Another successful conference has come and gone. Siobhan and her team are to be congratulated for all their hard work and effort to maintain the standard of our annual conference. The summaries of each workshop will appear in the newsletters over the coming issues, so if you were unable to attend the conference, or a particular workshop you can still benefit from the group discussions. Reports on the conference should have been printed in the Pharmaceutical Journal and the Irish Pharmaceutical Journal by the time you receive this newsletter.

Cisapride was the focus of major last minute discussion at the conference, following the recent MCA bulletin. A résumé of the discussion is produced in the newsletter. There are meetings arranged in London (late November) and Edinburgh (January) where local consultants and pharmacists will be discussing the issues raised by the bulletin. A full report of these meetings will appear in the next newsletter.

As you can see from the new heading to the newsletter NPPG is now live on the web. Work is progressing on the links on the site and it will hopefully be more detailed very soon. The previous publication of the newsletter on the Internet through Priory has led to some useful contacts already. The site will be registered with all the major search engines and will include NPPG conference details (including reports of proceedings), Paediatric and Neonatal Internet links, SNAPP, POP, copies of the newsletters, an on-line application form, a link to dial and a forum for current topics in paediatrics. Any other suggestions are welcome. In addition to the above Email address I can be contacted at pmulholland@nppg.demon.co.uk. Feel free to contact me at that site.

Finally I came across this quotation, written by Garrison Keillor, on an American paediatric web site: “Nothing you do for children is ever wasted. They seem not to notice us, hovering, averting our eyes, and they seldom offer thanks, but what we do for them is never wasted.”

Change of telephone number:
Philip Dale: Direct dial: 01872 252590 or 01872 250000 Bleep 2139

Rosemont Pharmaceuticals have become the first corporate member of the NPPG. Rosemont has a strong link with neonatal and paediatric pharmacy in providing a service for oral liquid ‘specials,’ taking them through to full licensing as appropriate. This fits in with the NPPG paediatric risk management philosophy around extemporaneous dispensing and unlicensed medicines. We welcome Rosemont to NPPG and look forward to a long relationship with them.

The Grand Hotel in Malahide, Co Dublin was the venue for the 4th Annual NPPG Conference over the weekend of 2nd - 4th October. Over 100 delegates from the UK, Ireland, Australia, Norway and the USA gathered to participate in workshops, poster sessions and plenary sessions covering a wide range of topics.

The second plenary session consisted of ‘clinical pearls’ in neonates and paediatrics - a new subject for the conference. The neonatal section covered topics such as digoxin like immunoreactive substances in neonates, magnesium sulphate infusion to treat...
persistent pulmonary hypertension of the newborn (PPHN) and an audit of morphine infusions in NICU. The topic that stimulated most discussion, however, was the use of netilmicin in neonates (NEIL CALDWELL, The Wirral Hospital). His discussion centred around using larger doses of netilmicin in neonates than that quoted in the paediatric literature, based on pharmacokinetic principles.

Paediatric topics covered included methylphenidate use, adrenaline in young children and epoprostenol infusion in persistent pulmonary hypertension of the newborn (PPHN) and the use of botulinum toxin for mobilising children.

Posters presented at the conference covered a wide range of neonatal and paediatric topics including information for families, drug administration guides for medics and nurses, use of growth hormone, neonatal parenteral nutrition and drug use in pregnancy. MARK HARRIES and colleagues (University College London Hospitals) presented a poster on the competence of pharmacists in calculating neonatal and paediatric drug doses. Papers published in the past have concentrated on the competence of nurses and doctors in calculating doses and it is assumed that pharmacists are particularly good in this task and are often regarded as a 'safety net' by fellow health professionals. Thirty pharmacists completed a written test involving twelve drug calculations, no prior warning having been given to the participants. Only five pharmacists answered all the questions correctly and 5 failed with a score of less than 6 marks, calculations involving doses expressed as dose/kg/unit time causing the greatest difficulty. The authors concluded that pharmacists providing services to neonatal and paediatric areas should have their computational competency assessed before being allowed to practice in that area or check prescriptions. This poster won the travel prize sponsored by Astra Pharmaceuticals.

Malcolm Partridge (Chairman, NPPG) presents Mark Harries with the prize for the best poster at the conference

Demand for next year’s conference in Derby is sure to be high, so make sure that you book early.

OTHER UPCOMING CONFERENCES

Overcoming the barriers to paediatric clinical trials by balancing financial incentives and moral obligations Holiday Inn Victoria, London 25th and 26th January 1999. Details of the programme, speakers and costs are included with this newsletter.

NEWS FROM THE REGIONS & SUB-GROUPS

SNAPP
29th October 1998

The problem with Cisapride was raised and the group is to arrange a meeting in January, open to medical and pharmaceutical staff, with presentations from cardiologists, gastroenterologists and pharmacists from the main children’s hospitals in Scotland.

The SNAPP document on the Safe Use of Medicines For Paediatrics in Hospital is currently being revised and should be available soon.

Several other issues were discussed including egg free vaccines, home oxygen, SCBU eye and mouthcare policies and paediatric CIVAS services. Documents on these should be available soon.

SUGAR FREE MEDICINES

The Scottish Office through the National Pharmaceutical Advisory Committee (NPhAC) has produced a report on sugar free medicines. In 1996 the Chief Pharmacist at the Scottish Office commissioned NPhAC to prepare a report on sugar-free medicines. The commission arose as a result of the deliberations of the Scottish Diet Action Group and it’s Action Plan which had requested that NPhAC identify action necessary to accelerate the introduction of sugar free paediatric medicines and to increase their usage. The report offers practical guidance on maintaining the momentum for the introduction and increased uptake of sugar free equivalents to improve oral health. Main recommendations for pharmacists are

- Pharmacists prescribing in hospitals for children’s services should have systems in place to prescribe a sugar free medicine wherever possible for both in-patient and out-patient use, unless there is a clinical reason not to do so
- Community and hospital pharmacists should be encouraged to play a more active role in increasing the uptake of sugar free medicine
- Pharmacist facilitators should promote sugar-free medicines as part of their role in developing formularies and providing advice to general practitioners in their locality
PRODUCT INFORMATION

Reckitt & Colman have changed the labelling on Gaviscon Infant® sachets. These now state ‘Do not use Gaviscon Infant with other feed thickening agents or infant milk preparations containing a thickening agent’. This change is because of concerns about new infant formulae containing thickeners which have been marketed in Australia and are soon to be marketed in the UK.

Many hospitals use Infant Gaviscon in conjunction with Carobel for the treatment of reflux. Reckitt & Colman have no data on the suitability of the combination but they have no data either on adverse effects. I have spoken to the company and they will carry out studies on the compatibility of the two products. When the results are available they will be detailed in the newsletter.

CISAPRIDE

Janssen-Cilag have issued a new Data Sheet for Cisapride (Prepulsid®) which now specifically contra-indicates the use of the drug ‘in prematurely born infants (born at gestational age of less than 36 weeks) for up to 3 months after birth, due to the risk of QT interval prolongation in this age group’. Although the drug is licensed in other countries for use in children under 12 it is unlikely that it will be licensed for this indication in the UK. Janssen-Cilag have said that the licensing is down to the regulatory bodies in the relevant country and that it is MCA restrictions that make its licensing in the UK unlikely.

The recent change in the data Sheet for Cisapride, the warning issued by the CSM about adverse effects of this product and the guidance issued in the BNF No 36 pose considerable problems for the treatment of gastro-oesophageal reflux (GORD) in children and infants. At the recent NPPG conference CATRIN BARKER (Alder Hey, Liverpool) reported on a review of the evidence for the use of cisapride in children. Most studies consisted of small numbers of patients and they were not randomised controlled trials. Commenting on the use of cisapride in neonates, where there was a potential for prolongation of the QT interval, IAN COSTELLO (St. George’s Hospital, London) said that a recent paper in the New England Journal of Medicine had reported a possible link between prolonged QT intervals and Sudden Infant Death Syndrome. Much of the discussion following the presentations centred around the fact that cisapride is licensed for use in children and neonates in other countries outside the UK. In Ireland there is not a contra-indication in premature infants, but caution is advised in those less than 34 weeks gestation. In Australia the product information has recently been altered to reduce the neonatal dose.

PAEDIATRIC NUTRITION

Pharmacia and Upjohn have updated their book Paediatric Parenteral Nutrition and it is now in its third edition. The update includes the revised feeding guidelines following the recent change in the dosage schedule of Vitlipid N Infant. Copies are available from the company.


Pedi-RD is an e-mail mailing list for dieticians and other health care professionals interested in neonatal/perinatal and paediatric nutrition. The purpose of the group is to allow members to share ideas and strategies for management of nutritional problems or concerns of infants and children. Individuals involved in NICU’s, PICU’s or other paediatric inpatient and outpatient groups are encouraged to join.

Topics of discussion include
- General concerns in paediatric and neonatal nutrition
- Dilemmas in nutritional assessment, management and ethics
- Enteral and parenteral nutritional support
- Discussion of current nutrition research and publications
- Informal surveys of nutrition practices.

To subscribe to the list send an E-mail message to Pedi-RD-request@list.uiowa.edu with the following text in the message subscribe end

INFORMATION ON THE INTERNET

The Pediatric Bulletin - this contains bimonthly reviews of current trends in the field of Pediatrics. Current articles are on Pediatric Pearls Orthopaedics and Pediatric Pearls Neurology. It can be found at http://www.coqui.net/myrna/
Children’s Cancer Web - A Guide to Internet resources for Childhood Cancer is a site that aims to provide a summary of dedicated childhood cancer pages available on the Internet. It currently has links to 348 other sites. It is at http://www.ncl.ac.uk/child-health/guides/guides2.htm

International Paediatric Chat is the global virtual paediatric community with educational goals to all paediatric professionals around the world. It has members in 105 countries. It uses Internet Relay Chat (IRC) to allow multiple users to type messages simultaneously into a chat room window that all users can see at once. Topics, led by paediatricians, are scheduled at regular times, posted on the web site. Previous subjects have included management of infection, behaviour disorders and breast feeding. Registration (free) is required. It can be found at http://www.pedschat.org/index.htm. The site is reviewed on The best of the Pediatric Internet (along with others) at http://www.aap.org/bpi/General_Peds.html

Neuromet is an educational tool for paediatric neurology conditions. It is a database of medical conditions that includes most organic acidurias, aminoacidurias and neurometabolic conditions, as well as other hereditary neuropaediatric conditions. It contains 205 conditions and is updated every 6 month. Details can be found at http://www.lemarpublishers.com/neuromet .html

Email ADDRESSES
John Timmins, Sheffield Children’s Hospital phajt@shefch-tr.trent.nhs.uk
Gwen Higgins, New Children’s Hospital, NSW, Australia GwenH@nch.edu.au

PAEDIATRIC and NEONATAL INFORMATION SHARING - REQUESTS

Peter Mulholland is looking for information on Benzylpenicillin eye drops preparations in particular suppliers and strengths

Catherine Hall, (Royal Victoria Infirmary Newcastle) is looking for information about the transport of nitric oxide, in particular how small cylinders are dealt with when transferring babies in incubators

Rowena McArtney (University Hospital of Wales, Cardiff Tel: 01222 743878 Email: rowena.mcartney@uhw-tr.wales.nhs.uk ) wants to know how other units use chloroform in the preparation of mixtures for children; do they use small amounts, for example in a suspending agent base or do they avoid its use entirely.

Mark Allam ((Royal Gwent Hospital Tel:01663 234234, Email mallm1@gwent.nhs.gov.uk ) is looking for any information from SCBUs who are using water for injection as a flush instead of sodium chloride 0.9% when taking blood gases etc. in an attempt to reduce the amount of sodium given to premature babies.

Fiona Anderson (Glasgow Royal Maternity Tel: 0141 211 5237) is looking for information on vaccination policy when babies are on steroid therapy, and details of levels of seroconversion attained. Also what is used in other SCBUs for neonatal eye and mouth care.

Philip Dale (Royal Cornwall Hospital Tel: 01872 252590) wants to know if anyone has any experience of using indwelling intramuscular Y-cannulae for paediatric anaesthesia. Their pain team has drawn up a protocol which advocates use of these cannulae for 24 hours.

CONFERENCE REPORTS


Peter Mulholland reports: I was able to attend this conference, which was held in the spectacular new Waterfront Conference Centre in Belfast. (only the fourth time that the conference has been held in the UK), as a result of having two posters accepted for presentation. The theme of the conference was scientific research as it relates to child health and paediatrics. There were sessions on epidemiology, nutrition, neurology, neonatology, pulmonology, genetics, micro-circulation and ambulatory paediatrics. The total number of abstracts presented (including those of invited speakers, oral and poster presentations) was 297!

Membership of the society is similar to that of the European Society for Developmental Pharmacology detailed by Sharon Conroy in a previous newsletter i.e. to become a member, an original scientific paper of a standard acceptable to the Society has to be presented as either an oral communication or a poster at a Society conference. I intend to take up the offer of membership and will report any relevant group activities to NPPG members.

The poster session was something different as it consisted of a 'poster walk' where a chairman conducts the business and supervises the discussion. Each presenter has
3 minutes to present their poster (with no visual aids other than the poster itself) and explain it to a roving audience (about 40 delegates). There is then 2 minutes for discussion and questions. Very daunting but good experience.

In addition to the plenary sessions there were debates on the following topics:
- CPAP
- Evidence Based Medicine
- Regionalisation of Care
- Nutrition

I came across no other pharmacists at the conference, but it was a worthwhile learning experience and I would recommend it to members who are carrying out research with medical colleagues.

NEW PUBLICATIONS

Drug Treatment In Obstetrics- a handbook on prescribing 2nd edition (Ledward, Hawkins and Stern ISBN 0-412-34900-0)
Resident’s Handbook of neonatology (Perlman Kirpilani Moore ISBN 1550090712)
Current Paediatric Diagnosis and Treatment (Hay, Hayward, Levin and Sondheimer ISBN 0838512542)
Ambulatory Paediatric Care (Lippincott, Williams and Wilkins ISBN 0781710146)

Adis are launching 2 new paediatric journals in 1999. The first is entitled Paediatric Drugs (ISSN 1174-5878), which will contain reviews of practical clinical advice containing treatment guidelines and comparisons of available agents and review articles containing research and educational material on all aspects of the use of drugs in children. It will be published quarterly at a subscription rate US$175 (Europe SwF255).

The second journal is entitled Paediatrics Today (ISSN 1174-5894) and aims to provide a rapid alert service on all aspects of drug therapy and disease management of children. It is published monthly at a rate of US$450 (Europe SwF650). Further details and a sample copy are available from Adis International.

GUIDELINES ON THE MANAGEMENT OF PAIN IN CHILDREN

A new paediatric book is available to complement the Alder Hey Book of Children’s Doses (ABCD). This book:
- Reflects practice used/researched at Alder Hey
- Is an educational aid for doctors, nurses and pharmacists
- Provides rationale for various techniques of pain control, e.g. PCA, NCA, epidural and paravertebral block
- Provides detailed dose/infusion rate information
- Provides pain monitoring sheets
- Included patient information leaflets and prescription forms

Copies are available by sending a cheque for £15 (which includes p&p) made payable to RLC NHS Trust to Pharmacy Office
Alder Hey Royal Liverpool Children’s NHS Trust
Eaton Road
LIVERPOOL L12 2AP

DID YOU SEE? NOV 98

Compiled by Andy Fox (Portsmouth Hospitals).


Intranasal diamorphine for paediatric analgesia: assessment of safety and efficacy. Wilson J.A et al. J Accid Emerg Med 1997; 14: 70-72. A prospective randomised trial of 58 children in two groups. 0.1mg/kg intranasal diamorphine verses 0.2mg/kg IM morphine.

This includes information on the new atypical antipsychotics and their place in therapy.


Practical Insights on managing Pediatric Atopic Dermatitis Skin and Aging 1998 6(10) 30-34

CONFERENCE WORKSHOPS
Palliative care (Christopher Cutts, Leicester Royal Infirmary)
The workshop is based around a case involving a seven year old boy who had relapsing leukaemia and is described for palliative care. However, these principles can be applied to any child requiring palliative care.

The initial phase to develop an all encompassing care package to deal with any possible symptom that would be expected to arise in the near future e.g. pain, problems with pain relief, nausea, agitation etc. The group will be expected to give therapeutic options/ suggestions and additional information e.g. doses. The aim is to help the primary care team (GP) to manage any symptoms arising and maximise the care of the child, especially out of hours. The group will discuss what drugs should be supplied at this early stage. Examples of a possible care plan will be shown.

Problems particular to paediatrics to be discussed include
  • Dosage conversion - factors to include, do not be too theoretical!
  • Risks and causes of opioid toxicity
  • Formulation problems
  • Fentanyl patch - initially too large and significant dosage increases
  • Anti-emetic adverse drug reactions
  • Causes of dyspnoea
  • The use of steroids in palliative care

The case illustrates each of these problems as the child progresses through their palliative care.

The workshop will try to explore the use of newer agents within paediatric palliative care, such as MXL® or hydromorphone. Follow up: The group discussed the benefits of developing an initial care plan covering all potential symptoms a child may experience during palliative care and the advantages of supplying all the necessary drugs and doses in cases of situations arising outside normal hours. Examples of how the care plans are prepared were shown.

The use of fentanyl patches was discussed at length with particular emphasis on the problem high doses cause for children. Options to reduce the risk of adverse effects could include
  • a dose of less than 80mg/day of oral morphine would preclude the use of fentanyl patches
  • covering half the patch with tape

The group agreed fentanyl patches should be introduced carefully to avoid problems. The group had no experience in using hydromorphone or MXL®. These still require investigation into their use in children.

Medication Errors - Can we prevent them? (Sandie Fairclough, Pharmacy Manager, Alder Hey Royal Liverpool Children’s Hospital)
Participants agreed that medication errors happen and that it is critical to analyse why and what we can do to prevent them.

We subdivided errors into prescribing, dispensing and administration problems. Prescribing errors include inappropriate drug choice, calculation & transcription errors, therapeutic duplication, inappropriate administration or monitoring. Administration errors include wrong choice, drugs given to the wrong patient, given twice, at the wrong time or given by the wrong route such as oral drugs given IV. Drugs may be given at the wrong rate due to incorrect use of equipment or prescriptions may be inappropriate. Dispensing errors include calculation problems, incorrect extemporaneous dispensing, inappropriate labelling, providing inadequate information, incorrect calculation of salts, and confirmation bias in drug selection influenced by the corporate dress of drug packaging.

Participants examined some real errors, considered causes and made their recommendations. Various error prevention strategies used at Alder Hey were used as examples. The Trust has a “no blame” philosophy to medication errors and a multidisciplinary medication error group examines reports, implements change, promotes risk assessment, analysis and produces regular newsletters. Participants agreed that this was a valuable way forward. Examples were given of a prospective new product risk assessment system together with
reviews of dispensing and manufacturing processes, which now include a 3rd check for extemporaneous products, minimum dispensing times, checklists and checking tutorials.

Standard prescription documentation for oncology that is currently being piloted at 3 centres, was available for review. It was agreed that this would be extremely valuable in all oncology centres, although it was agreed that the introduction of many different standard prescriptions has the potential to introduce more errors unless suitable document control systems are put in place.

Participants also recognised that pharmacists could develop guidelines and pathways as educational tools that might prevent medication error.

We considered the benefits and problems of systems such as computerised prescribing, bar coding, validated prescribers, pharmacist or nurse prescribing, extended medication reviews and whether our systems are foolproof 24 hours/day, seven days/week.

It was finally proposed that Pharmacists should see the prevention of medication errors as a challenge and take the opportunities of Clinical Governance to expand their role.

Evaluation of treatment results appears to be difficult due to the lack of patient number and disparity of the diseases.

Follow up
- The lack of safety and efficacy data on the use of high dose vitamin and coenzyme supplements.
- High dose regimens are often requested as a salvage therapy for patients with mitochondrial disorder, especially toward the severe end of the spectrum such as Leigh’s disease. The dosages used are based on anecdotal reports on a handful of patients with equivocal results. The lack of patients and the difficulty of conducting clinical trial on orphan drugs.
- Patients with mitochondrial disorders are rare and the disparity of manifestation would render comparison difficult.
- The lack of proper formulation and availability of pharmaceutical grade products.
- The lack of patient population and poor prognosis had made it financially not viable to formulate suitable products. Health food and non-pharmaceutical grade products are often used for this patient group.
- The lack of experience in both medical and pharmacy staff in non-specialised centre because of the rarity of the diseases.

Training needs in paediatrics (Andy Fox)

The aim of the workshop session was to act as a discussion forum for all those interested in Education and Training in Paediatric Pharmacy. The delegates were asked to discuss the following.

- Who required training?
- What level of training is required?
- How to provide the training?

Discussion on who required training resulted in an extensive list. The Priorities were thought to lie with Undergraduate, Pre-Reg and basic grade pharmacists. However, a number of other groups were identified including Medical and Nursing staff, GPs, Parents, Patients, Schools and the Pharmaceutical industry.

Based on our understanding of enzyme defects, the rationales for various therapeutic options are discussed. These include dietary measures; vitamins as coenzyme precursors; supply or substitution of artificial electron acceptors; supply of deficient or alternative substrates; avoidance of toxic drugs and the use of enzyme inhibitor. Defects in the respiratory chain appear to respond to treatment only in exceptional cases. This might be due to our lack of understanding on metabolic processes and multiple gene defects.

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It was felt that Pre-Regs would benefit from sessions on dose calculation, drug administration, information sources and how to check a Paediatric prescription. The subject of a Postgraduate qualification in Paediatric Pharmacy and Clerkships were brought up but clearly we were only able to scratch the surface on this topic.

A suggestion was made to form a subgroup similar to ‘POP’ to address all the issues. I would be very happy to hear from anybody who is interested in taking this forward.

**PAEDIATRIC AND PERINATAL DRUG THERAPY**

A new issue of this annual publication (edited by Professor Imti Choonara and Tony Nunn) has just been published. Subjects covered include Pain, Licensing, Adverse Drug Reactions and Antibiotics plus several other paediatric conditions.

The thread of licensing problems weaves its way through several of the articles in this issue. A major review of Adverse Drug Reaction reporting in children by staff at the Laboratory for Mother and Child Health in Milan reviewed all ADRs in children reported in Reactions Weekly in the period January 1995 to May 1997. Many compounds appear on market without labelling for safe effective use in children, but are subsequently used ‘off label’. Many ADRs are not reported to regulatory authorities until they appear as case reports in medical journals, thus requiring painstaking effort to uncover them. 269 ADRs were reported with neurological, dermatological and cardiovascular being the most frequent, accounting for 42% of all ADRs. The authors conclude that true ADRs remain a ‘needle’ in a large ‘haystack’ of suspicion, but the effort required to uncover them cannot be overlooked to guarantee safe and effective drug treatment. Sharon Conroy reviews recent studies into ‘off label’ drug use in neonates and paediatrics and discusses the recent EAEMP guidelines on the clinical investigation of medicinal products in children. These, and other articles, are neatly brought together in an article on Recent Developments in Paediatric Therapeutics by Imti Choonara to complete the volume.

Overall this publication once again is essential reading for all those who work in the field of paediatrics and publication is now in the hands of a commercial publisher. Copies (price £15) are available from LibraPharm Ltd, 3 Thames Court, High Street, Goring-on-