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Newsletter of the Malaysian Society of Anaesthesiologists and the College of Anaesthesiologists, Academy of Medicine of Malaysia

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Message from the President

I am pleased to report that the Annual General Meeting was successfully concluded on 18 March at the Melaka International Convention Centre, Ayer Keroh, Melaka. All but one member of the Executive Committee was nominated for another term. This was indeed a vote of confidence for the President and the Executive Committee and I take this opportunity to thank you for your presence and support. It is also my pleasure to welcome Dato' Dr S Jenagaratnam as our new Chairman. Dato' Jena is replacing Dato' Dr K Inbasegaran who passed away last year.

The Annual Scientific Meeting attracted more than 600 participants and 70 trade booths. Needless to say, it was a huge success and a testament of the organizational skills of Datin Dr Sivasakthi. The choice of medico-legal issues as the main theme for the meeting was timely and well received. In addition, the symposia provided many updates on important clinical issues. We have shown that anaesthesia in Malaysia has come of age and the annual scientific meeting is a main draw among members. To cap it all, the ASM had generated significant income to ensure a healthy financial account for this year. The Society wishes to record its utmost gratitude and thanks to Datin Dr Sivasakthi and the organizing committee for their tremendous effort and for having organized a highly successful meeting.

After two years of very successful AGM / ASM outings in the 'periphery', the Exco felt that it is time to bring the meeting back to the Klang Valley. Thus at its last meeting, the Exco appointed Dr Lim Wee Leong as the organizing chairman for the 2007 ASM. With Dr Lim, a senior consultant in Ministry of Health at the helm, we can look forward to another great meeting next year.

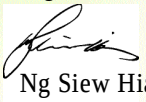
In the past, Society presidents used to ask what its members can do for the Society. I tend to take a different stand. I ask what the Society can do for its members. And so in the last two years, the Exco had strived to meet expectations and came out with many initiatives especially in areas of continuous medical education and professional development. We are perhaps the only Society which provides members with a web-based programme to log CME activities and points. We are also one of the few societies that provide subsidies for members presenting papers at scientific meetings. Members have found the e-library particularly useful. The Intensive Care Section had organised many seminars and courses e.g. Surviving Sepsis Campaign, BASIC course, fluid and nutrition workshops etc. We have brought the European Diploma in Intensive Care (EDIC) to our doorsteps by conducting its part II oral exam locally and starting this year, we will make available a research fund as well as a year book with collections of updates for members. What I have listed is just a fraction of what MSA had done in the last two years and I hope it is sufficient to convince anaesthetists who are currently non-MSA members that the services provided by MSA are worth the yearly subscription fee of RM 75!

It is my desire to see that every single anaesthetist in this country become a member of MSA. I hereby ask you, my colleagues and MSA members, to seek out friends who are non-members and urge them to join the society so as not to miss out on the many privileges and services we are providing for anaesthetists and trainees.

It is my duty to inform members that hospitals in Ministry of Health have introduced a separate anaesthetic consent for patients undergoing surgery/anaesthesia since January this year. The consent is taken by an anaesthetist and includes disclosure of common risks and complications associated with anaesthesia. This is a major change in clinical practice and one that I think is inevitable and in line with modern safe practice. UMMC had done this for many years and I believe my colleagues in other facilities may want to review their practice to reflect this current trend.

Finally, I am pleased to inform you that all members will receive a mouse pad and a year book from MSA this year. The year book will contain a series of updates written by local authorities and it will be sent to you end of this year.

Regards,

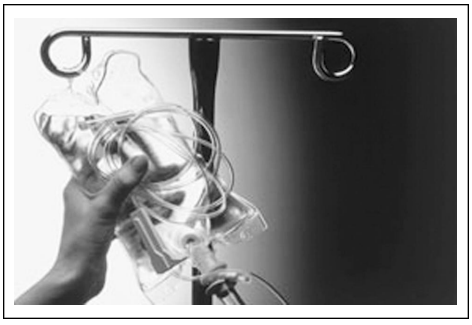


Ng Siew Hian

In this Issue ...

Crystalloid versus Colloid Controversy: A Review of Current Evidence

by **Dr Norezalee Ahmad**



"When a thing ceases to be a subject of controversy, it ceases to be a subject of interest".
William Hazlitt (1778 – 1830)

The idea of intravenous injection was not entirely new. Sir Christopher Wren, as far back as the early 1650s, had performed experiments in which he injected wine and ales into the venous circulation of dogs, with not unexpected results. In 1831 Dr W B O'Shaughnessy suggested in the Lancet the idea of infusing solution of highly oxygenised salts intravenously. His work was continued by Dr Thomas Latta who administered intravenous fluids to a cholera victim in 1832. By the turn of the century saline transfusion was so important in resuscitation that one eminent surgeon used to tell his students, "No person should die of haemorrhage." Saline was also reported in the treatment of diabetic coma and post-partum haemorrhage. At the same time intravenous injections of serum were also being used. By 1902 saline infusions appear to have become a standard tool in resuscitation, with the addition of "anti-streptococcic serum" in cases of infection or sepsis. The limitations of normal saline became apparent in the First World War and alternatives, such as gum acacia (a 6% solution of gum acacia in 0.9% saline) and hypertonic saline were used in addition to blood. The debate about the ideal resuscitation fluid continues to this day.

Recently there has been a resurgence of the debate with a flurry of systematic reviews assessing the effects of various crystalloids versus colloids on mortality, published in various international journals from 1998 to 2004. The limitations of any meta-analysis is that it can only be as good as the quality of the individual randomized control trials it includes. In this day and age of meta-analyses and evidence-based medicine, we must critically appraise these systematic reviews and cautiously relate their findings to our day-to-day clinical practice.

Velanovich (1989) and Bisonni et al (1991) performed the first meta-analyses on fluid resuscitation. The results of these two studies are mostly of historical interest because of the limitations of the methodology used. Although it may not reflect current practice, the findings of this review reverberated in all ensuing systematic reviews. In Velanovich's meta-analysis, the use of colloids was associated with an overall increase in mortality of 5.7% (95% confidence interval [CI], 9.4–20.8%). When trauma trials were analyzed separately, there was an increase in mortality of 12.3% (95% CI, 4.6–29.2%) associated with the use of colloid fluids. He concluded that "these data imply that resuscitation of trauma patients should be performed with crystalloid solutions; however, in the appropriate clinical setting colloid therapy may be more efficacious in the non-trauma patient." Using a much smaller group of patients, Bisonni et al. reported no statistically significant difference in overall mortality between colloids and crystalloids. They found, however, a clear trend towards increased mortality in hypovolaemic patients (mostly trauma patients) where the mortality rate associated with colloids was 17.8% versus 7.3% for crystalloids.

The controversy was revived in 1998 when two consecutive systemic reviews on fluid resuscitation were published in the British Medical Journal (BMJ). The first systematic review by Schierhout and Roberts again compared the effect on mortality of resuscitation with colloid versus crystalloid. They found that resuscitation with colloids was associated with an increased absolute risk of mortality of 4% (95% confidence interval 0% to 8%), or four extra deaths for every 100 patients resuscitated. The authors' recommendation is that colloids should not be used outside randomized controlled trials (RCTs).

In the following edition of the BMJ, the Cochrane Injuries Group Albumin Reviewers (Schierhout & Roberts as lead authors) published the controversial review on the effect on mortality of the administration of human albumin or plasma protein fraction in critically ill patients. They showed that, for each patient category namely hypovolaemia, burns and hypoalbuminaemia, the risk of death in the albumin treated group was higher than in the comparison group. The pooled relative risk of death with albumin was 1.68 (95% confidence interval 1.26 to 2.23) and the pooled difference in the risk of death was 6% (3% to 9%) or six additional deaths for every 100 patients treated. As a result of the media publicity, the review made a huge impact on the British practice. The use of albumin in the United Kingdom dropped by at least 40% by the end of that same year.

Choi et al (1999) systematically reviewed the effects of isotonic crystalloids compared with colloids in fluid resuscitation of adult critically ill patients. Their results showed no overall difference in mortality, pulmonary edema, or length of stay between crystalloid and colloid

Continued on page 3

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fluid resuscitation, but simply showed a trend toward lower mortality in favor of crystalloids. When the trauma subgroup was analyzed a priori, however, the results demonstrated a statistically significant increase in mortality associated with the use of colloids. Choi et al. suggested that the results of this meta-analysis are best viewed as hypothesis generating rather than as a justification to ban the use of colloids.

A meta-analysis by Wilkes and Navickis attempted to "allay concerns about the safety of albumin." They focused on the use of albumin versus crystalloids in critically ill patients. Their pooled relative risk of death was 1.11 (95% CI, 0.95–1.28) for all patients and 1.12 (95% CI, 0.85–1.46) for surgery and trauma patients. They concluded that there is no evidence that albumin significantly affects mortality across all trials and for the subgroup of surgery and trauma patients. Their finding "supports the safety of albumin"; nevertheless, they suggested "the need for further well-designed clinical trials."

Is albumin safe? On the one hand, albumin was suggested to increase mortality (Cochrane Injuries Group Albumin Reviewers) but on the other hand, it was considered to be safe. As the number of meta-analyses increases, more contradictions among them are inevitable. A well-designed RCT was needed to solve the uncertainty. A collaborative group in Australia and New Zealand rose to the occasion with the publication of the SAFE (Saline versus Albumin Fluid Evaluation) trial, which was dubbed as a landmark study that heralds a new era in critical care. The study demonstrated that, in heterogeneous population of adult ICU patients, albumin can be considered safe, without demonstrating any clear efficacy advantage over saline.

Key findings of the SAFE Study

6997 patients were randomised to receive either albumin (3497) or saline (3500).

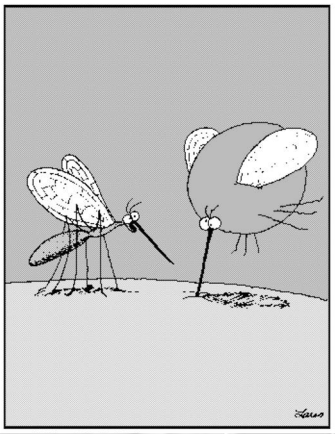
The primary outcome (alive or dead at 28 days) was available for 6933 patients (99.1%).

No significant difference was seen between the albumin and saline groups in:

- 28-day all-cause mortality (20.9% v 21.1%; P = 0.87)
- days in the intensive care unit (6.5 [SD, 6.6] v 6.2 [SD, 6.2]; P=0.44)
- days in hospital (15.3 [SD, 9.6] v 15.6 [SD, 9.6]; P=0.30)
- days of mechanical ventilation (4.5 [SD, 6.1] v 4.3 [SD, 5.7]; P=0.74)
- days of renal replacement therapy (0.5 [SD, 2.3] v 0.4 [SD, 2.0; P= 0.41)

Not to be outdone, the Cochrane Albumin Reviewers hastily came up with a meta-analysis, including the SAFE trial, which contributed 91% of the information (based on the weights in the meta-analysis). As a result, their conclusion is rather expected. They found "no evidence that albumin reduces mortality when compared with cheaper alternatives such as saline." They also concluded that "there is no evidence that albumin reduces mortality in critically ill patients with burns and hypoalbuminaemia."

The choice of fluid in resuscitation will always be a subject of controversy. There will always be proponents and opponents of crystalloids and colloids. Each has its advantages and drawbacks. Furthermore, not all crystalloids and colloids are created equal. Recently, there is renewed interest in the use of hypertonic saline in resuscitation. This is another area that needs an adequately-powered, well-designed RCT to answer the clinical conundrum.



"Pull out, Betty! Pull out!... You've hit an artery!"

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Continuing Professional Development Activities (CPDA)

Date • **18 Feburary 2006** Venue • **Hospital Universiti Kebangsaan Malaysia, Kuala Lumpur**

The CPDA is part of the commitment of MSA towards CME activities among its members. Three hospitals in the Klang Valley, namely UMMC, HKL and HUKM, are taking turns to host this two-monthly sessions comprising a series of talks by local and/or foreign speakers on topics of relevance and interest to the practicing anaesthetsiologist. This meeting in HUKM was the third in the series of meetings under the MSA-CPDA banner.

The topic for discussion was Intravenous Anaesthesia, and three young lecturers from UKM and UM delivered their lectures in the most interesting and informative manner. The turnout was excellent and in fact more than expected – we had a whopping 50 attentive listeners who were not slow to add their questions and comments at the end of each lecture. This was certainly very encouraging and proved that CME activities are far from dead in the Klang Valley!

The first topic was "Total Intravenous Anaesthesia: A Personal Experience" by Dr Muhammad Maaya from Department of Anaesthesiology & Intensive Care, UKM. He went through some basic principles of TIVA, pharmacology of the commonly used drugs, namely propofol and remifentanil, and shared with us his experience in using TIVA while he was in the UK. The pharmacology of remifentanil is especially suitable for TIVA and this opinion was shared by members in the audience who had used this drug during their training overseas. We should certainly renew our efforts to convince the drug company to register this drug for use locally.

Our next speaker was Dr Thong Chwee Ling from Department of Anaesthesiology, UMMC, who enlightened us on "Propofol Infusion Syndrome" or PRIS in short. She cited numerous case reports and impressed upon us that PRIS not only affects paediatric patients in the ICU setting but also adult patients both in ICU and under prolonged anaesthesia. Dr Thong also highlighted the possible pathogenesis, predisposing factors, presenting features, prevention and treatment of the syndrome.

Dr Muraly Somasundram from Department of Anaesthesiology & Intensive Care, UKM rounded off the morning's proceedings with a talk on "Awareness under Anaesthesia". This was a pertinent topic under Intravenous Anaesthesia even though large-scale studies have failed to show a correlation between TIVA and increased incidence of awareness under anaesthesia thus far. Various aspects of awareness were discussed, such as the incidence, presentation, methods of monitoring anaesthetic depth and an in-depth discussion on bispectral index (BIS) monitoring.

It was refreshing to hear the presentation from young lecturers who took pains to prepare their talks and conveyed their message in a succinct manner. It was certainly not a one-way traffic as the lectures generated a fair amount of discussion and comments from the audience.

I would like to thank the MSA for promoting this CPDA programme, the speakers for their high quality presentations, and the audience for taking time off from their Saturday morning routine to attend the session.

C Y Lee
Organizer & Chairperson
Department of Anaesthesiology & Intensive Care, UKM

Report on Weekend Workshop on Literature Appraisal

A one and a half day workshop on literature appraisal was held in University Malaya Medical Center (UMMC) on the 10 and 11 December 2005. It was conducted by Associate Professor Chen Fun Gee, Dr Eugene Liu and Dr Eugene Goh from the Departments of Anaesthesia, National University of Singapore and National University Hospital, Singapore. It was attended by 20 members of our society from all over the country.

The aim of the workshop was to introduce and popularize the use of evidence based medicine (EBM) and participants were taught how to appraise the value of scientific publications. The workshop had a mix of lectures, including one on statistics for numerophobes and small group discussions. The most engaging module was the one on how to make full use of Pubmed to answer clinical questions.

The workshop received positive feedback from the participants, and also allowed us to reaffirm our ties with our colleagues from across our southern border. I hope MSA will support similar workshops in future as EBM is an integral component of Continuing Professional Development Activities.

Continuing Professional Development Activities (CPDA)

Prof Dato' Wang Chew Yin

The Malaysian Society of Anaesthesiologists continue to play an important part in ensuring that an increased number of quality Continuing Professional Development (CPD) activities are made available to both anaesthetists and trainees alike.

The following CPD activities were recently sponsored by the MSA:

1. **24 September 2005**

   The CPD Inaugural Meeting was conjointly held by the Obstetric Special Interest Group (SIG) and the Dept of Anaesthesia, UMMC, KL.

   The session focused on issues of maternal safety and welfare, with presentations covering the following diverse topics; 'Recognition and Management of Maternal Cardiac Disease in Pregnancy' by Professor Chan Yoo Kuen (UMMC),'Confidential Enquiries into Maternal Deaths' by Dr Satber Kaur (HKL) and 'An Update in Obstetric Analgesia' by Assoc Prof Lee Choon Yee (HUKM).

2. **16 October 2005**

   The second meeting was held in Hospital Kuala Lumpur. The guest speaker was Dr Diana Khursandi from Australia who spoke on "Breaking Bad News".

   In her presentation,Dr Khursandi emphasized that breaking bad news must be a job well done.It is a difficult task and involves dealing with patients or relatives in distress. It cannot and should not be avoided and all doctors generally need training and practice. In general, dealing with patients/relatives in distress involves a team approach. Doctors should display empathy, sympathy and a willingness to listen. This programme also provided a great opportunity for delegates to participate in an activity that takes one beyond the operating theatre. At the end of the session the participants found that not only have they enjoyed the session, but had learned important lessons as well.

3. **18 February 2006**

   This CPD meeting was held in HUKM.

   Please refer to the report by Associate Professor Lee Choon Yee in this issue of the Berita.

   The MSA also held two workshops as part of its CPD activities:

1. **10 – 11 December 2005**

   An Evidence Based Medicine Workshop was held in the Clinical Skills Lab conjointly with the Department of Anaesthesiology, UMMC.
   Please refer to the report by Dr Thong Chwee Ling in this issue of the Berita.

2. **11 February 2006**

   The 1st Regional Fluid Transfusion Workshop was held in Renaissance Kota Bharu Hotel, Kelantan.

   The workshop attracted a large number of participants.There were 51 delegates from various disciplines. An enthusiastic feedback was received from those who attended the workshop.In the end,everyone enjoyed a great day. The standard of the presentations was also commendable.The following topics were covered:

   - **Pathophysiology of Fluid Imbalances**
     Prof Dr Y K Chan
   - **Crystalloids Versus Colloids**
     Dr Jenny Tong
   - **Colloids/Crystalloids and Their Influence on Coagulation**
     Prof Dr Y K Chan
   - **Hydroxyethyl Starch versus Gelatin**
     Dr Jenny Tong
   - **Transfusion Trigger in Surgical and Critically Ill Patients**
     Prof Dato' Dr Wang C Y
   - **Volume Therapy in Emergency Care**
     Dato' Dr Hj Abu Hassan Assari
   - **Current Indications for Albumin Usages**
     Prof Dato' Dr Wang C Y
   - **Voluven – A Novel Fluid in Volume Therapy**
     Fresenius Kabi

   The CPD committee would like to thank Ms Khong Ai Hiong from Fresenius Kabi for an excellent job in organizing the meeting and Fresenius Kabi for sponsoring the event. Special thanks also to Professor Nik Abdullah Nik Mohamad for being the chairperson and for giving his support in this meeting.

   The next MSA-CPD acitivity will be held conjointly with the Department of Anaesthesia, University Malaya Medical Centre, KL on 18 April 2006.The theme will be on Simulation.

   Speakers:

   - **Medical Simulation Medical Teaching**
     Prof Walter Thompson,Australia
   - **Simulation: The Malaysian Experience**
     Prof Dato' Wang Chew Yin, UMMC, KL

   This will be followed by a meeting to be held in Institute Jantung Negara (IJN) in July 2006.

   We look forward to another excellent year led by the committee members; Dr Ng Siew Hian,Dr Mary Cardosa and Datin Dr Sivasakthi.

MSA-College of Anaesthesiologist SIG Airway Management: Pre-Conference Airway Workshop

16 March 2006, Renaissance Hotel, Melaka

Prof Dato' Wang Chew Yin, *Convenor, SIG in Airway Management*

We have just had another successful Airway Workshop which attracted 70 registrants from all over Malaysia.It was a one-day comprehensive course addressing fundamental and advance airway management principles. The program comprises mini-lectures, hands-on-workshop, as well as interactive simulated difficult airway scenarios using the Sim-Man Simulator. The workshop had an impressive faculty, including our overseas guest lecturers Dr Med Harald V Genzwuerker from Germany, Dr Hwang Nian Chih and Dr Liu Hern Choon Eugene from Singapore. And also our

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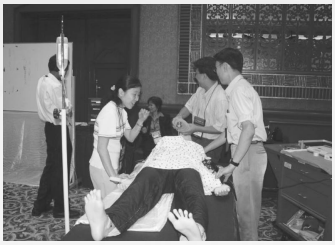
local experts Associate Professor Norsidah Manap,Dr Thong Chwee Ling, Associate Professor Toh Khay Wee, Dr Nor'Azim Mohd Yunos, Dr Rafidah Atan, Dr Mohd Yani Bahari Md Noor and Dr Loo Wee Tze.Overall feedback from the delegates were very positive, reflecting the high standard of presentations as well as the hands on workshop.

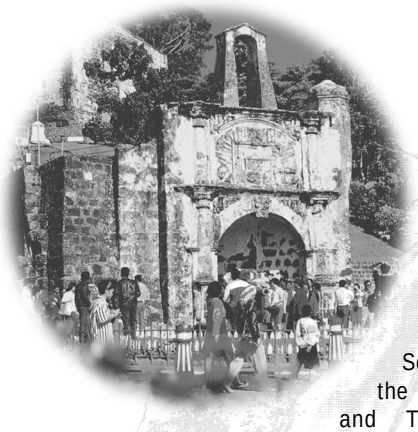
The topics covered were:

- **Predicting Difficult Airways and Intubation**
  Dr Eugene Liu Hern Choon, Singapore
- **Tricks and Tips on Fibreoptic Intubation**
  Dr Hwang Nian Chih, Singapore
- **Laryngosocopy, Aids and Alternatives**
  Dr Eugene Liu Hern Choon, Singapore
- **LMAs and Difficult Airway Management**
  Dr Eugene Liu Hern Choon, Singapore
- **Can't Intubate, Can't Ventilate. Can you do it?**
  Dr Med Harald V Genzwuerker, Germany
- **Case Discussions**
  Dr Thong Chwee Ling,UMMC, KL

The meeting involved significant contribution by the industry. I would like to specifically thank Datin Dr V Sivasakthi the Organizing Chairman and Dr Lim Teng Cheow the Scientific Chaiperson as well as the organizing committee members of the "Annual Scientific Meeting of MSA and the College of Anaesthesiologist, 2006, for their assistance in facilitating the workshop.





MSA ANNUAL SCIENTIFIC MEETING 2006

by **Dr Sidney Saw, HKL**

Yet another Combined Annual Scientific Meeting (ASM) of the College of Anaesthesiologists and The Malaysian Society of Anaesthesiologists had come and gone. Recently held in Malacca from the 17 to 19 March 2006, it carried the theme of "Towards a New Horizon in Anaesthesia in the 21st Century" which emphasised on the practice of anaesthesia in the coming years.

An airway workshop featuring the latest and most modern gadgets in airway management was held a day prior to the conference with invited international guest speakers and trainers. Amongst them were Dr Genzwuerke, Dr Hwang N C, Dr Eugene Liu and many others. Participants were given hands-on experience with various airway devices and it was pretty obvious that they were really enjoying themselves learning new skills and practicing old ones.

The official launch of the conference was held the next day at the Malacca International Trade Centre (MITC) after the first Plenary Talk. It was graced by the current Deputy Minister of Health, who apparently had also been an anaesthetic medical officer many years back before he launched into his political career. It was truly an affair filled with pomp and grandeur with many protocol personnel around. We were then shown the exhibition area where many companies had set up their booths to display their newest and best products. It was truly an eye opening experience for us all. Some took the opportunity to learn about new products while others decided to go booth hopping for various promotional items being handed out.

It was then back to the various symposiums and plenary meetings. There was a fair bit of emphasis on medico-legal aspects of medical practice, in view of the changing practice of medicine and an increased knowledge of patients towards their rights. The take home message was the mantra of "Communication, communication, communication". Apart from that, there were also symposiums on Paediatric Anaesthesia, Obstetric Anaesthesia and Critical Incident Reporting as well as lectures on updates in anaesthesia covering two new drugs; levobupivacaine and sugamaddex. One of the most interesting talks was by Dato Dr Hassan Ariff on Awake Coronary Bypass Graft under regional anaesthesia. Almost everyone held their breath when he showed us video clips of the procedure. His talk ended short of a standing ovation.

The MSA Award and The Young Investigators Award were also up for grabs for the best research project or case presentation. As usual, the Annual General Meetings of both the College of Anaesthesiologists and Malaysian Society of Anaethesiologists were held during the first and second afternoon of the conference, respectively.

The families of delegates were not forgotten as there were many social activities organized for them. Among the programs held were visits to the zoo, A'Famosa, Jonker Walk as well as a telematch. There was also a colouring competition held for the children, allowing their creative juices to flow.

The nights were also filled with activities and a grand dinner was held at the Renaissance Grand Ballroom on the first night of the conference. Several delegates went home with various lucky draw prizes. Entertainment came in the form of a cultural dance group which performed various local dances. The program on the second night was dinner at Perkampungan Ikan Bakar Umbai which allowed many of us to let our hair down and have fun while enjoying a sumptious seafood dinner. Many delegates were invited to take the stage and perform some karaoke songs. Some were invited to participate in various games.

Overall, the Annual Scientific Meeting was a successful effort and we truly wish to thank and congratulate the organizing committee for a job well done. I for one, look forward to attending the next ASM, wherever it may be.

Contest

A 24 year old male pedestrian was hit by a lorry while crossing a road. He was brought in to the A&E by paramedics about 1 hour after the incident. He sustained right lower limb crush injury and right 3rd, 4th and 5th rib fractures with right lung contusion. Clinical and radiological examinations done did not show any brain, spine or intra-abdominal injuries.

The following was his arterial blood gas and biochemistry analysis on admission:

pH : 7.22
pCO_2 : 36 mmHg
pO_2 : 91 mmHg (on O_2 15l/min via face mask with reservoir)
HCO_3^- : 14 mmol/l
Base Excess : -9 mmol/l

Na : 136 mmol/l
K : 5.0 mmol/l
Cl : 109 mmol/l
Urea : 10.2 mmol/l
Creatinine : 240 _mol/l

Mg : 0.9 mmol/l
Ca : 1.6 mmol/l
PO_4^{2-} : 2.4 mmol/l

Albumin : 26 g/l
Creatine Phosphokinase (CK) : 14 460 IU/l

1. Comment on the results.
2. State the likely cause of his renal impairment. How would you manage the renal impairment in the next 24 hours?

Please email your answers to rafidah10@hotmail.com and include your full name and address. The first most correct answer will receive a copy of the book 'Manual of Anaesthesia' by C Y Lee. Winners will be notified by email and will be announced in the next edition of Berita.

ANSWERS TO THE PREVIOUS CONTEST

1. Name at least two abnormalities seen in the ECG.
2. What is the likely diagnosis?
3. List two additional investigations that might be useful in this patient. What abnormal results do you expect from the investigations?
4. Give a brief explanation of the pathophysiology responsible for the ECG changes.

ANSWERS

1) Right atrial enlargement (p pulmonale), right axis deviation, 'Tall R in V_1'.

2) Causes of a tall 'R in V_1' include
   i) Right ventricular hypertrophy
   ii) True posterior infarct
   iii) Wolff Parkinson White syndrome
   iv) Right bundle branch block

   Other causes include dextrocardia, wrong lead placement, Duchenne's muscular dystrophy.

   Given the scenario (short as it was!) and combined with other ECG findings, right ventricular hypertrophy caused by obstructive sleep apnoea secondary to enlarged tonsils is the most correct answer.

3) An arterial blood gas to look for low pO_2 and CO_2 retention.

   A haemoglobin level check may show evidence of polycythaemia.

   Polysomnography or a sleep study is used to assess the severity of the condition. An apnoea hypopnoea index (AHI) which is defined as the combined number of apnoeic and hypopnoeic events per hour of sleep, of more than 30, indicates severe obstructive sleep apnoea.

4) Intermittent nocturnal hypoxia will cause pulmonary pressures to rise (remember factors affecting pulmonary vascular resistance). This rise in pulmonary vascular resistance will cause the afterload of the right ventricle to increase. In a chronic situation right ventricular hypertrophy (RVH) ensues and if untreated will progress to right ventricular failure. Apart from hypoxia, other postulated causes for the right ventricular hypertrophy seen in these patients include hypercarbia, increased haematocrit causing high viscosity and increased transmural pulmonary pressures (caused by attempts to overcome respiratory obstruction) resulting in increased venous return and increased flow to the pulmonary circulation.

Calling for contribution to Berita Anestesiologi

Have something to share with the rest of the anaesthetic community? And by that we don't just mean 'serious' academic articles or reports. Came across a hilarious joke about surgeons recently? Share it with everyone! (as long as it isn't too offensive…).

All forms of contribution are encouraged from all levels of MSA members. Just email your contributions to the editor at rafidah10@hotmail.com.

Saturday Refresher Course

for primary candidates

The tutors for the Saturday Refresher Courses were back in action!!

The courses were held on the 3rd floor conference room of the Department of Anaesthesia and Intensive Care, Hospital Kuala Lumpur from 8.30 to 10.30 a.m. Each trainee was required to pay a one-time fee of RM50 for the whole series of courses. Although the target group was exam sitting candidates, other medical officers were allowed and encouraged to join the course.

The course schedule were as follows:

18 February 2006	–	Assoc Prof Toh Khay Wee (IMU) – Respirator y physiology
4 March 2006	–	Assoc Prof Choy Yin Choy (HUKM) – Physiology viva I
11 March 2006	–	Assoc Prof Choy Yin Choy (HUKM) – Physiology viva II
25 March 2006	–	Dr Loo Wee Tze (HKL) – Renal physiology and the pharmacology of diur etics
1 April 2006	–	Dr Thong Chwee Ling (UMMC) – Gastr ointestinal and endocrine physiology
8 April 2006	–	Prof Wang Chew Yin (UMMC) – Statistics
22 April 2006	–	Dr Rafidah Atan (HKL) – Neuromuscular blocking agent and the peripheral nerve stimulator
30 April 2006	–	Dr Nor'Azim Mohd Yunos (HKL) – CVS physiology

The Malaysian Society of Anaesthesiologists would like to thank the tutors for their kind contribution.