

PATHOLOGUE

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FROM THE CHIEF EDITOR

This issue of our Newsletter marks the beginning of the establishment of an Editorial Board. I am very fortunate to have Dr. Florence Cheung, Dr. K.T. Loo and Prof. Irene Ng as our Editorial Board members. We have named our Newsletter 'Pathologue', hoping it can achieve its function in promoting dialogue amongst Fellows and colleagues in Pathology.

Starting from this issue, we shall publish featured articles that aim to stimulate constructive discussion within our profession. You are cordially invited to send us your comments and views through mails or e-mails. If you have any specific topic that you want to discuss in the future, you are most welcome to suggest to us. In this issue, Dr. Florence Cheung from our Editorial Board has written an article entitled 'To Amend or not to Amend', bringing out the dilemma we face in report amendment in Anatomic Pathology. When writing this article, we have solicited the views from a number of experienced senior anatomical pathologists; we would like to take this opportunity to thank them for their precious time and effort. Their opinions can certainly provide us with valuable insights in this matter.

The College had our first Trainee Presentation Session last year on the day of our Annual General Meeting. The response was very encouraging, and the College shall continue the session this year. For those who could not attend the session last year, we have included in this issue the abstract of the work presented by last year's winner, Dr. Y.P. Yuen of Princess Margaret Hospital. Dr. Yuen has also provided us with her comments and personal views regarding the Trainee Presentation Session.

Regular articles in this issue include Message from the President and Topical Update from the Education Committee. In this Topical Update, Dr. Raymond W.H. Yung shares with us his view about the Roles and Expectations of Specialist in Clinical Microbiology and Infection.

We hope you will enjoy reading this Newsletter.

Dr. Alexander C.L. Chan,
Chief Editor

Recently there is considerable concern over the scope of practice of different pathology sub-disciplines in relation to laboratory accreditation. As it would be important to clarify the expectations for both the pathologists and the institutions that we work with regarding the services and the standards we provide, therefore the Council is in the process of preparing discussion papers to consult Fellows, so as to establish a framework for ensuring ongoing competence of professional practice. With more Fellows participating in the debate and voice out their concerns in this and other issues, it certainly would be an exciting and healthy sign that should help the College to steer in the right direction.

A significant recent event that could have a long-term impact to the College is the signing of a Memorandum of Understanding (MOU) between the Chinese Ministry of Health (MOH) and the Hong Kong Academy of Medicine, on 14 April 2006, regarding accreditation and training of specialists, with the ultimate purpose of establishing Specialist Registration in the Mainland. The Academy hopes the MOU could set a new stage of cooperation between Hong Kong and the Mainland in the development of specialty, and would further enhance the academic and statutory status of the local institutions. With our collective experience in training, examinations, and standards setting, the Academy and its member Colleges are requested to assist the MOH to develop the specialist system that is most likely to be adaptable to the situation in the Mainland. The MOU does not touch upon the recognition of qualifications or practical arrangements such as conjoint examinations between the Mainland and Hong Kong. Furthermore, as you may know, the Academy Ordinance stipulates that to be an Academy Fellow, the doctor must be able to register with the Hong Kong Medical Council. Therefore, in the short term there should not be any change in our specialist status, or that of our Mainland counterparts. In a longer term, however, I believe there will be considerations regarding the comparability in specialist training and accreditation between the two places.

The other matter that concerns the Academy and will affect us is that the CME/CPD programme of the Academy is currently under review. Very likely some forms of mandatory requirements for CPD would be introduced by January 2011. While the total number of CME/CPD points would still be 90 over a 3-year cycle, a portion of these points need to be accumulated through participating in CPD activities. The difference between CME and CPD, in simple terms, is that CPD is more closely linked to the actual day-to-day practice such as participating in quality assurance programmes, rather than the traditional way of learning in CME like attending lectures or courses. As a result, there will soon be modifications of the College CME/CPD scheme accordingly. I am sure that the Council will take into consideration the fact that Pathology encompasses a wide range of service scope so that our scheme should be flexible enough to accommodate the variety of patterns and modes of professional practice, and to meet the different requirements of various pathology specialties.

This year is the 50th Anniversary of the Royal College of Pathologists of Australasia (RCPA), and I had the honour of being invited to join the official party of the ceremony held in Sydney in March.



Dr. K.C. Lee (left) and Dr. R.J. Collins (middle) of our College presented a souvenir to Dr. Stewart Bryant (right), the President of the Royal College of Pathologists of Australasia.

At the impressive ceremony, Dr J R Warren, an RCPA Fellow and last year's Nobel Laureate for his seminal observations relating to the significance of *Helicobacter pylori* in the causation of gastritis and duodenal ulcerations, talked to new Fellows on the importance of research in pathology. On your behalf, I presented to the RCPA a gift that was specially chosen for this special occasion. The gift was a crystal that takes the shape of blending the lines of a Chinese junk and the Sydney Opera House, and symbolizes the special relationship between the two Colleges.

This year is the second year in a row that we have College examinations in all six specialties, signifying our examination system is now in full swing. In addition, this year is also the time, once in every five years, that we need to carry out another large scale laboratory inspection exercise for training. Without doubt, these and other College activities have put an enormous pressure and workload on the College Secretariat and our colleagues who help in organizing the examinations, by participating in the inspection visits, as well as in many other activities. May I take this opportunity to thank everybody for your support, especially for your time and hard work in the coming months. Meanwhile, I hope everyone will enjoy a pleasant summer!

Dr. K.C. Lee,
the President



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BACKGROUND

In 1999, the Institute of Medicine (IOM) published an important report on “medical errors and patient safety” in the US, outlining specific recommendations to reduce errors and safeguard patient safety in medical practice. The Report’s premise, *To Err is Human*, finds many echoes and responses in the medical profession including anatomical pathologists (References 1-4). Sirota (Reference 5) succinctly defined and divided errors in anatomical pathology according to the test cycle as pre-analytic (e.g. wrong patient identification, inadequate clinical information), analytic (e.g. inadequate blocking, interpretation error) and post-analytic (e.g. delayed reporting, wrong location, computer error, misinterpretation by clinicians). After reports are signed out, errors are often brought to our awareness under the following circumstances:

1. Responsible pathologist’s review of a recent case with or without additional information or material
2. Preparation for presentation at CPC with clinicians
3. Clinician-initiated review
4. Result of external consultation
5. Internal audit or review for research purpose

Errors may or may not result in patient morbidity. The possible outcome has been categorized as:

1. No impact on care
2. Minimal harm (no morbidity): includes delay in diagnosis of ≤ 6 months
3. Mild harm (mild morbidity): includes delay of > 6 months
4. Moderate harm (moderate morbidity)
5. Major harm (major morbidity)

In the cases where an amended report is issued, revisions of the final diagnosis are made in the following aspects:

1. Primary diagnosis category (e.g. from benign to malignant)
2. Secondary diagnosis characteristics (e.g. tumour grade, stage, margin, node status)
3. Diagnostic reclassification (e.g. from MFH to fibrosarcoma) with no prognostic impact
4. Patient or specimen re-identification
5. Additional specimen sampling leading to changed report
6. Others

With the current trend of litigation against medical practitioners, pathologists experience increasing threats in revising authorized reports, especially after

6 months delay. We are torn between the expected professional ethics to strive for diagnostic accuracy and the fear of kicking up an unpleasant fuss once we admit our error. Thus arises the question: **To Amend or Not to Amend?** There is consensus concerning minor errors with no implications on patient management. Amendment of these causes little concern to clinicians and can be addressed by comments or case notes added to the computer record or LIS system. Errors causing outcome more serious than these merit careful deliberation. How are we going to inform the clinician-in-charge and subsequently the patient concerned?

To answer this, the Newsletter Editorial Board decided to tap on the wisdom and integrity of the profession at large, especially our senior colleagues. We have solicited the personal view from some experienced pathologists of different hospitals in Hong Kong (including HA and private hospitals). Their response is overwhelmingly encouraging and pertinent. We sincerely hope that it would generate further and wider discussion within our profession. Here we present their opinions in an anonymous fashion, divulging only the type of hospital (private or HA hospital) they work in and their years of practice in pathology. We welcome any written response from college fellows on this subject by mail or e-mail addressed to the Editorial Board. We would edit and publish them in the form of an open forum in subsequent issues.

RESPONSES

Pathologist in private practice and over 25 years of experience

1. As far as I remember, when we started any auditing programme, we pledged to have it anonymous to outsiders. Without this pledge and understanding between auditee and auditor, any audit programme will sooner or later break down. When some serious errors are found, there should already be an established protocol of who are the ones that “need to know”. My experience is that two parties should know: a. the auditee and b. the most senior of the Department (or the one responsible for the service).
2. There should be absolutely NO question for any other party to face any dilemma of “to tell or not to tell”. Auditors should be given this understanding of “exemption from responsibility” before taking up any auditing.
3. As there should be no other situations where someone not involved with the care of the patient

should be “reviewing the material”, this principle should cover most “ethical problems”. In any unauthorized or restricted review of case (including a retrospective study out of patient management context, self review of cases for personal development, CME activities etc), the individual is in no position to doubt or point out straight away that there are “ERRORS” while deliberately sidestepping the responsible pathologist. If one is in serious doubt, he/she should follow the ONLY correct pathway of “ringing the bell”: and that is to point out the observations to the pathologist who has signed the report, or if that one is not available, to the one responsible for the service under which the report was made.

4. Now the question becomes: Should the reporting pathologist or the one responsible for the service report the error? My answer is a simple YES, but of course it comes in various forms, and not always ending up with an amendment of the report or issuing of a supplementary report.
5. I think the dilemma you mentioned at the start is created with a presumption: “That patients are likely to be against us and sue us in cases of errors”. I must say that we should not start with this premise. More often than not, especially in private practice, we have more allies than you might suspect: a. the clinician, and b. even the patient.
6. When I find an error serious enough, (thank God there has not been one), I would evaluate the situation before taking any action: collection of information about what happened to the patient after the report etc. If my error has led to no sinister consequences (e.g. someone has performed some tests and has already rectified the clinical diagnosis), I would say let the error lie at rest.
7. In case of doubt, or if something has gone wrong, there are three parties you should immediately contact for help: a. your medical protection society, and ASAP, b. the clinician who ordered the test and received the report, and c. a fellow pathologist for peer review/support.
8. In private practice, when the MPS took up the issue, it became a “lesson to learn” and no more a mental / financial burden. You can then review your situation at ease and act purely as a professional (and not a potential defendant in a court case).
9. We must discuss with the clinician. Very often that is where the problems will end. Sometimes pathologists forget that clinicians are still “semi-god” in the eyes of their patients, and they can direct the situation to a much better or worse state.

THE TRICK - be helpful and more empathetic towards GOOD CLINICIANS when doing our reporting. All of us know that we stick our neck out in different degrees (often depending on to which clinician). I make it a point that the clinician would be notified as soon as possible; discuss with him what damage has been done and how he can win the patient over to be less militant when someone suggests legal actions.

10. Your peers are also very important: My experience is that we often grade our errors worse than peers. When some peer can stand up and give a second opinion, more often than not you get some support (i.e. EXCUSE FOR HUMAN ERROR). At least when I review others’ cases, I always emphasize HOW SIMILAR OUR INTERPRETATIONS ARE and not how bad the error is. In case where errors are gross, it would also be good that some peer remind you that you have no ground to defend and run quickly to MPS for shelter.
11. By now, you should have a very good idea to issue or not to issue an amended report and be able to do so with the least of worries and the maximum of support.
12. I would issue an amended report if it would remove stigma or worries from the patient, if it implies a different management plan from this moment onwards, and if the clinician demands it. (See how I have shifted my ethical responsibilities to the clinician somehow!!)
13. In issuing such an amended report, I would document how the error was found, how I have gathered a second opinion from my peers, why it was issued and how I have issued it at the earliest time.

Unfortunately I ended with 13 points. I don’t mean to imply something ominous. I think I can still sleep after issuing such amended reports. Have I ever encountered something similar? Most of the time, the incidents fall short of your arbitrary line of 6 months. This is more a luxury in private practice, because clinicians are quick to doubt your reporting and will ring and discuss with you. Amended reports (for small to serious error!!! Everyone erred some time or the other) are often sent out as the “Final Copy”, I mean within 1 or 2 days. After practising for all these years, I have learnt that to issue a helpful, timely and accurate report, we must allow a process of “proof reading” by the clinician-in-charge AFTER we signed. Sounds irresponsible? NO! I am just sharing the responsibility as well as the burden of CLINICAL care (as oppose to simple scientific reporting). This I consider as part of THE ART OF PATH REPORTING.

Pathologist in HA hospital practice for over 25 years

The question raised is only part of a much larger complex problem that has no simple answer. My personal view is that amendments that are clinically significant should be issued. This statement is obviously an over-simplification. Many pathological specimens including tumours do not have a well-defined 'correct' diagnosis, although we generally accept a peer majority agreement or expert opinion. The other issue of 'clinical significance' may be difficult to be decided by the pathologists. The dilemma of professional ethics and fear of litigation on amending a report is a real concern but cannot and should not be evaded. Instead, the public and the court if necessary should be shown that the placement of a quality system testifies in favour of the profession's effort to maintain the highest standard for the benefits of the patients. However, we have to admit that steps like establishment of the College, specialist examination, continuous medical education and laboratory accreditation only minimize but cannot completely eliminate diagnostic errors. In the end, we would need to trust that the court could make a fair judgement.

Most laboratory accreditation agencies require the practice of a quality system such as intra-departmental consultation, cyto-histology correlation and frozen section-final diagnosis review, documentation of extra-departmental consultation, participation in external QAP, written policy on amending reports, etc. However, no generally accepted guidelines exist outside these scopes. A major concern is the 'background' level of clinically significant diagnostic error or variation that cannot be easily detected. Various studies have reported an incidence from 0.2% to above 1%, probably reflecting the lack of agreement on what constitutes a 'significant variation' (Reference 1, 4). Measures such as subspecialty reporting, routine or targeted double reading, etc. have been proposed to deal with this problem. In the study from Southampton, most mistakes (both oversight and misinterpretation errors) tended to occur while reporting a large batch of surgical specimens with a target TAT (Reference 1). The current work practice of pathologists with intermittent heavy duties followed by quieter periods may need to be reviewed.

Pathologist in HA hospital practice for over 25 years

This, as you are aware, is a complex issue. The critical point is a responsibility to provide optimum care to the patient. In general if patient harm is decreased by issuing an amended/supplementary report then it should be done. It is usually straightforward if an error is discovered very near the time of the original pathology report then a corrected, revised, or addendum report should be issued and the responsible clinicians notified. Errors or discrepancies with no impact on patient care can be forwarded to the departmental quality assurance programme for analysis and action as required. The response to a diagnostic discrepancy which becomes apparent after some period of time will vary depending on the nature of the error and likely clinical impact on the patient. Errors that may affect patients' care should probably best be referred to the institution's risk management committee or equivalent for advice before issuing an amended report. The last scenario begs lots of questions. How long? What sort of error for what sort of response?

Pathologist in HA hospital practice for over 25 years

The policy in my department is that amended or supplementary reports would be issued if there is significant discrepancy in the diagnosis or important information is not included which will affect patient management or prognosis. Most of the errors are detected through peer review, external consultation and clinician-initiated review. Although there is a chance of being sued, I still believe that this ought to be done for patients' sake. I think that voluntary open disclosure will be more acceptable than leaving the room to be discovered through other means later by the affected patients. Sometimes I will discuss with the clinicians about the cause of the discrepancies so that they can give a better explanation to the patients. So far we haven't been blamed by the clinicians for issuing an amended report causing them trouble. I think error could be minimized but not eliminated completely, therefore subscription to a medical protection scheme is indispensable for all practicing doctors.

Pathologist in HA hospital practice for over 25 years

From a brief review of 23 amended reports (0.06% of all reports) issued in my department last year, 70% (16/23) are either typographical errors (discovered by clinicians or pathologists) or errors in mislabelling of specimens (informed by clinicians). The others are 3 false negatives (from atypia to in-situ malignancy) and 4 'different malignancies'. Two of them were requested by clinicians and 5 were discovered by pathologists after special investigations and peer reviews. As all the amendments were done shortly after the issue of

the original reports, no harm was done to the patients. We do not know how the reports were communicated to the patients and the outcome.

The decision to amend a report varies between pathologists; some would amend the report even with minor changes in description. Hence the percentage of amended reports might not fully reflect the error rate. If errors were discovered during the QA process, the results were only noted in case notes for internal reference if there is no immediate treatment implication or prognostic significance. Clinicians are well aware of the possibility of errors and are quite ready to seek clarification from us. In signing out amended reports, most pathologists would also contact the clinicians by phone explaining the reason. A brief note would usually be given in the amended report. In sensitive cases, we pay particular attention in wording the amended report to reflect the issue fairly and more senior pathologists would usually be involved.

Prevention is always better than cure. Helpful practices include: computerize requests (cross check with OT notes to avoid mislabeling), provide check lists in grossing especially on difficult dissections, standardize reports to avoid incomplete reporting, be ready to consult others, improve awareness of blind spots, institute group slide review sessions, encourage peer review in case of doubt (a reporting room might facilitate this practice), increase educational activities (CME), obtain laboratory accreditation with on-going audit for protection, etc.

Our mandates as physicians are: do no harm and seek the best welfare of our patients, treat our colleagues as our dear brothers/sisters. Errors occur sporadically and are difficult to be completely avoided. I will expect an increasing number of cases to be discovered with increasing audit activities, pressure from hospital administration and social expectation (increasing transparency); we will be called upon to review the report of our own or our peers' work. We need to seek support from both colleagues within our specialty and our clinicians to face the challenge. Oversight and heavy workload are the usual factors contributing to error. Documentation of training, audit activities and workload monitoring would be helpful.

In conclusion, amend the report to avoid or minimize the harm done to the patients. Seek support from peers and clinicians in handling. Seek legal advice from medical protection agency if there is possible litigation. Fortunately as seen in this brief review most errors are minor and serious mishaps are rare.

Pathologist in HA hospital practice for over 25 years

I believe that issuing supplementary reports in Anatomical Pathology is a relatively common practice (e.g. availability of results on histochemistry and immunohistochemistry, EM, EBER, etc). For amended reports, the scenario may be quite straightforward (e.g. the requesting doctor, Dr. ABC, may call to amend the laterality of specimen A which should be 'right' instead of 'left' as indicated on the request form; or significant typo mistakes). The pathologist should fill in the column "purpose of amendment" in the LIS which would be printed as the headline in the amended report to alert the clinician who receives the report on the reason for the amended report. When the amendment is initiated by the pathologists, extra care should be taken in handling the case, especially if the diagnosis is to be changed since the amended information may have implication on patient care. The clinician should be contacted personally to alert him of this significant change. This will avoid confusion and misunderstanding, as well as to facilitate the clinician to work on a new line of managing care. For example, the patient may have to be contacted and asked to come back for an early appointment or procedure. In cases where major discrepancy in diagnosis is found after case review (e.g. for CPC, audit exercise, comparison with subsequent specimen, etc.), the original sign-out pathologist should be informed. If an amended report has to be issued, it should be signed out by the original pathologist (provided that he/she agrees to the change), or done with his/her consent (if he/she is no longer working in the department). If the case is controversial, it may not be a good idea to amend a previous report as there is no way to prove what is the truth. Alternatively, a comment can be made in the latest report to explain or follow on the new lines of thought - after all, it may not be the fault of a previous report. This is particularly important if one considers the possibility of medical legal implication. Before issuing any amended report, the involved clinicians should always be consulted first, and the case thoroughly discussed with them. The opinion of the clinician should be sought and respected as he/she is the frontline personnel who has to "break the news" to the patient. It may be even worse, if not awkward, on his/her part to amend the news.

REFERENCES

1. Ramsay AD. Errors in histopathology reporting: detection and avoidance. *Histopathology* 1999; 34: 481-490.
2. Sirota RL. The Institute of Medicine's report on medical error. Implications for Pathology. *Arch Pathol Lab Med* 2000; 124: 1674-1678.
3. Sirota RL. Error and error reduction in pathology. *Arch Pathol Lab Med* 2005; 129: 1228-1233.
4. Zarbo RJ et al. Error detection in Anatomic Pathology. *Arch Pathol Lab Med* 2005; 129: 1237-1245.
5. Sirota RL. Defining error in anatomic pathology. *Arch Pathol Lab Med* 2006; 130: 604-606.



TOPICAL UPDATE

Volume 1, Issue 2 July 2006

Editorial note:

*I hope you have all enjoyed the first issue of **Topical Update – The Hong Kong College of Pathologists** published by the Education Committee of the Hong Kong College of Pathologists. It is now time for the second issue. Any feedback and suggestions could be directed to Dr. Janice Lo (e mail: janicelo@dh.gov.hk) of the Education Committee, the Hong Kong College of Pathologists. Opinions expressed are those of the authors or named individuals, and are not necessarily those of the Hong Kong College of Pathologists. Happy reading!*

The Roles and Expectations of the Specialist in Clinical Microbiology and Infection

Raymond WH Yung

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In the past three years, we have witnessed the revived recognition of the importance of the specialty of Clinical Microbiology and Infection. The SARS outbreak reminded the medical profession that the line of defence which we had built against infection was still not robust enough to handle major outbreaks. Three reports were published after the outbreak. They outlined the deficiencies found and recommended what should be done for the future.¹⁻³ Many of the recommendations are relevant and will impact on the future development of the specialty of Clinical Microbiology and Infection. Let me quote from the report of the Hospital Authority Review Panel, Paragraph 2.40: ‘... to control an outbreak of an unknown infectious disease ... rapid implementation of measures to prevent spread and control the impact are vital, viz. 1) effective surveillance, data collection and sharing; 2) high level of awareness and implementation of effective infection control measures; 3) rapid and comprehensive contact tracing; and 4) timely declaration and enforcement of isolation and quarantine measures’.

Other than infection control issues, the SARS outbreak further reinforced the role of the Clinical Microbiologist in several aspects. Firstly, the clinical microbiology service supports not only clinical care

of individual infected patients, but also supports the protection of the health of the general population. Besides possessing strong command in the science of clinical microbiology, solid knowledge in epidemiology and crisis management to facilitate investigation and control of outbreaks is also essential. In the context of provision of the daily service, the Clinical Microbiologist has a consultative role in managing patients with infectious diseases, from the arrival at a presumptive diagnosis based on clinical and ancillary laboratory/radiological findings, to advising on the appropriate diagnostic microbiological investigations, to interpreting results based on clinical and epidemiological information, and to recommendation of management options. Apart from attending to the individual patient, the Clinical Microbiologist, as the infection control specialist, undertakes to decisively direct and advise on the consequent infection control issues, both within the institution and in the community. Synthesis of epidemiological data with knowledge of the infectious agent, such as transmission route, incubation period, duration of infectiousness and susceptibility to disinfection, will enable the microbiologist to recommend specific measures to define at risk groups for contact tracing and to implement measures to prevent and control further spread of the infection to ensure public health.

Secondly, to deliver a proficient service, it requires integration of a range of competencies, encompassing clinical practice, diagnostic laboratory science, laboratory management, infection control, research and development, which can best be provided by a multidisciplinary team working in close partnership with other clinical specialists. The Clinical Microbiologist, as a medically-qualified personnel with specialist training in both medical microbiology and infectious diseases well versed with the interaction between the worlds of the microbe and human, is in the ideal position to harness and ensure best application of all these knowledge and skills, especially in this cost-effectiveness conscious age. Taking stock of presently pressing needs, sound advice can be provided on various service developments, including the evolving scope of a quality microbiology laboratory service, establishment of epidemiological and laboratory surveillance programmes, administration of infection control programmes such as antimicrobial stewardship, and public health policy development such as vaccination programmes. In particular, when antimicrobial resistance is spreading from the health care setting to the community, the Clinical Microbiologist is best equipped to take the lead in setting up surveillance of resistance trends, providing advice on and monitoring the use of antibiotics, and developing guidelines and strategies on empirical treatment of infections.

Thirdly, with the development of automated systems and technological advancement, an increasing number of front-line virology investigations can now be carried out in traditionally bacteriology laboratories, and test systems are in rapid evolution. The Clinical Microbiologist is expected to maintain an up-to-date perspective with an attitude to embrace and put into practical application various advances especially in the field of clinical virology.

Fourthly, there is increasing pressure for a more rapid turnaround time to support the clinical service and outbreak investigations. Again, the Clinical Microbiologist, with knowledge and experience in various laboratory techniques, coupled with the acumen on clinical applicability, is in the best position to ensure adoption and use of microbiological investigations in a cost-effective manner.

Fifthly, with the emergence of new infections and resurgence of some old ones, and burgeoning knowledge on the immunological interaction between our body system and intrusive agents, clinical microbiology is a dynamic subject. Among the frontiers of research are the host genetic susceptibility as a marker of risk of infection, and the use of immunomodulating agents for the treatment and prevention of infection. On the laboratory diagnosis front, the Clinical Microbiologist

needs to constantly review and update investigation and management protocols. It may not be easily done by individual laboratories, but may be made possible by setting up a network of laboratories with an agreed standard of practice. In a similar vein, risk assessment for pandemic planning and for handling potentially emerging infections is an important area which the Clinical Microbiologists should not overlook.

We specialists in Clinical Microbiology and Infection can well capitalize on these concerns and challenges, and position ourselves so that our contribution is appropriate to clinical service in the twenty-first century and to future emerging infections. As one of the founding specialties of the College, we have the responsibility to continually review the strengths and weaknesses of current situations; equally important is to look into the opportunities and threats encountered by the specialty. We need to undertake to map out the domain of practice of Clinical Microbiology and Infection and formulate the core competence required to bring forth a quality service.

While the senior management in both the government and institutional context recognizes that infection is everyone's responsibility and puts infection and infection control higher up the agenda, the specialty of Clinical Microbiology and Infection can take the opportunity and initiative to rejuvenate the clinical microbiology service. This will mean embracing new practices as described above, with our service to be delivered in innovative ways. New partnerships should be fostered and strengthened with both medical and allied health colleagues, to ensure an optimum complement of expertise for the control and prevention of infectious diseases.

By consolidating our training and expertise in managing infectious diseases, together with experience gained from recent challenges, the specialist in Clinical Microbiology and Infection is well-positioned to take the lead in the renewed effort in the war between microbes and man.

References

1. SARS Expert Committee. SARS in Hong Kong: From experience to action. <http://www.sars-expertcom.gov.hk/english/reports/reports.html>. Accessed 5 June 2006.
2. Hospital Authority Review Panel. Report on the SARS outbreak. http://www.ha.org.hk/sars/ps/report/reviewpanel_e.pdf. Accessed 5 June 2006.
3. Legislative Council Select Committee on SARS. Report to inquire into the handling of the Severe Acute Respiratory Syndrome outbreak by the Government and the Hospital Authority. http://www.legco.gov.hk/yr03-04/english/sc/sc_sars/reports/sars_rpt.htm. Accessed 5 June 2006.

Genetic diagnosis of inherited nephrolithiasis in Hong Kong

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Inherited metabolic diseases like cystinuria (MIM220100), primary hyperoxaluria type 1 (PH1, MIM259900) and primary hyperoxaluria type 2 (PH2, MIM260000) are relatively rare but clinically important causes of nephrolithiasis in both paediatric and adult patients. We selectively studied the *AGXT* (PH1), *GRHPR* (PH2), *SLC3A1* (type A cystinuria) and *SLC7A9* (type B cystinuria) genes in 13 unrelated patients diagnosed to have PH1 (n = 3), PH2 (n = 2) or cystinuria (n = 8) based on biochemical investigation results. All, except one PH2 patient, were ethnic Chinese. The entire coding sequences and flanking introns of the four target genes were amplified by polymerase chain reactions and then sequenced in forward and reverse directions. When novel missense mutations were detected, we screened the mutation in at least 50 control subjects by either restriction fragment length polymorphism or primer-introduced restriction

analysis. In the three PH1 patients, we identified five different mutations in the *AGXT* gene, one of which occurred in homozygous state. Three of the mutations (c.817insAG, M1T, Q282X) were novel. The two PH2 patients carried homozygous *GRHPR* mutations and one of the detected mutations (c.862delTG) was novel. Based on the urinary amino acid patterns of the index patients and their parents,

we have identified 5 patients with homozygous cystinuria and 3 patients with heterozygous disease. Analysis of the *SLC3A1* and *SLC7A9* genes not only confirmed the biochemical diagnosis, the results also further characterized the 5 homozygous cystinuria patients into either type A (3 patients) or type B (2 patients) cystinuria. Two novel *SLC3A1* mutations (D210G and S547L) and four novel *SLC7A9* mutations (c.730delG, C137R, IVS10+2_3delTG and IVS12+3insT) were identified. Our results contribute to the number of novel mutations in the four target genes. They also increase our knowledge about the genetic basis of these inherited nephrolithiasis in the local Chinese population.



Dr. Y.P. Yuen, winner of Trainee Presentation 2005, presenting her findings to the audience.

COMMENTS AND VIEWS ABOUT THE TRAINEE PRESENTATION SESSION: PERSPECTIVE FROM A PARTICIPANT

Iwas fortunate to be able to participate in the first Trainee Presentation Session organized by the College during my last year of Pathology training. This event was special to me because this was the first time I shared my research work in a competition context. The theme of my presentation was inherited metabolic diseases that present with renal stone disease. In the presentation, I summarized the clinical cases, together with the research findings, encountered in my five-year pathology training. These inherited metabolic diseases carry distinct clinical significance because their natural courses, prognosis, management and implication to siblings are very different from other causes of renal stones.

As these inherited diseases are rare, the limited and scattered clinical experiences have to be grouped together for us to learn the most out of it. As Pathologists who deal with special biochemical and genetic investigations, we are in the best position to accomplish this task. Our work has highlighted that small-scale research at a peripheral hospital could play an important role in patient care and knowledge advancement. To me, this represents a wonderful experience and a lot of satisfaction.

Dr. Y.P. Yuen,
Winner of Trainee Presentation Session 2005

The book, 'Plague, SARS and the Story of Medicine in Hong Kong', is a project of the Hong Kong Museum of Medical Sciences (HKMMS) Society, published this year to mark the occasion of the Centenary of the Old Pathological Institute (initially named the Bacteriological Institute), the building which houses the Museum, and the 10th Anniversary of the HKMMS, opened in March 1996.

Research into the medical history of Hong Kong started with the establishment of the Museum, but the book project was given an added impetus when the Gerald Choa Memorial Fund was set up at the end of 2002, as it enabled the employment of a full-time research assistant to assist in the collection of archival records and other materials. Altogether it took 3 and 1/2 years of research and preparation to produce the volume of 368 pages, consisting of 6 chapters and a chronology.

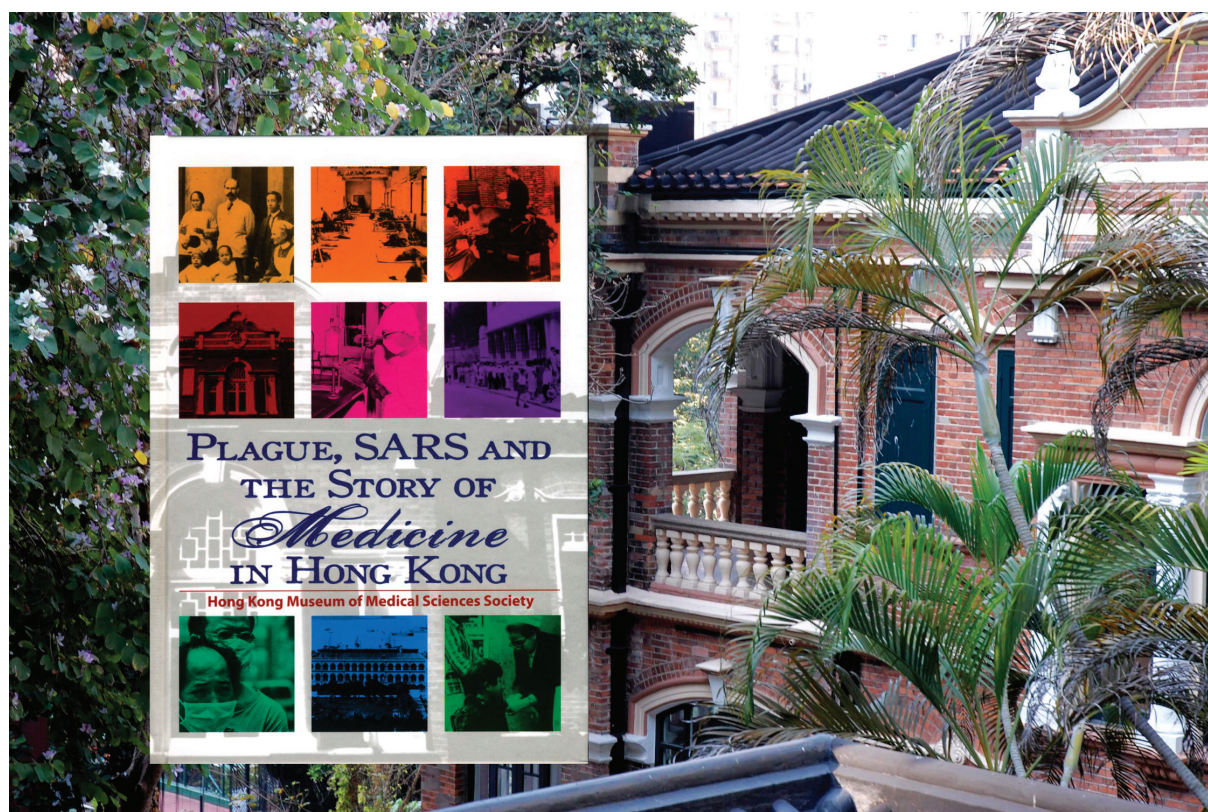
Inevitably only a few selected topics could be covered, including the history of infectious diseases in Hong Kong, the battle against tuberculosis, the evolution of Hong Kong's hospitals, the history of the Bacteriological Institute and its contributions to Hong Kong and shorter chapters on Medical education and health-care issues in a changing society. Nevertheless we are delighted that the

book has been chosen as one of 40 titles for special recognition at the "Hong Kong Book Fair 2006" <香港書展2006名家推介> held from 19th to 24th July, 2006 at the Hong Kong Convention and Exhibition Centre.

Pathologists and Microbiologists may find the chapters on infectious disease and the Bacteriological Institute (Ch.3) of special interest, and the latter also gives an account of its transformation into the HKMMS, acknowledging the role played by the Hong Kong College of Pathologists. This chapter has also been produced in an abridged and bilingual version with a Chinese translation, published separately under the title: *The Silent Protector* [默然捍衛 - 香港細菌學檢驗所百年史略], which aims to help the general public understand the unique contributions of the institute to protecting the health of HK citizens.

Copies of both books may be ordered at www.hkmms.org.hk, with discounts if bought in person at the Museum. All proceeds go to support the continuation of the HKMMS and the work of the Museum Society, so your enthusiastic support is most welcome.

Prof. F.C.S. Ho,
Hong Kong Museum of Medical Sciences Society



2nd HKCPath Presentation Session for Pathologists in Training

The Education Committee

The Education Committee would like to announce that the oral presentation session for trainees will be held on the day of the Annual General Meeting on 25 November 2006. This is a good opportunity for our trainees to share experience and to practise presentation skills. A prize will be given for the best presentation.

Please support this meaningful activity of our College by taking part in the presentation or by encouraging your trainee to participate. An abstract of not more than 300 words can be submitted to Dr WK Luk through e-mail (lukwk@ha.org.hk). Confirmation letter for acknowledgement of receipt will be issued. The deadline of submission is 31 October 2006.

MEETING ANNOUNCEMENT

- **Histopathology Course of HKIAP:** gastrointestinal pathology by Dr. D. Owen. Kai Cheong Hall, Prince of Wales Hospital; **2 Sep, 2006**. <http://www.hkiap.org>
- **XXVI International Congress of the International Academy of Pathology (100th Anniversary Congress of the IAP).** 16-21 Sep, 2006; Montreal, Quebec, Canada. <http://www.iap2006.com>
- **14th Annual General Meeting of the Hong Kong College of Pathologists.** HKAM Jockey Club Building; **25 Nov, 2006**.
- **15th Annual Scientific Meeting of the HKIAP:** gastrointestinal pathology and dermatopathology by Dr. P. Chandrasoma and Dr. P. LeBoit. Postgraduate Education Centre, Prince of Wales Hospital; **1-3 Dec, 2006**. <http://www.hkiap.org>

*The next AGM of our College will be held on
Nov. 25, 2006 (Sat).*

Mark it on your diary now!