

- 1 Zideman DA. Paediatric and neonatal life support. *Br J Anaesth* 1997;79:178-87.
- 2 Magill IW. An improved laryngoscope for anaesthetists. *Lancet* 1926;i:500.
- 3 Siker ES. A mirror laryngoscope. *Anesthesiology* 1956;17:38-42.
- 4 Pope ES. Left handed laryngoscope. *Anaesthesia* 1960;15:326-8.
- 5 Schapira M. A modified straight laryngoscope blade designed to facilitate endotracheal intubation. *Anesth Analg* 1973;52:553-4.
- 6 Moynihan P. Modification of paediatric laryngoscope. *Anesthesiology* 1981;56:330.
- 7 Macintosh RR. A new laryngoscope. *Lancet* 1943;ii:205.
- 8 Nimmo WS, Smith G. *Anaesthesia*. Oxford: Blackwell Scientific Publications, 1989.
- 9 Phillips OC, Duerksen RL. Endotracheal intubation: a new blade for direct laryngoscopy. *Anesth Analg* 1973;52:691-8.
- 10 Marks RRD, Hancock R, Charters P. An analysis of laryngoscope blade shape and design: new criteria for laryngoscope evaluation. *Can J Anaesth* 1993;40:262-70.
- 11 McIntyre JWR. Laryngoscope design and the difficult adult tracheal intubation. *Can J Anaesth* 1989;36:94-8.
- 12 Miller RA. A new laryngoscope. *Anesthesiology* 1941;2:317.
- 13 Bryce-Smith R. A laryngoscope blade for infants. *BMJ* 1952;i:217.
- 14 Robertshaw FL. A new laryngoscope for infants and children. *Lancet* 1962;ii:1034.
- 15 Seward EH. Laryngoscope for the resuscitation of the newborn. *Lancet* 1957;ii:1041.
- 16 Soper RL. A new laryngoscope for anaesthetists. *BMJ* 1947;i:265.
- 17 Advanced Life Support Group. *Advanced paediatric life support*. 2nd Ed. London: BMJ Publishing Group, 1997.
- 18 Stratton SJ, Kane G, Gunter CS, *et al*. Prospective study of manikin-only versus manikin and human subject endotracheal intubation training of paramedics. *Ann Emerg Med* 1992;21:1168-9.

Major Incident Medical Management and Support (MIMMS) Courses 1998

This is a 3 day course, teaching all aspects of the management of major incidents by medical, nursing, and paramedical staff. The course is available to healthcare workers from specialties where they are likely to form part of a major incident team.

There is an increasing number of courses in various locations.

St Mary's Hospital, London: 22-24 September
Contact: Shaun Stacey, 0171 725 6666

Guildford: 13-15 October
Contact: Major Tim Hodgetts, 01276 604604

Swansea: Date to be arranged
Contact: Meinir Williams, 01269 851501

Plymouth: 28-30 October
Contact: Tristan Evely, 01752 561305

Belfast: 19-21 November
Contact: Christine Campbell, 01232 524783/654537

Lancashire Ambulance: Date to be arranged
Contact: Frank Whiteford, 01772 773018

JOURNAL SCAN

Journal scan

Edited by Jim Wardrope: this scan coordinated by G Thirumamanivannan

A comparison of low molecular weight heparin with unfractionated heparin for acute pulmonary embolism

G Simonneau, H Sors, B Charbonnier, *et al*
New England Journal of Medicine
1997;337:663-9

Overview—The aim of this paper was to determine whether tinzaparin, a low molecular weight (LMW) heparin, was clinically superior to unfractionated heparin in the management of acute pulmonary embolism.

Design—Multicentre, randomised, unblinded trial conducted in 57 centres in France, Belgium, and Switzerland.

Patients—Inclusion criteria: consecutive patients above with objective evidence of pulmonary embolism. Exclusion criteria were patients with massive pulmonary embolism, those with contraindications to anticoagulation, anticoagulation 24 hours before the study, life expectancy less than three months, hepatic or renal failure, potential non-compliance, or pregnancy.

Methods—Patients in the LMW heparin group received a once daily subcutaneous injection of tinzaparin (175 units/kg). The other group received unfractionated heparin with monitoring. Oral anticoagulation was started within three days of heparin treatment and continued for a minimum of three months. Outcome measures were death, symptomatic recurrent thromboembolism, or major bleeding within eight days of the study and also at day 90. Another secondary outcome measured was the percentage of extension of pulmonary vascular obstruction on scintigraphy within eight days.

Results and analysis—Of 1482 patients from July 1995 to July 1996, 612 patients entered randomly into the study (304 to LMW heparin; 308 to unfractionated heparin). The baseline characteristics of the treatment groups like age, sex, weight, predisposing factors, etc were similar in both groups.

During the first eight days, in the unfractionated heparin group three died, two had recurrent venous thromboembolism, and five had major bleeding compared with four deaths, three with recurrent thromboembolism, and three with major bleeding in the LMW heparin group.

During days 9-90, there were 11 deaths, four with recurrent venous thromboembolism, and six with major bleeding in the unfractionated heparin group compared with eight deaths, two with venous thromboembolism, and four with

major bleeding in the LMW heparin group. The perfusion scan showed no significant difference in improvement in both groups from day 1 to day 8.

Conclusion—The rates of recurrence, major bleeding, and death were similar and low in both the group of patients receiving unfractionated heparin and LMW heparin during the initial eight days (~3%). During the three month period there was a non-significant trend favouring LMW heparin as evidenced by its overall complication rate of 5.9% *v* 7.1% with unfractionated heparin. The authors suggest that tinzaparin, a LMW heparin, is safe and effective to treat haemodynamically stable patients with acute pulmonary embolism.

Critique—This study asked an important question as tinzaparin (LMW heparin) would be an attractive option because of its advantages, which include its simplicity in administration (subcutaneous, once daily), and it is patient and medical staff friendly. There are some points of concern in the study and its conclusion.

The limitations of tinzaparin were not addressed in the study. It may induce bronchospasm and shock especially in patients with asthma and this is not mentioned in the exclusion criteria. Haemorrhage after LMW heparin can only be partially reversed by protamine sulphate. Tinzaparin is much more expensive.

The authors mentioned their special care to minimise potential biases as this study was unblinded. But both the logic and the data analysed point out the inevitable bias. Examples:

(1) Analysing the data of death, major bleeding, or recurrence during days 9-90 has no relevance because the patients were only on oral anticoagulation at that time and claiming the overall minor increase in the complication rate towards a favourable trend for LMW heparin is therefore incorrect.

(2) Altogether 222 of 304 patients (73%) in the LMW heparin group received therapeutic doses of unfractionated heparin for a mean period of 18 ± 7 hours before study. This could have added the benefits of unfractionated heparin to nearly three quarters of the patients in the LMW heparin group.

Therefore it is difficult for anyone to be confident about changing practice based on this paper until the above concerns are studied further.

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Rapid detection of traumatic effusion using surgeon performed ultrasonography

A C Sisley, G S Rozycki, R B Ballard, *et al*
Journal of Trauma 1998;44:291-7

Overview—The aims of this study were (1) to determine if surgeons could accurately perform and interpret focused thoracic ultrasonography to detect traumatic effusion and (2) to compare the accuracy and efficiency of surgeon performed ultrasonography and portable chest radiography in the detection of traumatic effusion.

Design—A prospective study at a level I trauma centre in a 12 month period.

Patients and methods—Patients with blunt or penetrating torso injury requiring chest radiography were included in the study. Patients needing immediate tube thoracostomy were excluded from the study. Ultrasonographic examinations were conducted by experienced surgeon sonographers who completed a training programme. All sonograms were performed with the patient in supine position within 10 minutes of the patient's arrival in the resuscitation room. All patients had portable chest radiography while supine and results interpreted by radiologists blinded to the data. The performance time of both procedures was carefully recorded and compared using Student's *t* test.

Results and analysis—Among the 360 patients in the study there were 40 traumatic pleural effusions (33 in patients with penetrating injuries). Ultrasonography results were: 319 true negatives, 39 true positives, one false negative, and one false positive yielding a 97.5% sensitivity and 99.7% specificity, with a positive and a negative predictive value of 97.5% and 99.7% respectively.

The results of portable chest radiography were: 319 true negatives, 37 true positives, three false negatives, and one false positive yielding a 92.5% sensitivity and a 99.7% specificity with positive and negative predictive values of 97.4 and 99.1% respectively.

The results were not significantly different either in blunt (268) or (92) penetrating injuries.

The three patients with false negative chest radiographs had effusions that were successfully detected by ultrasonography. Supine chest radiography detected effusion in the one false negative on ultrasonography. One patient with false positive ultrasonography and chest radiography had pulmonary contusion that was evident on computed tomography. The mean (SD) performance time for chest radiography was 14.8 (0.91) minutes and for ultrasonography 1.30 (0.08) minutes.

Conclusion—The high sensitivity and specificity rates along with rapid performance time is highly encouraging in that ultrasonography can be included routinely in the evaluation of patients with thoracic injury. This would dramatically shorten the time before tube thoracostomy and also reduce the number of chest radiographs (chest x ray only after chest tube).

Critique—This was a well designed study to establish the role of ultrasonography in early and rapid detection of traumatic pleural effusion. This is probably an extended approach of previous studies which demonstrated the role of ultrasonography in the abdomen with blunt injury.

There are a few points of concern in this study:

(1) Ultrasonography was compared with supine portable chest radiography, which itself was used as gold standard to define positive and negative values. The false negative results of chest radiography derived from positive detection on ultrasonography and thoracostomy. The false positive result on both tests were confirmed by computed tomography. Though it is difficult to have computed tomography as the gold standard, it does not appear ideal to have one of the tests being compared as the gold standard.

(2) The role of ultrasonography in detecting pneumothorax is not addressed. Though ultrasonography is rapid and accurate in detecting traumatic effusion, the time taken to exclude this and then still relying on chest radiography to diagnose pneumothorax is certainly a cause for delay in tube thoracostomy for pneumothorax.

(3) The prolonged performance time for chest radiography is not typical, as the authors themselves state, and with improved resources acceptable shorter performance times can be achieved, though not as rapid as ultrasonography.

(4) Lack of consecutive patient enrolment was pointed out by the authors as a potential factor for bias.

(5) This study included a high percentage of patients with penetrating injury, the cause of nearly 80% of the effusions. This would clearly aid skill training and retention. In settings with lower patient volumes, training and retention of skills may be difficult.

Therefore one could possibly accept the role of ultrasonography in the early detection of traumatic effusion along with abdominal evaluation. But chest radiography should still have a place in the initial assessment of chest injury and not just a check film to confirm the position of the tubes, thereby reducing the number of chest radiographs as claimed by the authors.

Incidence and outcome of bleeding before the 20th week of pregnancy: prospective study from general practice

C Everett

British Medical Journal 1997;315:32-4

This two year prospective community study was done as there were no published national statistics for Britain on miscarriages. The study concludes that bleeding in early pregnancy is followed by a live birth in about half the affected pregnancies, about a quarter of all miscarriages treated at home by general practitioners would be missing in the published statistics, and women who had a miscarriage did not have a higher chance of a second consecutive miscarriage.

**Efficacy of oral *v* intravenous
N-acetylcysteine (NAC) in
acetaminophen overdose: results of an
open label clinical trial**

H E Perry, M W Shannon

Journal of Pediatrics 1998;132:149-52

This study indicates that 52 hours of intravenous NAC is as effective as 72 hours of oral NAC in paediatric patients with acetaminophen poisoning while highlighting the problems of emesis with oral NAC.

**Randomised trial of high dose isosorbide
dinitrate plus low dose furosemide *v* high
dose furosemide plus low dose isosorbide
dinitrate in severe pulmonary oedema**

G Cotter, E Metzko, Edo Kaluski, *et al*

Lancet 1998;351:389-93

This paper highlights the fact that intravenous high dose isosorbide dinitrate as repeated 3 mg boluses with low dose furosemide [frusemide] is more effective in controlling severe pulmonary oedema and reduces the need for mechanical ventilation and the incidence of myocardial infarction.

**Influence of tidal volume on the
distribution of gas between the lungs and
stomach in the non-intubated patient
receiving positive pressure ventilation**

V Wenzel, A H Irdis, M Banner, *et al*

Critical Care Medicine 1998;26:364-8

This study on a bench model of a patient provided data supporting the recommendation of the European Resuscitation Council to decrease tidal volume from 0.8 to 1.2 litres to 0.5 litres when ventilating a cardiac arrest victim with an unprotected airway.

**Acetaminophen and other risk factors for
excessive warfarin anticoagulation**

E M Hylek, H Heiman, S Skates, *et al*

Journal of American Medical Association 1998;279:657-62

This prospective case-control study points out that paracetamol is an under recognised cause of over anticoagulation in patients on warfarin. This should be taken as a warning to all emergency doctors, general practitioners, and also

for the general public as paracetamol is thought to be the safest analgesic.

**Direct ophthalmoscopy *v* slit lamp
bimicroscopy in diagnosis of the acute
red eye**

D F Anderson, P M Sullivan, A J Luff, *et al*

Journal of the Royal Society of Medicine 1998;91:127-8

This prospective crossover study interestingly indicates that the initial diagnosis and management of patients with an acute red eye is not prejudiced by the lack of a slit lamp bimicroscope and a direct ophthalmoscope has the same accuracy.

**Radiologist's review of radiographs
interpreted confidently by emergency
physicians infrequently leads to changes
in patient management**

K C Lufkin, S W Smith, C A Matticks, *et al*

Annals of Emergency Medicine 1998;31:202-7

This prospective descriptive study found the rate of clinically significant discordant interpretations of radiographs to be low when the emergency physicians were confident in their readings and doubts the role of routine review of all radiographs by radiologists.

The anatomy of acute scaphoid fractures

J P Compson

Journal of Bone and Joint Surgery [British]

1998;80B:218-24

This article analyses the value of appreciation of three dimensional anatomy while discussing the interpretation of different radiological projections and their implications in the management and outcome of scaphoid fractures.

**Radiography of facial trauma, the lateral
view is not required**

N Raby, D Moore

Clinical Radiology 1998;53:218-20

This paper has the potential to change current practice and stresses that lateral film may safely be excluded in the initial evaluation of facial trauma and suggests a lateral film and or computed tomography only after a fracture identified on the OM and OM30 films.

Commentary

WHY THESE GUIDELINES

Greater population movement in recent times has meant that a patient can present with a sickle cell crisis anywhere in the UK. These guidelines will be particularly useful for those hospitals which deal with this condition infrequently. These patients are often disadvantaged in accident and emergency departments, where they present less frequently, because the underlying pathological severity of the condition is easy to underestimate.

WHAT IS A SICKLE CELL CRISIS?

In the inherited condition of the gene causing an amino acid substitution in haemoglobin from the normal adult HbA to HbS, the homozygote (SS) has sickle cell anaemia and the heterozygote (AS) has sickle cell trait. In the deoxygenated state HbS molecules can polymerise causing red blood cells to sickle. Sickle cells block small blood vessels to cause infarction but are also fragile and therefore haemolyse. Sickle cell crises may be from thrombosis, marrow aplasia, sequestration, or haemolysis.

PROBLEMS IN MANAGEMENT

(1) *Pain without clinical signs* means that it is difficult for the uninitiated to take the pain seriously. Assessment is made even more difficult because the patient may be irritable due to pain and hypoxia. Generous, early, and frequent analgesia is required. In severe pain, morphine is the drug of choice. Patients like

pethidine but its use should be avoided because of the greater possibility of addiction, the possibility of metabolites causing fits, and the long half life which makes patient controlled analgesia difficult. Patients may say that they have allergic reactions to morphine in an attempt to persuade the doctor to use pethidine so this history should be properly pursued. Ketorolac trometamol has been shown to be useful in the USA but centres in the UK have found it less useful because patient acceptance has been poor.

(2) *Hydration* can be difficult by the intravenous route because of vein closure due to frequent cannulation. Profuse oral drinks may tide over the problem temporarily in patients with normal bowel sounds, as may rectal rehydration. The external jugular or any other vein can be used in an emergency.

(3) *The need for speed* because of the risks of rapid deterioration, infarction, and infection is paramount.

CONCLUSION

We hope these guidelines find national acceptance and implementation. Rapid effective management of sickle cell crises will result in a dramatic reduction of avoidable distress and morbidity.

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Faculty of Accident and Emergency Medicine

Consultant appointments, January to April 1998

Mr Richard Bailey	Chesterfield and North Derbyshire Hospital
Mr Martin Edgell	Sharoe Green Hospital, Preston
Mr R Pullinger	John Radcliffe Hospital, Oxford
Dr G L Campbell-Hewson	Addenbrooke's Hospital, Cambridge
Mr Peter Thomas	Milton Keynes General Hospital
Dr Fionna Poyner	Northampton General Hospital
Mr David Small	Bedford Hospital
Dr George Olverman	Macclesfield District General Hospital
Mr I H Jones	Royal Bolton Hospital
Dr Ruth Spedding	Warrington Hospital
Mrs Carol Gray	North Staffordshire Hospital
Dr P A Kenny	University Hospital, Lewisham

Emergency Medicine

A reciprocal arrangement has been set in place with the *Journal of Accident & Emergency Medicine* and *Emergency Medicine* whereby the contents pages of the journals will be published in the respective issues.

The contents page of *Emergency Medicine*, Volume 10, Number 2 appears below.

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