

The 11th Annual General and Scientific Meeting was held at the Awana Golf and Country Club, Genting Highlands on 11–12 October 1986.

Abstracts of the scientific communications follow:

PAPER PRESENTATIONS:

1. HISTOLOGIC FEATURES AS A PROGNOSTIC FACTOR IN HISTIOCYTOSIS X

5. C. Peh\* and H.P. Lin\*\*

*Departments of Pathology\* and Paediatrics,\*\* Faculty of Medicine, University of Malaya, Kuala Lumpur.*

A retrospective study of Histiocytosis X was carried out to determine the possible role of histology as an additional prognostic criteria.

Over the 8-year period from 1978 to 1985, 17 patients with Histiocytosis X were seen in the Department of Paediatrics, University Hospital, Kuala Lumpur. The sex ratio was almost equal with 9 males and 8 females. There were 9 Chinese, 7 Malays and 1 Iban. 15 had histological confirmation of the disease in the Department of Pathology.

These patients were clinically assessed and radiographic investigations were also done to determine the extent of the disease at the time of initial diagnosis. The liver, lung and haemopoietic systems were evaluated for evidence of dysfunction. They were followed up for varying periods of time ranging from 10 months to 8 years.

The histology of the biopsied specimens was retrospectively reviewed independently of the clinical data. The lesions were divided into the Type I (unfavourable) and Type II (favourable) patterns of Newton and Hamoudi. Analysis showed 4 patients had Type I pattern and 11 had Type II pattern. The Type I lesions occurred in patients less than 3 years of age. All 4 had disseminated disease as well as organ dysfunction. Type II lesions were encountered in patients with both localized and disseminated disease. The ages ranged from 5 months to more than 6 years old. In general, their clinical outcome was more favourable and they were less inclined to have organ dysfunction.

In this small study, there is an apparent association of Type I lesions with severe disseminated disease and Type II lesions with less severe disease.

2. A CASE REPORT OF A TESTICULAR LEYDIG CELL TUMOUR

Halimah Yahaya

*Jabatan Pathologi, Hospital Besar Tengku Ampuan Rahimah, Klang.*

A seven-year old Indian boy presented with features of pseudo-precocious puberty since two years of age. In January 1986, he was found to have a testicular swelling which was subsequently excised in April 86. The pathological findings, with clinical correlation, are discussed.

3. A CASE OF TUBERCULOSIS OF THE THYROID GLAND MIMICKING AS A CANCER OF THE THYROID

Alshah Abu Bakar\*, Sharifah Noor Akmal\*, Isa Rose\* and Yusha Hj Abdul Wahab\*\*

*Departments of Pathology\* and Surgery\*\*, National University of Malaysia, Kuala Lumpur.*

A retrospective diagnosis of tuberculosis of the thyroid was made in a 66-year-old Chinese man who presented with a nodular goitre of eight months' duration and miliary shadows in the lungs.

The patient was preoperatively diagnosed as having cancer of the thyroid following negative sputum smears for acid-fast bacilli, ultrasound findings of a solid thyroid mass and a negative radioiodine uptake in the left lobe of the thyroid. A total thyroidectomy was done. The histopathological report described a colloid goitre, with an area showing a granulomatous reaction with many Langhans giant cells. There was no evidence of malignancy.

Subsequently, a mantoux test showed a negative reaction. An open lung biopsy was carried out. The histopathological findings were consistent with pulmonary miliary tuberculosis.

This may be the first report of tuberculosis of the thyroid gland in Malaysia.

**4. A REVIEW OF DISCREPANCIES BETWEEN CLINICAL DIAGNOSES AND AUTOPSY FINDINGS IN THE UNIVERSITY HOSPITAL, KUALA LUMPUR.**

Sobhana Arianayagam and L. M. Looi

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

A review was undertaken of 100 consecutive adult and 100 consecutive paediatric clinical autopsies performed at the Department of Pathology, University of Malaya. In 59 adult and 43 paediatric cases, complete evaluation was feasible. The ages of the patients ranged from neonates to 83 years. There was no sex predominance. Malays were under-represented due to obvious social/religious factors.

In the assessment, the following code was adopted to reflect discrepancy between the clinical diagnosis and autopsy findings. A = major discrepancy; B = minor discrepancy; C = no significant discrepancy. 40% of assessed cases fell into category A, 19% B and 41% C. Common category A conditions included bronchopneumonia, pulmonary tuberculosis, ruptured aortic aneurysms and septicaemia in the adult group and infections and cerebral haemorrhage in the paediatric group.

In spite of factors of selection, this study has shown that clinical autopsies still have an important role to play in medical audit.

**5. CEREBRAL LYMPHOMA - A CASE REPORT**

Henry Rantai Gudurn\*, Jayalakshmi P.\*, Veerappan R.\*\* and Abdullah Daud\*\*\*

*Departments of Pathology\*, Surgery\*\* and Radiology\*\*\*, University of Malaya, Kuala Lumpur.*

A 58-year-old Chinese man was admitted to the University Hospital with a history of progressive deterioration in mental function and alteration in personality. There was no hepatosplenomegaly or lymphadenopathy or localising sign on clinical examination. CT scan showed a frontal lobe tumour. Chest X-ray was normal. Peripheral blood smear, bone marrow and trephine biopsy did not show evidence of malignancy. Craniotomy and subtotal excision of the mass was done. A diagnosis of cerebral lymphoma was made on histological examination. A brief literature review of cerebral lymphoma is discussed.

**6. MYELODYSPLASTIC SYNDROME : A REVIEW FROM THE UNIVERSITY HOSPITAL, KUALA LUMPUR.**

S. C. Ng\*, P. Kuperan\*, R. Cherian\*, N. Menaka\* and J. Bosco\*\*

*Departments of Pathology\* and Medicine\*\*, Faculty of Medicine, University of Malaya, Kuala Lumpur.*

Between June 81 and June 86, 20 patients with myelodysplastic syndrome (MDS) were diagnosed in the University Hospital. Using the FAB classification (82), they were classified as follows:

(1) Refractory anaemia (RA)	- 7
(2) Refractory anaemia with excess blasts (RAEB)	- 4
(3) Refractory anaemia with excess blasts in transformation (RAEB-t)	- 4
(4) Refractory anaemia with ringed sideroblasts (RAS)	- 3
(5) Chronic myelomonocytic leukemia	- 1
(6) Unclassified	- 1

90% of the patients were > 40 years old and the sex ratio was about equal. Symptoms related to anaemia were the predominant presenting feature (80% of patients). Bleeding and infection were seen in the remaining 3 patients while one patient was asymptomatic. There was a paucity of physical signs (as expected). Hepatosplenomegaly was seen in 2 patients (CMML and unclassified case). Anaemia was present in all 20 patients. No significant lymphadenopathy was present in any of them.

The peripheral blood pictures were dominated by cytopenia (i.e. anaemia, neutropenia, thrombocytopenia occurring alone or in varying combinations). Morphological changes e.g. megaloblastosis, anisopoikilocytosis, hypogranular neutrophils, etc., as well as circulating nucleated red cells and blasts were seen in some patients.

The bone marrow aspirate (+/- trephine) usually showed hypercellularity (65% of patients). Marked dysplastic changes, usually confined to erythroid lineage, were seen in RA and RAS, while in RAEB and RAEB-t, both dysgranulopoiesis and dysmegakaryopoiesis were present concurrently.

MDS was not thought of as a possible diagnosis in any of the cases at the initial presentation. 5 of the patients had bone marrow examination outside and in 1 patient the diagnosis was accurate.

Most patients were managed **symptomatically** (haematinics and blood transfusions). Low dose **ARa-C** was given to selected young patients with excess of blasts. 4 patients were noted to transform to AML during follow up. 6 deaths were noted, 3 amongst the AML while one died of infection and another of bleeding. One patient died of an unrelated cause.

#### 7. SUCCESSFUL TREATMENT OF TWO CASES OF APLASTIC ANAEMIA

Mokhtar Abu Bakar and Soon-Keng Cheong  
*Division of Haematology, Faculty of Medicine, National University of Malaysia, Kuala Lumpur.*

Severe idiopathic aplastic anaemia is an uncommon fatal blood disorder as a result of bone marrow failure.

We have successfully treated one case with **allogenic** bone marrow transplant from an HLA-compatible sibling (done in Sydney, Australia) and another with **antithymocyte** globulin.

The clinical and laboratory features, and treatment outcome are described. Current management strategy of aplastic anaemia is briefly reviewed.

#### 8. HEPATITIS SCREENING IN ANTENATALMOTHERS

Tan Puay Eng  
*Department of Pathology, Hospital Besar Tengku Ampuan Rahimah, Klang.*

Between December 1985 and August 1986, 2,000 random venous blood samples were taken from new patients attending ante-natal clinics in General Hospital TAR, Klang, for hepatitis screening. Over the same period, venous blood of ANC patients attending Maternal and Child Health centres around Klang, Tanjong Karang and Banting were similarly collected and screened. The results were analysed and future plans to continue screening, accompanied by immunisation services, are discussed.

#### 9. VACCINATION PROGRAMME FOR HEPATITIS B VIRUS INFECTION – A RATIONAL APPROACH

P. K. Dass and I. N. Ross

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

Hepatitis B Virus (HBV) infection status has been examined in 1,250 Malaysian subjects aged 1 month to 66 years. Analysis of this data revealed that the basic reproductive rate (Ro) of HBV is 5. To eradicate HBV, it would be necessary to vaccinate 80% of neonates. This would currently cost Malaysia **M\$60 million** per year. A less costly approach would be to vaccinate those most at risk of developing HBV-related liver disease, i.e. HBV carriers, 60% of whom presumably have acquired their infection by vertical transmission. Cost effective analysis of maternal screening methods to identify at risk neonates indicated that **HBe** antigen screening of pregnant **mothers** was best. Screening and vaccination by this method would cost **M\$2.6 million** per year compared to a cost of HBV-related liver disease of **M\$4.8 million** per year. However, the cost benefit of this vaccination policy would not mature for at least 30 years. From our study in the pregnant mothers and neonates, we calculate that only approximately 3% of HBV infection is acquired by vertical transmission in Malaysia, the remainder by horizontal transmission. What role the vertically-infected carriers play in horizontal transmission must be ascertained before vaccination can be claimed as a method of HBV elimination.

#### 10. PNEUMOCOCCAL SEROTYPE SURVEILLANCE

Farida Jamal, Ilina Isahak and Sabiha Pit  
*Department of Medical Microbiology, Faculty of Medicine, National University of Malaysia, Kuala Lumpur.*

104 clinically significant strains of *Streptococcus pneumoniae* were isolated from 90 patients over a 4-year period. 43 were from blood culture, 14 of which were also isolated from other specimens from the same patient. Single isolates from each patient were included in the serotype surveillance. 33

strains were lost during storage or transport. 57 strains (from 43 children and 14 adults) were serotyped. 38 strains of doubtful clinical significance isolated from nasopharyngeal aspirates of children were also serotyped. Type 6A (11 strains), 6B (7 strains), 14 (8 strains) and 19A (8 strains) were predominant in children. The strains from older patients comprised 3 isolates from cerebrospinal fluid (types 18P, 6B and 4), 5 from blood (type 1, 4 strains and type 4, 1 strain) and 6 from pus (type 14, 1 strain, type 23C, 3 strains and type 34, 2 strains). The number of strains serotyped so far is small. More data, particularly from adults, is essential before commenting on the prophylactic potential of the 23 valent pneumococcal vaccine in the Malaysian population.

#### 11. EFFECT OF LITHIUM HEPARIN ON COMMON CLINICAL CHEMISTRY ANALYSIS

C. G. Boey and S. F. Yap

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

Serum from clotted blood is the specimen of choice for many assay systems. Plasma specimens obtained from appropriately anticoagulated blood can, however, be equally good and, in certain circumstances, preferable to clotted blood. Use of plasma expedites analysis in medical emergencies and yield from a given volume of blood is higher. The main disadvantage of plasma specimens is the risk of formation of fibrin clots upon storage of the specimens. The most widely used anticoagulant for clinical chemistry analysis is lithium salt. The clinical diagnostic laboratory, University Hospital, K.L. plans to introduce the routine use of lithium heparin anticoagulated specimens for common clinical chemistry analysis. A study was conducted to determine the effects of lithium heparin on various determinations. Blood specimens were collected from volunteers and split into 2 aliquots - one into a plain tube and a second into a lithium-heparin containing tube. The serum and plasma specimens obtained from each individual were analysed in parallel, using the Technicon Autoanalyser SMA II. The results of this study indicated that with the exception of protein and aspartate amino-transferase there is no significant difference in the values

obtained using a plasma sample compared to that obtained using a serum sample.

#### 12. THE EFFECT OF WALL THICKNESS ON LIPID ABSORPTION BY HUMAN GALLBLADDER

Mohd Azman Abu Bakar

*Department of Biochemistry, Faculty of Medicine, National University of Malaysia, Kuala Lumpur.*

Lipid absorption by human gallbladder mucosa is suggested to be important in the pathogenesis of cholesterosis. Thus, the present study was designed to investigate lipid absorption by the human gallbladder, an area little investigated. Human gallbladders were obtained from patients undergoing cholecystectomy and were separated into two groups according to their wall thickness (a) 1 - 3 mm (b) 4 mm or more.

In contrast to the guinea pig data (non-diseased gallbladder), the results from human tissues showed a big variation. However, by grouping the concentration of (14C)-lipid in the gallbladder wall and serosal fluid according to the gallbladder wall thickness, consistent results were obtained. There was more (14C)-lipid retained in the wall and secreted into serosal fluid when thicker wall group (b) was exposed to (14C)-lipid.

The present study thus suggests that wall thickness influences absorption and further work is needed to elucidate the detailed mechanisms.

#### POSTER PRESENTATIONS

##### 11. EXPERIENCE WITH MYELOYDYSPLASTIC SYNDROME SEEN IN A UNIVERSITY HAEMATOLOGY UNIT

Soon-Keng Cheong and Ainoon Othman  
*Division of Haematology, Faculty of Medicine, National University of Malaysia, Kuala Lumpur.*

Myelodysplastic syndrome denotes a group of preleukemic disorders in which acute leukaemia ultimately develops.

Cases of myelodysplastic syndrome seen and managed by a University Haematology Unit between 1981 and 1985 were reviewed. The clinical and laboratory features of the cases were described and illustrated. Options for management are briefly discussed.

## P2. HAIRY CELL LEUKEMIA - A CASE REPORT

Alnoor Othman and Soon-Keng Cheong  
*Division of Haematology, Faculty of Medicine, National University of Malaysia, Kuala Lumpur.*

A 38-year old Malay woman presented with gross splenomegaly. Her peripheral blood film showed lymphocytosis of which 54% of the lymphocytes had "hairy" cytoplasmic projections. Cytochemical and electron microscopic studies of the cells confirmed the diagnosis of Hairy Cell Leukemia. Surface marker studies revealed that the "hairy" cells were of B-cell lineage.

## P3. SYNTHESIS OF HUMAN PLACENTAL LACTOGEN (HPL) IN HYPERTENSIVE PRE-ECLAMPTIC PREGNANCIES

Shaharuddin Aziz and Shaikh Alaudeen  
*Department of Biochemistry, Faculty of Medicine, National University of Malaysia, Kuala Lumpur.*

In pregnancy, hormone production depends on the well-being of the foeto-placental unit. Most polypeptide hormones of placental origin are synthesized in the syncytiotrophoblastic layer of placental villi and that human placental lactogen (HPL) is one which has been shown by many workers to be useful in predicting normal or pregnancies complicated with physiological changes. Thus, in our present investigation, it was shown that the level of HPL fell drastically in pregnancies complicated with intrauterine growth retardation. In this report also we present further evidence of HPL metabolism in pregnancies complicated with essential hypertension and pre-eclampsia. Together with an ultrastructural study of placental tissues from the complicated and normal pregnancies, we concluded that the complications were characterized by severe ultrastructural changes of protein synthesizing organelles that led to the decline in synthesis of HPL in the placenta.

## P4. FLAVOBACTERIUM MENINGOSEPTICUM : ANTIBIOTIC RESISTANCE PATTERN AND POSSIBLE MECHANISM OF BETA-LACTAM RESISTANCE

F. Moosdeen  
*Department of Microbiology, Faculty of Medicine, National University of Malaysia, Kuala Lumpur.*

*Flavobacterium meningosepticum* is a rare causative agent of infection, commonly affecting newborn and premature babies. The organism is resistant to a wide range of antimicrobial agents and has an unusual pattern of resistance for Gram-negative bacteria.

Six epidemiologically distinct isolates were investigated for their resistance pattern. All strains were resistant to the aminoglycosides (MIC > 16 mg/l), erythromycin (4-16 mg/l), vancomycin (16 mg/l) and tetracycline (64-128 mg/l). Susceptibility to chloramphenicol was from 8-128 mg/l. The most active antibiotics were rifampicin and clindamycin with MICs of 1-4 mg/l. The greatest activity of beta-lactams was shown by cefoperazone, cefotaxime and mezlocillin (8-16 mg/l). The addition of 2 mg/l of clavulanic acid was able to potentiate the activity of most of the beta-lactams.

The beta-lactamase produced by this organism is chromosomally mediated and uninducible. It has a broad substrate profile and probably is a Class IV enzyme (Richmond and Sykes classification). It hydrolyses penicillin more efficiently than cephalosporins. However, there was no correlation between MIC decrease and the Km of penicillins when the enzyme was inhibited by clavulanic acid. It is therefore difficult to elucidate completely the role of the beta-lactamase in affording protection to the organism against the beta-lactam antibiotics. A non-enzymic mechanism could also account for beta-lactam resistance.

## P5. SEROLOGICAL RESPONSE TO GROUP A STREPTOCOCCUS

Zooraidah Zainal and Farida Jamal  
*Department of Microbiology, Faculty of Medicine, National University of Malaysia, Kuala Lumpur.*

As part of a study of skin infection caused by group A streptococcus, sera from 107 adults (ages ranging from 20 to 40 years) were evaluated for the presence of antibodies towards extracellular antigen of group A streptococcus. Commercially available kits for the determination of antistreptolysin O (Wellcome) and antideoxyribonuclease B (Wampole Lab. USA) were used according to the manufacturers' instructions. Raised titres (340 and above) towards deoxyribonuclease B were demonstrated in 102 samples and raised titres (200 and above) towards streptolysin O were present in 29 samples. This study confirms the findings

of other authors. It indicates the need for determination of antibodies towards more than one antigen of group A streptococcus, particularly in cases of skin infections.

**P6. GLYCOSYLATED HEMOGLOBIN AND GLYCATED PLASMA PROTEIN: A COMPARATIVE STUDY**

S. F. Yap\*, C. G. Boey\* and A. Zaini\*\*

*Departments of Pathology\* and Medicine\*\*, Faculty of Medicine, university of Malaya, Kuala Lumpur.*

Glycosylated hemoglobin is currently considered as one of the best means for the objective assessment of diabetic control. The measurement of glycosylated hemoglobin is widely accepted as a quantitative index of the "time-averaged" glycaemic level over the preceding 6-10 weeks. The use of glycosylated proteins have been advocated as an alternative - for monitoring diabetic control over a shorter period of time.

Diabetic patients on long-term follow-up in the University Hospital, K.L. are currently monitored by glycosylated hemoglobin measurements using a cation-exchange procedure. The use of glycosylated proteins (fructosamine assay) as an alternative is also considered. To determine the feasibility of using the fructosamine assay, as an alternative and/or as a supplement to the glycosylated hemoglobin assay, a study was performed to compare these assays. Fasting venous blood samples were collected from a group of diabetic patients at the Endocrinology follow-up clinic. Blood glucose levels were determined by the Glucose-oxidase method using the Beckman Glucose analyser. Glycosylated hemoglobin measurement were performed by ion-exchange chromatography (Eagle Diagnostics). Glycosylated protein was estimated using a commercial kit (Roche) which measures fructosamine.

The study demonstrates that there is a linear correlation between fructosamine and glycosylated hemoglobin levels ( $y = 1.33x + 4.38$ ,  $r = 0.79$ ). The correlation coefficient between glycosylated hemoglobin and fasting plasma glucose is 0.76, while that between fructosamine and fasting plasma glucose is 0.70.

**P7. PATHOLOGY IN ELECTIVES AT THE MEDICAL SCHOOL, PENANG**

Sathy Ramakrishnan

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

Electives are time-slots in the curriculum where emphasis is placed on maximum student participation. During this time, programs that are offered are targeted at team-work among students or group-activity while working towards a common objective.

Pathology is one of the disciplines that offer pre-programmed packages for students during that time. These packages mainly centralise topics of student interest in Pathology and methods of study. Electives provide a period where students interested in Pathology can exercise their options. This poster examines the programs that deal with various aspects of Pathology during the elective period.

**P8. A PRELIMINARY STUDY OF THE PATTERN OF ABNORMAL CERVICAL CYTOLOGY SEEN AT THE UNIVERSITY HOSPITAL, KUALA LUMPUR, OVER A FIVE YEAR PERIOD 1981-1985.**

S.F. Alhady, L. M. Looi and P. Jayalakshmi

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

A retrospective study of cervical smears done in the University Hospital, Kuala Lumpur, over a 5 year period from 1981 to 1985 was undertaken. Out of a total of 30,185 cervical smears done in this period, 711 (2.4%) were abnormal. These were smears from 510 patients. Of the 711 abnormal cervical smears, 488 (68.7%) showed dysplasia, 23 (3.2%) were suspicious of malignancy and 200 (28.1%) indicated malignancy. Ethnic distribution of abnormal smears were as follows: Malays 60 (11.9%), Chinese 365 (71.4%), Indians 80 (15.7%) and others 5 (1.0%) and these differences were found to be statistically significant ( $p < 0.001$ ). Age distribution of

all and abnormal cervical smears showed a greater proportion of patients in the > 40 years age group. Age and ethnic distribution by cytological diagnosis was compared. Clinical diagnosis and cytological diagnosis were also compared. The details are presented.

**P9. TUMOUR-ASSOCIATED TISSUE EOSINOPHILIA : A HISTOLOGICAL FEATURE OBSERVED IN BOTH PRIMARY AND METASTATIC NASOPHARYNGEAL CARCINOMA.**

**L. M. Looi**

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

In recent years, the study of nasopharyngeal carcinoma has focussed on the characteristics of the malignant epithelial cells, the presence of lymphocytes in the stroma and, more recently, the occurrence of intratumour deposits of amyloid. Although tumour-associated tissue

eosinophilia (TATE) has been reported in a number of tumours, there has been little attention given to the occurrence of eosinophils in the stroma of nasopharyngeal carcinomas.

A study of biopsies from 422 consecutive primary nasopharyngeal carcinomas examined at the Department of Pathology, University of Malaya, revealed TATE in a large proportion (26%) of the tumours. It occurred more frequently in non-keratinising carcinomas (38%) than the squamous (21%) or undifferentiated (23%) types. There was no sex predilection and no association with the presence of intratumour amyloid deposits. No association with blood eosinophilia was observed. Stromal eosinophilia was also observed in 53 (38%) of 138 metastatic nasopharyngeal carcinomas in lymph nodes, where it had occasionally led to confusion with Hodgkin's disease. TATE may be a feature of diagnostic importance in nasopharyngeal carcinoma although its prognostic significance remains to be ascertained.