assistance in Peru and Ethiopia. The months of July and August have witnesed return visits to France and West Germany, and extended stays in Korea and the Phillipines on training and coordination visits. **OAFME** assistance was requested during FBI examination of the video footage purporting to document the remains of Lt.Col Rich Higgins, USMC. A team of nine forensic pathologists, odontologists and photographers assisted with the identification of remains from the aircraft accident which took the life of Representative Mickey Leland and 15 American and Ethiopian staff members, near Dembidollo, Ethiopia.

Dr. Florabel G. Mullick, SES, attended a Think Tank Forum "AIDS in Puerto Rico and the Puerto Rican Population on the Mainland", 28 August. Hosted by the Honorable Jaime B. Fuster, Puerto Rico's representative to the U.S. Congress, and the Puerto Rico Federal Affairs Administration, the event brought together experts in science and public health to discuss how to prevent the further spread of AIDS in Puerto Rico.

Immediate no-notice response, intense time pressures, and long hours typify all mass casualty medical legal investigations. "All hands" can include AFIP Director, CAPT Robert F. Karnei, Jr., MC, USN. Maj Deborah Kay, MC, USA, (center), with Maj Joni McClain, USAF, MC, (right) during the U.S.S. Iowa mission.

AFIP IN PERSPECTIVE

FORT STEVENS REVISITED

This last July marked the 125th Anniversary of the Battle of Fort Stevens - the Civil War Battle in which Confederate Lt. Gen. Jubal A. Early came disconcertingly close to capturing the Union Capital, and President Abraham Lincoln came under direct fire from confederate troops.

The National Park Service commemorated the historic anniversary with two months of memorial observances, reenactments and events, including weekly lectures at our own National Museum of Health & Medicine of the AFIP's Russell Auditorium. Lecture topics included a historical summary of the museum's own civil war origins, missions and evolution; overviews of battle plans and operations; and biographical sketches of key players in the events leading up to the battle itself.

Memorial observations took on a more somber note, during a Proclamation Ceremony and lantern lighting at the Fort Stevens National Park, and Candlelight Memorial observances at Grace Episcopal Church Cemetery - AFIP Deputy Director, Colonel Vernon W. Armbrustmacher, MC, USAF represented AFIP, WRAMC, and the Armed Forces as a whole.

"I find it particularly noteworthy"...said Colonel Armbrustmacher, returning the symbolic candle lantern, "that our 16th President entrusted the future of the still young republic to his armed forces only after all other efforts, political, economic and humanitarian, had failed. And equally appropriate, that at war's end, having fulfilled their charter, the citizen-soldiers promptly returned this trust to our elected officials."

Col Vernon W. Armbrustmacher, MC, USAF, Deputy Director of the Armed Forces Institute of Pathology, accepts the symbolic lantern from Pastor Richard Clifford during the July 12 proclamation ceremony at Ft. Stevens National Park.

L. to R., President Lincoln (Mr. Ted Ballard), Pastor Richard Clifford, and Col Vernon W. Armbrustmacher, on the historic Ft. Stevens battlements.

DENTAC Prosthodonists Enjoy Proximity

Colonel John R. Agar, DC, USA, Program Director of Prosthodontics for the WRAMC U.S. Dental Activity, his senior staff, and department residents enjoyed a change of pace last July 11, with a four-hour customized AFIP tour.

Areas of particular interest included our own Department of Oral Pathology (through the gracious ministrations of Department Chairman, Col Brent Koudelka, DC, USA, and CAPT John T. Werning, DC, USN), the Armed Forces Medical Examiner System, and a special "behind-the-scenes" tour of the National Museum of Health & Medicine of the AFIP (including workshops and "Wet Room").

While AFIP and U.S. Dentac share the WRAMC campus as tenant units, routine work schedules can be just as effective as geographic separation in restricting access! Special tours like this one help break down perceptual barriers, and remind colleagues of ready resources. Col Agar concurs: "Of course I've been to AFIP, but that was a few years back. AFIP is an extremely vital and active institution. Tours like this one help put everything in perspective...one gains a deeper appreciation for the incredible array of activities which fall under the AFIP umbrella."

Dr. Gloria J. Edynak, Curator, Anatomical Collections (center) introduces Col Agar (right) and dental staff to relevant archival material.

Dr. Koop Appointed to Chair Board

Dr. C. Everett Koop, former Surgeon General of the United States, has agreed to serve as Chairman of the Board of Trustees for the newly established National Museum of Health and Medicine Foundation, Incorporated. Initial priorities include a national fund raising campaign, guaranteeing key resources for revitalizing the National Museum of Health and Medicine of the AFIP. The ambitious schedule includes identification and acquisition of increased exhibit space closer in to the National Mall, maximizing visitor access, and showcasing expanded exhibits.

THE WIDE WORLD MADE SMALLER

Last minute scrambles to clear "unannounced" visits have almost been eliminated, as the international pathology community adds diplomatic procedure to their own repertoire of expertise. (Visit requests are submitted through the host nation's respective embassy through military attache' channels) and conventionally take 30-45 days for approval). As most visits to the Washington, D.C. area are planned months in advance, this seemingly extensive lead time is, in practice, rarely a problem

July visits began rather auspiciously, with "returning alumnus" **LTC Supachai Wongpichedchai** (RTA MC) Department of Ophthalmology, Royal Thai Army Medical College Hospital, Pramongkutklao, Thailand, and his wife, **Dr. Lalita Wongpichedchai**, taking advantage of their time in Washington, D.C. to visit with AFIP counterparts.

Col Martin Daly, (MC, British Army), Military Medicine liaison and special attache' for the United Kingdom and Canada, has been a very special friend to AFIP these last three years. Col Daly introduced his successor, LTC Charles W. Lyon-Dean to AFIP staff last July 7, prior to reassignment.

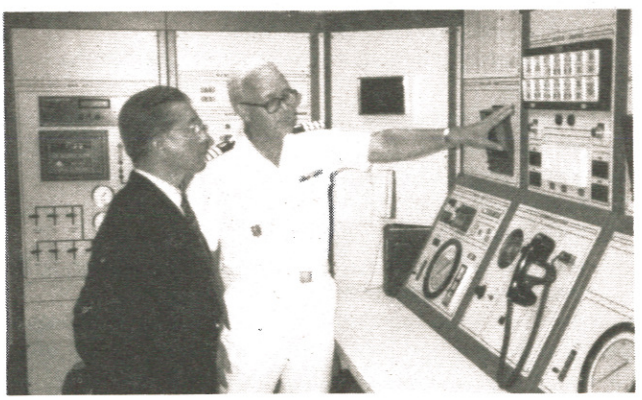
Brigadier Khalid Hassan Mahmood lead a delegation of senior Pakistani Military Hospital Commanders and academicians on a tour of U.S. medical facilities, the week of 10 July. Primarily interested in the organizational structure and operation of field medical units, military hospitals and DoD medical departments, Brigadier Mahmood reserved a full day for the Walter Reed Army Medical Center and AFIP.

Lieutenant General Phinyo Siriyaphan, Director of the Pramongkutklao Medical Center, Royal Thai Army, and former Assistant Surgeon General, RTA, visited the Institute 4 August. No stranger to AFIP, Lt Gen Phinyo is a diplomate of the American Board of Anatomic Pathology (1966) and spent his last 6 months of study with AFIP (Soft Tissue Tumor).

Dr. Beatrice Bhathal (Barcelona, Spain) spent two days exchanging information with CAPT Dennis K. Heffner, MC, USN, Department of Otolaryngic Pathology Chairman, prior to returning to Spain on 8 August.

Third year Japanese medical students, **Mr. Teiji Takei**, and **Mr. Shingo Kato** enjoyed a tightly choreographed visit on 8 August, squeezing briefings and tours of the new hospital, AFIP, and Walter Reed Army Institute of Research, all in 6 hours with just a quick pause for a snack on the run!

Ms. Ada L. Lofton, Center for Records & Information Management, demonstrates case retrieval procedures for LTC Lyon-Dean, (center) and COL Daly, Military Medical Liaison and special attache', United Kingdom.



CAPT Karnei explains hyperbaric chamber console controls during Pramongkutlao Medical Center Director, Lt Gen Phinyo Siriyaphan's recent visit to the Institute.

ANNOUNCEMENTS

Embedding Oversized Specimens With Ease

Occasionally, histotechnologists are required to embed specimens which are unsuitable for placement in standard sized molds. The multiple tissue embedding method as described in the Manual of Histologic Staining Methods of the Armed Forces Institute of Pathology, page 14, has traditionally been the preferred procedure to be used for embedding these specimens. However, this method can be time consuming and may require an excessive amount of paraffin and custom made embedding equipment. In terms of time, equipment, and materials, this method may not be the best choice when only one to two specimens require special handling.

Histotechnicians at the AFIP have successfully embedded single, large specimens including cross sections of human eyes which have both lids attached, large prostate sections which are subsequently mounted on 50 x 75 mm glass microslides, and oversized brain and bone samples in disposable medium sized (3 1/16 inches with 1 inch depth) plastic weighing boats which are inexpensive and readily available.

Specimens are embedded as follows:

1. Turn on cryo console of embedding center and allow to cool to proper temperature prior to start of embedding.
2. While wearing safety goggles and gloves, score both sides of a glass slide with a diamond point pencil. Gently break slide in half.
3. Place halves of the microslide side by side in the bottom of the weighing boat. Glass slides are used to facilitate flattening of the specimen's cutting surface.
4. Fill boat with liquid paraffin.
5. Position specimen in boat and rotate to dispel air bubbles and to check for correct orientation.
6. Immediately place specimen on cold plate of the cryo console.
7. Using "bent-nosed" forceps, press specimen to glass until paraffin begins to solidify.
8. Allow paraffin block to cool until completely solid.
9. Peel away weighing boat. Discard.
10. Gently pry glass from paraffin.
11. Trim away excess paraffin. Paraffin block is now ready for mounting on microtome for sectioning.

This method has been found to be practical and efficient when single, large specimen must be embedded. It saves preparation and trimming time and requires the use of materials which are routinely found in the laboratory.

17th Fascicle to Handbook of Animal Models Available

Sixteen new animal model studies from the American Journal of Pathology and the Comparative Pathology Bulletin have been reprinted as the 17th Fascicle to the Handbook: Animal Models of Human Disease, and may be purchased from the Registry of Comparative Pathology at the Armed Forces Institute of Pathology.

The 17th Fascicle can be purchased in a three-ring vinyl binder that holds three Fascicles for $10 or unbound for $7. A Special Library Edition of the first seven Fascicles is available in a vinyl binder for $30. Individual unbound copies of Fascicles 1-16 cost $5 each. Orders must be prepaid with check or money order payable to UAREP and sent to; Registry of Comparative Pathology, Armed Forces Institute of Pathology, Washington, D.C. 20306. An eight-page folder with contents of all 17 Fascicles and an order blank may be obtained free from the Registry.

The Handbook and the Fascicles are published by the Registry with the support in part of the Division of Research Resources, National Institutes of Health, DHHS, under the auspices of Universities Associated for Research and Education in Pathology, Inc. (UAREP). Members of the Handbook Board of Editors are C. C. Capen, DVM; T.C. Jones, DVM; and George Migaki, DVM. The Registry also publishes a quarterly Bulletin of Comparative Pathology, available by subscription for $10 per year.

Teaching and Study Sets (35mm Transparencies) Available for Purchase from American Registry of Pathology

High quality slides illustrating the Pathology of Disease in various organ systems; including Gynecologic, Gastrointestinal, Lymph Node, Neuro- and Nephropathology. Other sets include Infectious and Parasitic Diseases and the Histological Typing of Tumors from the World Health Organization Classification of Tumors.

Order forms and additional information available from:

American Registry of Pathology
AFIP, Bldg 54, Room 1077
14th Street & Alaska Ave., N.W.
Washington, D.C. 20306-6000
Phone: (202) 576-2980/2978.

REPRINTS

Injury in U.S. Army Helicopter Crashes October 1979 - September 1985

Dennis F. Shanahan, M.D., M.P.H., LTC, MC, and Maureen O. Shanahan, B.S.

All U.S. Army class A and B mishaps of four types of helicopters occurring from 1 October 1979 through 30 September 1985 were reviewed. During this 6-year period, there were 298 crashes involving 303 aircraft. There were 1,060 individuals aboard the crashed aircraft and 611 were injured, 136 fatally. The most common cause of injury was the "secondary impact" caused by collapse of structure into occupied areas, by inadequate restraint of the occupants which allowed them to flail into structure, or by a combination of both mechanisms. Injury solely related to acceleration occurred infrequently. The most frequently injured body regions in survivable crashes were the head (28%) and extremities (43%). Injury patterns are compared for different helicopter types and related to differences in design. Basic principles of crash injury protection, including individual protection by helmets, seatbelts, and airbags, and structural modifications to minimize injury potential, as well as crashworthy fuel systems, are reviewed, and recommendations are made to increase the crashworthiness of helicopters, such as adapting designs and standards on the basis of active field investigations.

Journal of Trauma, Vol. 29, No. 4, 1989

Pseudoinvasive Intestinal Polyps

Leslie H. Sobin

A peculiar phenomenon occurs in certain intestinal polyps that can be a pitfall in diagnosis because it resembles invasion. It has been referred to by several terms including pseudocarcinomatous invasion, pseudoinvasive polyp, epithelial misplacement, epithelial displacement, and epithelial herniation. It can be defined as the presence of noncancerous mucosa in the submucosa of an intestinal polyp. It typically occurs in pedunculated adenomas, hyperplastic polyps, Peutz-Jeghers polyps, and inflammatory polyps. The purpose of this chapter is to discuss this phenomenon and to compare its features in the various types of intestinal polyps.

Digestive Disease Pathology, Watanage, Wolff, and Sommers, S.C. Philadelphia, Field and Wood Medical Publishers, Inc., 1989, vol, 2, chap. 1, pp. 1-12.

Palisaded Myofibroblastoma

Sharon W. Weiss, M.D., Douglas R. Gnepp, M.D., and Gary L. Bratthauer, B.A., MT(ASCP)

We report 22 examples of an unusual and distinctive benign mesenchymal tumor arising exclusively from lymph nodes of the groin. The tumor, which presents clinically as a swelling, is composed of spindled cells arranged in solid sheets or short, vaguely palisaded fascicles similar to a neurilemoma. The spindled cells blend gradually with large mats of eosinophilic material that appear as thick bands, ellipses, or circular profiles, depending on the plane of section. These eosinophilic structures, which represent a highly characteristic feature of the tumor, contain deeply eosinophilic, collagen-rich cores surrounded by a weakly eosinophilic, actin-rich cuff. The actin within these eosinophilic structures is derived by coalescence of intracellular actin globules extruded from neighboring cells. In all cases, a thin, compressed rim of normal lymph node was identified. Immunohistochemical analysis indicates that the cells express actin but lack S-100 protein, synaptophysin, desmin, keratin, and epithelial membrane antigen. Delicate, linear striations were identified in only two cases by conventional histochemical techniques. The foregoing features suggest that the tumor is related to a myofibroblast or a specialized smooth-muscle cell. These tumors, therefore, probably arise from smooth-muscle-like cells, which are normally present in some lymph node capsules or stroma. Followup information on 17 patients indicated that all are alive and well without any evidence of recurrence or metastasis.

Am J Surg Pathol 13(5): 341-346, 1989.

Fatal Infection of Silvered Leaf Monkeys with a Virus-Like Infectious Agent (VLIA) Derived from a Patient with AIDS

Shyh-Ching Lo, Richard Yuan-Hu Wang, Perry B. Newton III, Neng-Yu Yang, Mary Ann Sonoda and James Wai-Kuo Shih

Four silvered leaf monkeys, inoculated with a virus-like infectious agent (VLIA) derived from transformed NIH/3T3 cells (sb51) transfected with Kaposi's sarcoma DNA of an AIDS patient, showed wasting syndromes and died in 7-9 months. Two monkeys had a transient lymphadenopathy in earlier stages. Two moribund animals showed lymphopenia. Although three of the VLIA inoculated monkeys had persistent low grade fever early in the infection, the animals became afebrile in the later stages. One VLIA inoculated animal had a prominent antibody response, which occurred 7 months after VLIA inoculation. The other three monkeys had a transient or poor antibody response in the later stages. These three animals revealed periodic VLIA antigenemia during the course of the experiment. A control monkey was killed 8 months after the last VLIA inoculated monkey succumbed and showed neither an antibody response nor evidence of antigenemia. VLIA-specific DNA could be directly detected in necropsy tissues of all 4 monkeys inoculated with VLIA using the polymerase chain reaction method. VLIA infection was identified in all 4 spleens, 2 of 4 livers, 1 of 2 kidneys, and all 3 brains tested from these 4 animals, but not in the tissues from the control monkey. The necropsy examination of the 4 VLIA inoculated animals revealed no opportunistic infections, acute inflammatory lesions, malignancy or cause of death other than VLIA infection. We believe that the VLIA caused a fatal systemic infection in these monkeys.

Am. J. Trop. Med. Hyg., 40(4), 1989, pp. 399-409.

Overlap Syndromes: Wegener's Granulomatosis and Churg-Strauss Syndrome

Samuel A. Yousem, M.D., and Liselotte Hochholzer, M.D.

Wegener's granulomatosis (WG) is a clinical syndrome characterized by necrotizing granulomatous lesions that are usually accompained by a vasculitis and that involve the upper and lower respiratory tract and kidneys. Since early descriptions by Klinger, Rossle, and Wegener, disease involvement beyond these three major sites has been recognized, for example, skin, joints, and eye. Several different histologic presentations have also been described, including isolated small vessel angiitis (microangiitis, capillaritis), alveolar hemorrhage, and organizing pneumonia with punctate granulomatous microabscesses. One finding, which has not been commonly acknowledged, is the occasional presence of tissue eosinophilia. This histologic feature raises diagnostic problems, especially with regard to the distinction of WG fromallergic angiitis and granulomatosis or the Churg-Strauss syndrome (CSS).

We have recently encountered a case in which the clinical history and histopathologic findings suggested an overlap of CSS and WG. This precipitated a review of the literature, which elucidated previously unemphasized features of these two conditions. The results suggest not only similarities in histopathologic characteristics and clinical presentation, but also the pathogenesis.

Seminars in Respiratory Medicine, Vol. 10, No. 2, April, 1989.

Carotenodermia in Men with Elevated Carotenoid Intake from Foods and B-Carotene Supplements

Marc S. Micozzi, M.D., Ph.D., Ellen D. Brown, M.S., Philip R. Taylor, M.D., Sc.D., and Elaine Wolfe, M.A.

We evaluated the relation between plasma levels of carotenoids and carotenodermia in 30 men receiving carotenoid supplementation for 42 d. Five subjects each were randomly assigned to one of six treatment groups: 30 mg purified B-carotene supplement, 12 mg B-carotene supplement, 272 g cooked carrots, 300 g cooked broccoli, 180 g tomato juice, and placebo. Definite carotenodermia was observed only in the five subjects who took 30 mg of purified B-carotene daily. Carotenodermia was first noted between 25 and 42 d after supplementation and persisted from 14 to >42 d posttreatment and was observed only after plasma total carotenoid levels exceeded 4.0 mg/L. These observations may be useful to investigators planning clinical trials with B-carotene and to clinicians assessing the significance of carotenodermia in men taking B-carotene supplements or following diets high in carotenoid-containing foods.

Am J Clin Nutr 1988; 48:1061-4.

Fat-Containing Lesions of the Thyroid Gland

Douglas R. Gnepp, M.D., Jeffrey M. Ogorzalek, M.D., MAJ, MC, USAF, and Clara S. Heffress, M.D., LTC, MC, USA

Thyroid lesions containing adipose tissue are rare; only scattered case reports are recorded. This study of 17 lipomatous thyroid lesions on file at the Armed Forces Institute of Pathology was undertaken to better document the full range of these abnormalities. Patient ages ranged from 11 to 75 years; nine patients were female and eight were male. Fat-containing thyroid neoplasms included seven papillary carcinomas, four adenomatoid nodules, one follicular adenoma, and one minimally invasive folicular carcinoma. Nonneoplastic conditions associated with adipose tissue included four cases of amyloid goiter, two cases of lymphocytic thyroiditis, one case of dyshormonogenetic goiter, and one case of thyroid atrophy. This study documents the presence of adipose tissue in a wider range of benign and malignant thyroid lesions than has previously been reported.

American Journal of Surgical Pathology 13(7):605-612, 1989.

AFIP Training/Study Application Procedures for Foreign Nationals

Foreign nationals wishing to participate in AFIP training/study programs, may do so on a cost reimbursable basis. Civilian applications should include:

a. The type or subspecialty area of training/study for which you are applying.
b. The start and end dates for your stay and specific areas of interest.
c. Your present position.
d. Your home and office mailing addresses.
e. Your date and place of birth, and country of citizenship.
f. Your financial support arrangements for your stay at the AFIP (the AFIP cannot be responsible for any expenses incurred during your stay).
g. A general statement as to your proficiency in written and spoken English, in both general and medical terminology.

Along with your application letter, please attach the following:

a. A statement from your institution that the training/study you are requesting will be beneficial and that you are qualified within the specified area of interest.
b. A resume of professional education, experience, and qualification (i.e., curriculum vitae).
c. A statement of financial support from your sponsoringinstitution, agency, or government.

If you are presently in the U.S., request your Embassy in Washingon, D.C. to forward your application and their letter of request for training/study to the U.S. Information Agency. If submitting from your home country, your government should contact the Cultural Office of the U.S. Mission to arrange, through the U.S. Information Agency, for the training/study you desire. The request should include your application and a letter of

request from your government for the training/study. The request, in either case, is to be ultimately forwarded to:

Chief, Program Resources Branch
E/VCP
United States Information Agency
301 4th Street, N.W.
Washington, D.C. 20547

Upon acceptance, send a check or international money order (in U.S. dollars) covering the cost of the training/study to the United States Information Agency (above address). If submitting from your home country, the payment is to be sent to the Cultural Office of the U.S. Mission in your country. The Cultural Affairs Officer will then forward the check or money order to the U.S. Information Agency.

If you currently have a green card, send your application and letter of request for training, including your green card number, directly to the U.S. Information Agency. Upon acceptance, you or your sponsoring institute are to send a check or money order (in U.S. dollars) covering the cost of training/study to the U.S. Information Agency.

Further payment instructions will be provided later on during the processing of your training request. It is very important that you forward the above information and begin processing your application at least 90 days prior to your desired training/study start date. Please include any letters you may receive from any department of the AFIP along with your application.

Qualified foreign military medical members, may participate in training/study with the AFIP by requesting desired training through military training channels to the Security Assistance Office of the nearest U.S. Mission. If approved, you will be issued an Invitational Travel Order (ITO) by the Security Assistance Office. Bring the ITO with you when you report for training. Reimbursement for training is made through appropriate security assistance channels.

For further information, please contact the AFIP Education Division between 7:30 am and 4:30 pm EST, Mon-Fri at (202) 576-2356.

COURSE DESCRIPTION

** Aerospace Pathology

Designed for flight surgeons, residents in pathology and aerospace medicine, pathologists and other accident investigators with specialized instruction in areas of pathology concerned with aerospace vehicle accident investigations. Will cover pre-accident planning; operational correlations; identification procedures; special autopsy techniques in aircraft correlations; toxicological exam and correlation; practical evaluation and correlation of findings; crashworthiness, survivability and human tolerances; and the flight surgeon's responsibilities.

Enrollment limited to 100. Approximately 24 CME credit hours.

**Sponsored solely by AFIP.

Conference on Cardiovascular Diseases

A basic and comprehensive review of cardiovascular pathology. Will cover how to examine a heart with various pathologic conditions so clinical correlations can be easily done with the newer investigative tools used by cardiologists. Various changes seen in myocardial infarction will be shown; and how to diagnose early stages of ischemia, both at light and electron microscopy levels, will be reviewed. Types of prosthetic heart valves used today and also pericardial diseases and cardiovascular tumors will be covered.

Oral Pathology

Course designed to provide dentists, physicians, and trainees in oral pathology, oral and maxillofacial surgery, and general pathology a fundamental knowledge of various aspects of oral diseases, and to bring them up-to-date on recent developments in the field. Developmental disturbances of the head, neck and oral region, inflammatory diseases of the oral mucose and jaws, oral manifestations of systemic diseases, and neoplasms of the oral cavity and related structures will be discussed in detail. Lectures to be complimented by case presentations, microscopic slide seminars and clinico-pathologic conferences.

Enrollment limited to 125. Approximately 36 CME credit hours.

+Legal Medicine Seminar

Addresses many root causes of successful medical malpractice claims against physicians. Focuses on physician liability in a disease oriented manner, emphasizing selected disease entities which are persistent precipitators of malpractice claims. Risk management techniques will concentrate on capability of health care providers to implement immediate and practical solutions to prevent successful medical malpractice claims.

Enrollment limited to 100. Approximately 15 CME credit hours.

Gynecologic Pathology

Lectures cover a general review of fundamental pathology of the female reproductive tract. Discussion of newer concepts in the field will include contributions from morphometry, immunopathology, and cytopathology. Microscopic slide review with proctors will supplement lectures. Kodachrome slides are available for purchase.

Enrollment limited to 150. Though designed for gynecologists, will consider applications from other interested physicians. Approximately 25 CME credit hours.

Basic Forensic Pathology

Provides basic training in and a concise review of medico-legal autopsy, identification of human remains, blunt and sharp force injuries, child abuse, basic ballistics and missile wounds, sex crimes, sudden and unexpected deaths, asphyxial deaths, drug reactions and drug deaths, and problems arising from investigations and court presentations. Course designed especially for pathologists preparing for specialty board exams in forensic pathology, but others interested are encouraged to attend.

Enrollment limited to 100. Approximately 29 CME credit hours.

Infectious and Parasitic Diseases

Designed for physicians, pathologists, parasitologists, and veterinarians interested in the study and control of infectious, parasitic and tropical diseases. Course formal includes lectures and study of microscopic slides.

Enrollment limited to 150. Approximately 36 CME credit hours.

Pathology of Congenital Heart Disease

Designed for fellows, residents, and board eligible candidates in cardiology, cardiothoracic surgery, pathology, and radiology. Lectures on the gross and microscopic pathology of the major forms of congenital heart and aortic disease, and demonstrations of these features with gross and microscopic preparations and select videotapes. Ample time alloted for interaction between faculty and attendees.

Enrollment limited to 15. Course offered Feb, May, Aug, and Dec. each year. When applying, specify when you want to attend. Approximately 30 CME credit hours.

Orthopaedic Pathology

Consists of lectures, demonstrations, and laboratory sessions in orthopaedic pathology. Emphasizes radiologic, pathologic correlation and conceptual morphologic analysis developed at the AFIP.

Enrollment limited to 90. Applicants must possess a doctoral degree. Approximately 53 CME credit hours.

Uroradiology

Designed to offer radiologists and urologists a summary of the most important morphological principles which underlie the evaluation of roentgenologic signs. Particular emphasis will be placed on the differential diagnosis of abnormal urograms.

Enrollment limited to 200. Approximately 14 CME credit hours.

Genitourinary Pathology

A basic and comprehensive survey of the pathology of the kidney, ureter, bladder, prostate, testes, penis, and urethra. Designed for urologists and urology residents, the course will be by lectures, demonstrations, and microscopic slide labs. Course is not designed for pathologists as it is quite elementary.

Enrollment limited to 250. Approximately 50 CME credit hours.

Postgraduate Short Courses in Continuing Education
Academic Year 1989-1990

Course Title	Scheduled Dates	Application Deadline	Non-Federal Fee	Federal Fee
Conference on Cardiovascular Diseases	2-4 Oct 89	5 Sep 89	$375	$100
*Aerospace Pathology	10-13 Oct 89	11 Sep 89	$125	N/A
Oral Pathology	16-20 Oct 89	18 Sep 89	$295	$35
+Legal Medicine Seminar	18-19 Oct 89	18 Sep 89	$300	$15
Gynecologic Pathology	23-25 Oct 89	25 Sep 89	$415	$65
Basic Forensic Pathology	13-17 Nov 89	13 Oct 89	$265	$30
Infectious & Parasitic Diseases	27 Nov-2 Dec 89	27 Oct 89	$495	$110
Path of Congenital Heart Disease	4-8 Dec 89	6 Nov 89	$250	N/A
	5-9 Feb 90	5 Jan 90	$250	N/A
Orthopaedic Pathology	22-26 Jan 90	22 Dec 89	$400	$30
Uroradiology	14-15 Feb 90	5 Jan 90	$275	$20
Genitourinary Pathology	16-21 Feb 90	7 Jan 90	$500	$100

+Courses offered every other year ** Sponsored solely by AFIP

1. **Course Fee:** Payments for courses sponsored solely by the AFIP must be by checks drawn on U.S. banks or international money orders only. They must be payable in U.S. dollars to the Treasurer of the United States. Payments for all other courses (co-sponsored by the American Registry of Pathology) are to be made payable to the American Registry of Pathology or ARP. To safeguard your course space, we strongly encourage advance fee payment when registration form is submitted, but not later than the Application Deadline (does not apply to foreign nationals).
2. **Application Deadline:** Fifty percent of the course spaces are reserved for military and federal applicants through the Application Deadline Date. After this date applications will be considered on a first-received, first-accepted basis.
3. **Military and Federal Employees Please Note:** To assure a space will be held for you, submit an application for each course you desire to attend directly to the Education Division, AFIP. Do this regardless of any funding action.
4. **Accreditation:** The Armed Forces Institute of Pathology is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.
5. **If you are a foreign national** planning to submit an application for any of the listed courses, you must contact AFIP immediately for special instructions. Call (202) 576-2356 between 7:30 am and 4:30 pm EST Mon-Fri or write to: Armed Forces Institute of Pathology, Education Division, Washington, D.C. 20306-6000,. ATTN: Ms. Debbie Montgomery. Failure to contact us immediately will delay processing of your application .

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