

The 9th annual general meeting and scientific meeting was held at the School of Medical Sciences, Universiti Sains Malaysia, Penang on 4-5 August 1984.

Abstracts of the scientific communications follow.

**SQUAMOUS SYRINGOMETAPLASIA IN A PATIENT UNDERGOING CHEMOTHERAPY**

**BHAWAN, J.; STADECKER, M.J.**

*Department of Pathology/Medicine, University of Massachusetts Medical Center, USA.*

28 year old white male patient, undergoing chemotherapy with cytosine arabinoside and daunomycin for acute myelogenous leukemia in blast crisis, developed isolated as well as confluent erythematous papules on the left arm on both thighs. The clinical diagnoses of leukemic infiltrate or opportunistic infection were entertained. A 3mm. punch biopsy of one of the papules on the left arm showed foci of squamous metaplasia limited to the upper and mid portions of the sweat duct epithelia. Minimal inflammatory infiltrates, but no leukemic cells or micro-organisms were identified.

Squamous syringometaplasia has been observed in association with healing skin ulcers, or skin tumours, particularly keratoacanthoma and squamous cells carcinoma. Its cause, however, is not known, but local ischemia has been suggested. In the absence of associated skin pathology, and in view of the widespread nature of this patient's lesions, we propose that these may represent an unusual reaction to chemotherapeutic agents.

Recently, a distinctive picture, termed neutrophilic eccrine hidradenitis, has also been described in association with myelogenous leukemia and attributed to chemotherapy. The possibility of these two conditions utilizing similar pathogenetic mechanisms, remains to be investigated. One should be aware of squamous syringometaplasia, as it could mimic squamous cell carcinoma.

**ANA-NEGATIVE SLE; THE IMPORTANCE OF ANTINUCLEAR ANTIBODIES IN THE DIAGNOSIS OF SLE**

**SIMMONS, P.**

*Department of Immunology, School of Medical Sciences, Universiti Sains Malaysia, Penang.*

In December 1982, Simmons and Wang published their findings of a large number of ANA negative SLE patients. This theme was

also highlighted at THE SEAPAL Meeting in Bangkok in 1984 and the same findings have been recently confirmed by Santoso and Sutjahjo in Jakarta. The importance of ANA as a diagnostic criterion will be discussed in view of this.

**PROGNOSTIC FACTORS OF SQUAMOUS CELL CARCINOMA OF CERVIX**

**SABARIAH, A.R.; LOOI, L.M.; SEN, D.K.**

*Department of Pathology/Obstetrics & Gynaecology, Faculty of Medicine, University Malaya, Kuala Lumpur.*

47 cases of squamous cell carcinoma of cervix had undergone Wertheim's Hysterectomy at University Hospital during a 3 year period from 1978 to 1980. Based on these cases, various pathological features were studied including differentiation, depth of invasion, stromal reaction and presence of vascular and lymphatic invasion. The findings are discussed in relation to clinical staging, presence of lymph node and parametrial involvement.

**DIAGNOSTIC PROBLEMS IN GASTRIC BIOPSY - CASE REPORTS**

**FERNANDO, N.v.P.; DASS, P.K.**

*Department of Pathology, School of Medical Sciences, Universiti Sains Malaysia, Penang.*

Two cases where endoscopic biopsy was done to exclude gastric carcinoma are reported for some unusual features. Both the biopsy specimens showed evidence of malignancy. Following this, gastrectomies were done. The gross specimens showed appearances of chronic ulceration and histologically no malignancy was seen in either. The earlier biopsies were reviewed by others and serial blocks of tissues were re-cut extensively from relevant areas in the stomach and also from identified lymph nodes. Whereas one case showed no malignancy in the gastrectomy specimen, the other case showed intraepithelial malignancy in just one of the sections. The significance of these findings are discussed.

## CHONDROSARCOMA OF THE BREAST – A CASE REPORT

PEH. S.C.; CHANG. K.W.

*Department of Pathology, Faculty of Medicine,  
University of Malaya, Kuala Lumpur.*

A 47 year old Malay lady was admitted to the University Hospital in April 1984. She had an enlarging lump in the right breast from 5 years ago, which had reached an enormous size, occupying almost the right chest. The overlying skin was stretched. Chest X-rays revealed that the lesion had penetrated into the thoracic cavity. Resection of the breast tumour and the anterior chest wall was done, followed by chest wall reconstruction. There was a low grade chondrosarcoma arising from the breast with involvement of the chest wall.

Sarcomas of the breast are relatively uncommon and primary soft tissue chondrosarcoma arising from the breast is considered rare. The histopathological findings of this sarcoma will be discussed.

## THE PATTERN OF SURGICAL PATHOLOGY IN EAST MALAYSIA

LOOI, L.M.

*Department of Pathology, Faculty of Medicine,  
University of Malaya, Kuala Lumpur.*

An analysis of 5,800 consecutive surgical biopsies from patients in Sabah and Sarawak received by the Department of Pathology, University of Malaya revealed that the 5 most common organs to be biopsied (in rank order) were endometrium, skin/subcutaneous tissue, lymph node, uterine cervix and breast. The 5 most common morphological changes encountered (in rank order) were neoplasia, inflammation, cyclic tissue alterations, hyperplasia and cysts. In rank order, the 5 most common malignancies diagnosed by biopsy were gastric carcinoma, nasopharyngeal carcinoma, carcinoma of the uterine cervix, thyroid carcinoma and colorectal carcinoma. The differing patterns of surgical pathology according to sex, age group, race and organ systems will be presented. The significance of these findings, with particular reference to the health problems of East Malaysia, will be discussed.

## NECROTISING LYMPHADENITIS

LIEW. S.H.; POR P.

*Pathology & Clinical Laboratory, 392 Mezz.  
Floor, Jalan Pudu, Kuala Lumpur.*

5 cases of necrotising lymphadenitis, a disorder initially described in Japan are presented. Four patients presented with painless cervical lymphadenopathy while one had axillary lymphadenopathy. Only one patient was febrile on admission, while two patients claimed significant weight loss. Four patients were females and their average age at presentation was 33 years. Chest radiographs when done were reported as normal. Histologically, the lesions in all cases were characteristic. There were centres in the lymph nodes. The necrotic areas contain abundant karyorrhectic nuclear debris with occasional prominent eosinophilic fibrin deposits. The inflammatory infiltrate consists of large and small lymphoid cells, histiocytes and foamy macrophages. All stains for acid fast bacilli, fungi and bacteria were negative. A culture for mycobacterial attempted in the patient with axillary lymphadenopathy was negative. Two cases resolved spontaneously without any treatment; while in 2, treatment for mycobacteria infection was instituted. In all cases, the surgical incision healed completely. The aetiology of this disorder is unknown and its distinction from other reactive lymphadenitis with necrosis will be discussed.

## THYROID DISEASE IN EAST MALAYSIA

ALHADY, S.F.

*Department of Pathology, Faculty of Medicine,  
University of Malaya, Kuala Lumpur.*

252 surgical specimens of the thyroid gland from 244 patients were seen at the University Hospital from May 1981 to March 1982. All the cases were from East Malaysia. There was an expected female preponderance; the female to male ratio being 6.6 : 1. The age, ethnic distribution, morphological pattern and incidence of thyroid diseases which include nodular goitre, non-neoplastic cystic lesions, thyroiditis, Grave's disease, follicular adenoma, follicular carcinoma, papillary carcinoma, undifferentiated carcinomas and some miscellaneous lesions will be presented and discussed.

**A NOVEL METHOD OF SERUM TRANSPORT FOR IMMUNOASSAY OF THYROXINE (T<sub>4</sub>) THYROID STIMULATING HORMONE (TSH), PARATHORMONE (PTH) AND INSULIN**

CH'NG, S.L.; MARINAH, TUNKU A.

*Clinical Diagnostic Laboratory, University Hospital, Kuala Lumpur.*

Referral of serum samples to central laboratories locally or abroad for technically demanding assays is difficult, expensive and time-consuming. Attention on collection and preservation of specimens, stability of the analytes at tropical room temperature, dispatch of specimens by air freight has to be meticulous and thorough to ensure precise, accurate and meaningful results. A simple and low cost method of serum transport could reduce the costs of the assays. In this study the possibility of transporting serum in microlitre volume using non-wettable support medium was examined. The results showed satisfactory stability at room temperature for one week of analytes examined such as thyroid hormone T<sub>4</sub>, glycopeptide TSH, and polypeptide PTH and insulin. There was no significant bias or poor precision of results of these analytes by this technique. The implication and significance of this technique are discussed.

**RADIORECEPTOR ASSAY FOR THYROID-BINDING INHIBITING IMMUNOGLOBULIN (TBII) USING UNEXTRACTED SERUM**

YAP S.F.; NGAN, A.; ZAIN, A.

*Faculty of Medicine, University Malaya, Kuala Lumpur.*

A simplified receptor assay for TBII is described, in which unextracted sera are used in place of serum immunoglobulins. Crude human thyroid membrane - receptors are incubated with serum sample and 125 I-B TSH. The inhibitory effect of patient's sera on the binding of receptor-purified 125 I-B TSH to the receptors is measured. Results of tests on about two-hundred specimens from patients with clinical diagnosis of 'Graves Disease' will be discussed.

**THE STABILITY OF LYOPHILISED MATERIALS USED FOR QUALITY CONTROL IN CLINICAL CHEMISTRY**

MARINAH, TUNKU A; CHANDRASEKHARAN, N.

*Clinical Diagnostic Laboratory, University Hospital, Kuala Lumpur.*

The changes in the activity of some enzymes and the concentrations of some constituents in seven lyophilised control sera from five different sources kept at 2 - 6°C after reconstitution are investigated and reported in this study. Bovine sera thawed and stored similarly was also investigated. After 1, 2, 4, 8, 16, 24, 48 & 72 hours, aliquots were made and frozen (-40°C). All the aliquots were thawed, allowed to reach room temperature and analysed for alkaline phosphatase and aspartate aminotransferase activities, total protein, albumin, bilirubin, calcium and phosphate concentration using a sequential multiple analyser.

There was an increase in alkaline phosphatase activity of most of the reconstituted lyophilised sera with no significant change in the bovine sera. Relatively small changes in the aspartate aminotransferase activity, bilirubin and total protein concentrations occurred in a few of the controls, whereas albumin, calcium and phosphate concentration remained unaltered. The changes in the bovine sera were not significant.

Most of the lyophilised material are stable for use up to 24 hours after reconstitution. Bovine sera appears to be a satisfactory control material for routine use in the laboratory, the significance of the findings for laboratory quality control programmes are discussed.

**HEPATITIS B MARKERS IN CHRONIC LIVER DISEASE**

HOW, V.J.L.; ALHADV, S.F.; HAMIMAH, HJ. H.

*Department of Medical Microbiology, Faculty of Medicine, University of Malaya, Kuala Lumpur.*

Between June 1982 and December 1983, 281 patients with chronic liver diseases were seen at the University Hospital, Kuala Lumpur. Amongst them, there were 149 (53.0%) Chinese, 76 (26.8%) Indians, 55 (19.4%) Malays and 1 Eurasian. Of them, 212 were males and 69

were females (3:1). The clinical diagnoses were cirrhosis (157); hepatocellular carcinoma (98); CAH (21); CPH (4) and one with hepatic encephalopathy.

Radio immunoassay screening for HBsAg revealed that 101 (35.9%) were positive and of these 62.4% were Chinese, 22.8% Malays and 14.8% Indians.

The liver biopsy were performed in 59 (20.8%) of the 281 patients. The diagnoses were confirmed histologically in 15 out of 22 clinically diagnoses cases of cirrhoses, 14 out of 33 suspected hepatocellular carcinoma cases and 2 out of 4 cases clinically diagnosed as CAH.

The positivity and negativity of the serum of HBsAg and orcein stain on the tissue correlated in 79.9% of the cases and the remaining 22.11 although positive for HBsAg were negative for orcein.

The usefulness of serological markers for hepatitis B virus and histological techniques in the diagnosis of chronic liver diseases will be discussed.

#### **AETIOLOGICAL AGENTS IN ACUTE VIRAL HEPATITIS**

ROSS, I.N.; MADHAVAN. H.N.; TAN, S.H.

*Departments of Medicine/Mircobiology/Immunology, School of Medical Sciences, Universiti Sains Malaysia, Penang.*

We used serological markers to determine the infective agents causing sporadic, acute viral hepatitis in 246 patients. Hepatitis A virus (HAV) infection was determined by RIA detection of anti HAV IgM, hepatitis B virus infection (HBV) was assessed by detection of core antibody and surface antibody using RIA, and surface antigen by using an ELISA technique. Patients without evidence of acute A or B viral hepatitis were further investigated for cytomegalovirus and Epstein Barr virus infection. HAV hepatitis was present in only 40% of patients, HBV hepatitis in 17% and non A, non B (NANB) hepatitis in 41%. The log mean age of HAV infected patients was 18 years, HBV patients 26 years and NANB patients 30 years ( $p = < 0.001$ ). The male to female sex ration was 2:1. Overall, Malays and Indians has significantly more viral hepatitis than other ethnic groups. HAV infection was more prevalent in Malays than in Chinese or Indians. HBV infection did not differ between

the three ethnic groups, whilst NANB hepatitis was more prevalent amongst Chinese and Indians ( $p = < 0.001$ ). Evidence of previous HBV infection was present in 24% of patients  $< 15$  years, but present in 45% of adults, reaching this level in the third decade. In conclusion, NANB hepatitis is a common cause of hepatitis in urban residents. An up to 40% of persons with NANB hepatitis c m develop chronic liver disease, this infection must be an important initiator of liver-related illness in Malaysia.

#### **THE INCIDENCE OF HEPATOCELLULAR CARCINOMA IN A MALAYSIAN COMMUNITY**

ROSS, I.N.; DASS, P.K.

*Departments of Medicine/Pathology, School of Medical Sciences, Universiti Sains Malaysia, Penang.*

We determined the prevalence of the pre-cancerous liver lesions, livercell dysplasia and macronodular cirrhosis, in patients with suspected liver disease. We also calculated the annual incidence of hepatocellular carcinoma in our area. Liver biopsies from 179 patients were reviewed blind by one histopathologist (PKD). Liver-cell dysplasia was present in 10% of patients and macronodular cirrhosis in 7% of patients, who has an abnormal liver biopsy. Fifty-two cases of hepatocellular carcinoma were identified either proven by biopsy or based on a clinical diagnosis of carcinoma with a positive alphafoetoprotein performed by crossover immunoelectrophoresis. The male to female sex ratio of the hepatocellular carcinoma patients was e to 1. The peak age of onset was in the seventh and eighth decades (median age 63 years). The age specific incidence ( $> 14$  years) for males, was 15/100,000/year and for females was 4/100,000/year. The age standardized incidence rate (European) for males was 22/100,000/year. This is twenty-two fold the incidence in the United Kingdom, but only slightly less than that found in Singapore (29/100,000/year). We could not detect any racial preponderance.

In conclusion, pre-cancerous liver lesions are present in 17% of our patients with chronic liver disease. Regular screening of such patients with ultrasound, alpha-foetoprotein measurement and biopsy might preempt in in-operable hepatocellular carcinoma

## INVESTIGATION OF CEREBROSPINAL FLUID – OUR EXPERIENCE IN THE DIAGNOSIS OF BACTERIAL MENINGITIS

SIVA. S.; NADARAJAH. M.

*Department of Microbiology, Faculty of Medicine, National University of Singapore, Singapore.*

Analysis of the cerebrospinal fluid (CSF) is the most important procedure in the evaluation of the patient with suspected meningitis. In a five year period, 1979 – 1983, 15,673 specimens of CSF were received for culture at the Pathology Department, Singapore General Hospital. The primary pathogens, namely *S. pneumoniae*, *H. influenzae*, *N. meningitidis*, beta-haemolytic streptococci group B and *E. coli* were cultured only from 105 of these specimens during this period. A large proportion of our CSF specimens were culture sterile due to administration of antibiotics before patients were admitted to the hospital for investigation. Contamination of the CSF by aerobic spore-bearers during collection, transport and culture further reduced the chances of isolation of primary pathogens. Therefore, to determine the aetiology of meningitis in these cases, an investigation was carried out to detect soluble antigens for these primary pathogens in the CSF specimens.

In one study, 198 specimens were investigated by counterimmunoelectrophoresis. 17 specimens were positive by CIE for 4 of the primary pathogens, whereas the corresponding organisms were cultured only in 9 specimens. *E. coli* was neither cultured nor detected by CIE in these 198 specimens. In all specimens where *N. meningitidis*, *H. influenzae* and beta-haemolytic streptococci group B were cultured corresponding antigens were detected by CIE. 12 specimens were positive by CIE for pneumococcal antigen but the organism was cultured only from 4.

In a separate study, 78 specimens were investigated by a coagglutination technique

using a commercial kit. 19 specimens were positive by CoA whereas only 8 were culture positive. The most common organism detected was pneumococcus with 13 positive by CoA and only 5 of these were culture positive. Suitable antiserum was not available in this kit for the detection of *E. coli* antigen.

Both CIE and CoA were sensitive, specific and easily performed. CoA procedure was more rapid than CIE. Both detect microbial antigens in CSF specimens from patients who are already on antibiotics. Further, contamination of the cultures, by the most common contaminant, aerobic spore-bearers, did not interfere with these two procedures.

## STAGE SPECIFIC IMMUNE MODULATION IN FILARIAL INFECTION

ANUAR. K.A.

*Department of Microbiology/Parasitology, School of Medical Sciences, Universiti Sains Malaysia, Penang.*

Analysis of the immunological responsiveness of lymphocytes from the spleen and lymph nodes of Jirds, *Meriones unguiculatus* at different times following infection with either 5, 20 or 75 larvae of *Dipetalonema viteae* once or 25 larvae given on 3 separate occasions at 7 days interval was undertaken. Reactivity to larval and adult worm antigen was determined during first 12 weeks of infection by measurement of *in vitro* lymphocyte blastogenesis.

Blastogenic responsiveness of lymph node and splenic lymphocytes from infected jirds to larval antigens of *D. viteae* was observed from 2 – 4 weeks post infection and the responsiveness to adult worm antigen between week 6 and 12 post infection.

The author discussed the cellular and humoral responses as observed in various levels of infection.