INTENSIVE CARE: The last 25 years
A personal view

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JANUARY 1985

- Consultant, Ninewells Hospital, Dundee
- 7 bedded ICU; 300+ admissions
- One of four consultants
- 1:2 rota for trainees; 24 hr shifts for 2 weeks
- 4 nurses per bed
- Ventilators: mainly Brompton Manleys, one or two Servo 900s
- Monitoring: S & W Modular
- Single lumen central lines; Dedicated Nutricath feeding lines
- One or two pulse oximeters; no end-tidal CO2 monitors
- Renal replacement by intermittent dialysis
- Cardiac output measurement by PA catheter
GOING BACK

COPENHAGEN POLIOMYELITIS EPIDEMIC, 1952: THE BEGINNING OF INTENSIVE CARE

- 866 polio patients with paralysis
- 316 with respiratory failure
- 50-70 at a time
- Only 7 neg press ventilators
- Tracheostomy; cuffed tube
- Manual bag ventilation
- 8 hr shifts
- 47% mortality (previous mortality 80-90%)
VENTILATION IN THE 50s and 60s

- Neuromuscular disease
  - poliomyelitis
  - Guillain-Barre syndr
- Closed chest injuries
- Post-operative
  - Cardio-thoracic surgery
  - Aortic aneurysm
- Invasive PPV replaced NPV
- Establishment of assisted ventilation units
OUTCOME FROM CHEST INJURIES 1955-65, RIE

• 1955-60
  • 38 cases
  • 9 survivors (24%)

• 1961-65
  • 64 cases
  • 54 survivors (84%)

Griffiths, JRCSE 1960
Bargh, BMJ 1967
1960s

• Ward 19, AVU, Royal Infirmary, Edinburgh opened
• ICUs in Glasgow Royal and Western Infirmaries
• ICUs open across UK, mostly late 60s, 1970
• Era of “local heroes”:
  
  Mike Telfer, Iain Ledingham, Jo Stoddart, Denis Copell, Tony Gilbertson, Doreen Browne, Gillian Hanson, Alan Gilston

• Intensive Care Society founded 1970
PERSONAL STORY

• 1972: HO, RIE
• 50yo man (EA) presenting with progressive weakness
• LP: High protein, few cells. Suspected Guillain-Barre syndrome
• Type II respiratory failure, progressing to respiratory arrest
• Referral to Ward 19: No beds
• Intubation, Ventilation on Ward 22....thanks to A.Norbury
• Subsequent management: Transfer to NGH
• 3 months later: Weaned patient sent to neurology ward
STOBHILL GENERAL HOSPITAL, 1973

• ICU just opened
• Open access unit; no direct anaesthetic involvement
• Case 1: Aspiration caused by over-sedation by chlormethiazole infusion for DTs.
  - Arrest call, Intubation, Ventilation
  - Ask anaesthetists about sedation: boluses of phenoperidine and pancuronium
• Case 2: Malaria with septic shock and MOF
  - Ventilation
  - Dopamine
  - Peritoneal dialysis
STOBHILL then WESTERN INFIRMARY

- Case 3: Phenformin induced lactic acidosis:
  - PD with acetate-buffered haemodialysis fluid
- Want to do ICM: Only practical way: become an anaesthetist
- Western or Royal? Wife knew Gerry Mone
- 3 months ICU in 1st 3 years of training
- No specific ICU training
- Anaesthetic training very physiology-based rather than medical-based....causes of hypoxaemia
- Weekly Grand ward round: Ledingham v Finlay. Umpires: Mone and Wallace
- Shock team: Critical care transfers
  - SDD
  - Etomidate story
DUNDEE

- Committed Intensivists
- Improving technology
- Data collection
- Need for education, research and audit
- Discussion about forming SICS
- Perth meeting organised by Alf Shearer in 1988

- Transfer trolley
- Pharmacology research
- PA catheters
- SCARRF meeting: Dundee outcomes best
- Attempts at CAVH
WGH EDINBURGH

• 1st fully fledged general ICU in Edinburgh (1988!)
• ICS Exeter 1987: Free paper session
  Inotropes, Vasopressors, Oxygen transport
  Haemofiltration (in bar)
• Not enough work; transfers to WGH to generate trade
• Advanced invasive haemodynamic monitoring
• Observational research
• High volume Venovenous Haemofiltration
• LATER: Percutaneous tracheostomies...Inhaled NO....NIV...Neuro-ICU.....Long-term ventilation
THE UK PERSPECTIVE

- 1970: UK Intensive Care Society formed. At that time ICM very different in London compared with rest of country.
- 1980s: Concern expressed about quality of intensive care in the UK
- Late 1980s: UK APACHE II study to address quality of care
- 1988: Joint Committee for Intensive Therapy (JACIT) formed at behest of Royal Colleges.
- JACIT SR posts established. John Kinsella 1st in Scotland
- 1994: ICNARC formed by ICS to foster audit and research
SCOTLAND AND SICS

1988: 1st Perth meeting. Half day Friday
1991: Scottish Intensive Care Society formed
   Annual meetings
   National audit (JCH)
   Trainee courses
   Research committee and meeting
      - leading to Clinical Trials Group
   Evidence based Medicine Group
   Education Group
   Advice on many issues: Transport, transplant etc
UK – the 90s

- RCoA walks out of JACIT which collapses

- Intercollegiate Committee on Intensive Therapy (ICIT) formed with 50% RCoA representation

- RCoA unwilling to recognise ICM; refuses faculty status as ICM is integral part of Anaesthesia
1995 QUESTIONNAIRE OF ICS CONSULTANT MEMBERS

• 58% RESPONSE; ONLY 2 whole-time intensivists
• 24% wanted formal specialty status and 76% sub-specialty status
• 78% wanted a Faculty of ICM (IC 58%, RCoA 19%)
• 12% wanted Royal College of ICM
• 8% wanted no change
• 79% wanted a Diploma exam (44%: European will do)
• 76% wanted 2+ years of dedicated ICM training before accreditation.
LATE 90s

- ICIT becomes IBTICM
- Framework for competency-based training in ICM established: Step 1 and Step 2
- 1998: Local (Regional) advisers appointed
- 1998: 1st sitting of Diploma of Intensive Care Medicine
- 1999: DoH approval of ICM specialty CCT
- 1st successful Scottish Diplomat in ICM: K Kelly
TO THE PRESENT: The last 10 years

- Initial lack of candidates for ICM SpR posts and DICM
- Now resolved
- Steady development under Board of Training, Assessment, Examination
- Movement to Intercollegiate Faculty (Achieved)
- Academic ICM advances: 4 Professors in Scotland
  Multicentre RCTs: SIGNET
- Organisation of ICM finally catches up with the rest of the developed world! ICUs and HDUs co-located and amalgamate as Critical Care Units
CONCLUSIONS

• Huge progression of Intensive Care over 25 years
• Recognition as a Specialty with Specialists
• Formalized training
• Audit of performance
• Multi-centre clinical research
• ‘Evidence’ available on which to base ‘Guidelines’
• BUT are we too rigid in our ‘evidence’ and ‘guidelines’?
• Is our management individualized?
RESEARCH AND OTHER ISSUES

• Evidence from some trials NOT accepted or implemented....inconvenient
• Evidence from others accepted and implemented without due consideration
• Evidence not infrequently misrepresented
• Observational research disregarded and not published
• Physiological facts and logic disregarded
• Experience and judgement not valued
• Remember we are dealing with individuals NOT populations
MORE...

• Clinical trials are often based on:
• Inadequate observation
• Have too loose inclusion criteria....to get numbers
• Have too tight exclusion criteria....don’t include our everyday patients
• Wrong dose or duration
• Wrong end-points/outcome measures
• Easy to come away with all the wrong conclusions
MORE…..

• SDD
• Steroids in shock and ARDS
• Connors…on PA catheters
• Nutrition
• Centoxin
• Xigris
• Dopamine
• Tight glycaemic control
• GBS
• ECMO…..etc etc
• New treatments accepted too easily; discarded too easily
FINALLY....

- Intensive Care is ‘miles better’ than when I started
- We must be careful with it
- Don’t allow conventional wisdom to go unchallenged
- Don’t shut out lateral thinking
- Remain helpful, open to people and ideas, and inclusive
- Remember we are treating individuals, whose condition may fluctuate necessitating adjustments to the treatment plan
HAMPDEN PARK 2010, 18 years after ICU admission in Type II respiratory failure