Medication Safety Bulletin

Produced by NHS Borders Medication Safety Action Committee
Issue 1, September 2012

This bulletin has been produced to support clinicians involved in the prescribing and administration of paracetamol, it outlines and builds upon the paracetamol dosing advice approved by the Area Drugs and Therapeutics Committee in 2011.

Oral Paracetamol: Adult Dosing

- There is no documented guidance for dose regimes for oral paracetamol in adult patients weighing <50kg.
- It is suggested that, where clinically indicated, paracetamol is commenced at a dose of 500mg, and is increased to 1 gram only if there is an inadequate response to the 500mg dose (monitor LFTs if increased)
- Prescription of regular paracetamol should be reviewed every 72 hours.

Medical review is required for patients identified as at risk; this review should consider the dosage intervals and maximum daily doses

If a dose of 500mg does not provide adequate pain relief the dose can be increased in a practical manner (either to 1 gram or using 15mg/kg (maximum 1 gram) as a guide though this should be rounded so that a dose can be easily administered using 500mg tabs or 250mg/5ml solution.

Oral Paracetamol: Paediatric Dosing

The MHRA has provided guidance on updated age banded doses for liquid oral paracetamol in children; **this supersedes guidance in the BNF for children 2011-2012 and the online BNF.**

This guidance is available by following this link: www.mhra.gov.uk/Safetyinformation/DrugSafetyUpdate/CON123113

Intravenous Paracetamol Dosing

Risk Factors

- Low weight (<50kg)
- Renal impairment (eGFR ≤30ml/min)
- Caution/reduce dose in patients:
  - Receiving chronic enzyme inducer treatment e.g. carbamazepine, phenytoin
  - With other risk factors for glutathione depletion e.g. cystic fibrosis, HIV, Malnutrition

Key Prescribing Points
✓ IV paracetamol is indicated only for the short term treatment of fever or moderate pain especially following surgery, where the IV route is clinically justified
✓ Indicate a **single** route for administration
✓ Prescribe IV paracetamol for **24 hours only** and then review to change to oral route
✓ **Patient weight and renal function** must be recorded on the Medicines Chart.
✓ Check for additional paracetamol prescriptions in all sections of the Medicines Chart, including combination products, e.g. : co-codamol, co-dydramol

Adult or Adolescent IV Paracetamol Dosing (Table 1.1)

PATIENT GROUP	DOSE	DOSAGE INTERVAL	MAXIMUM DAILY DOSE
✓ Hepatocellular insufficiency ✓ Chronic alcoholism ✓ Chronic malnutrition ✓ Dehydration	1g up to 3 times a day	8 hours	3g
Severe hepatocellular insufficiency	**CONTRAINDICATED**		
Renal impairment with eGFR ≤30ml/min	As below depending on weight	6 hours	As below depending on weight
Adults or adolescent > 50kg	1g up to 4 times a day	4-6 hours	4g
Adults or adolescent ≤ 50kg (see Table 1.2)	15mg/kg up to 4 times a day (see Table 1.2)	4-6 hours	60mg/kg without exceeding 3g

References: 1) Paracetamol IV SPC 2) NHS GG&C Leaflet 3) NHS Borders IV Paracetamol Dosing Guidance 2011 4) British National Formulary 5) MHRA Drug Safety Update July 2011.

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Adult or Adolescent IV Paracetamol Dosing for Weight ≤ 50kg (Table 1.2)

Weight (kg)	Dose (mg)	Volume (ml)
30-34	500	50
35-39	550	55
40-44	650	65
45-50	700	70

Nurses involved in the administration of paracetamol should consider these key points for administration and remain aware of their accountability for medicines management processes as laid out in the NMC Standards for Medicines Management and the NHS Borders Code for the Control of Medicines.

Key Administration Points
✓ Ensure no other paracetamol containing product has been administered within the last 4-6 hours. E.g. co-dydramol
✓ Remove any excess from the vial before administering (to prevent whole vial being inadvertently administered)
✓ The 50 ml vial is restricted by licence to term newborn infants, infants, toddlers and children weighing less than 33kg
✓ Infuse over 15 minutes
✓ Careful monitoring required towards the end of the infusion – risk of air embolism (special care with central lines)
✓ IV Paracetamol will only be kept as stock in ITU and Theatres and will be required to be obtained on an individual patient basis in other areas

Management of Paracetamol Overdose

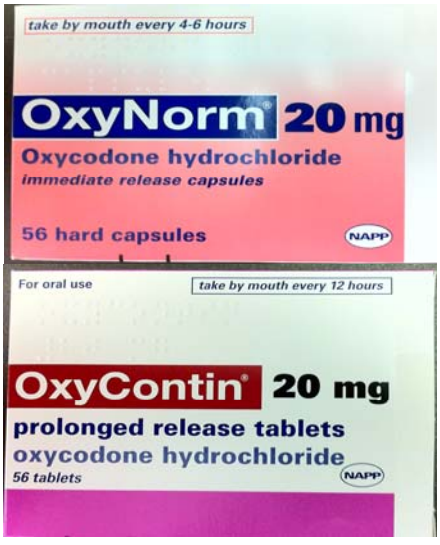
- Refer to **TOXBASE** (www.toxbase.org – password required) and contact National Poisons Information Service for specific advice – do not extrapolate advice on oral paracetamol overdose
- IV Paracetamol is a black triangle drug and problems with its use should be reported to the MHRA via the yellow card system as appropriate.
- Please contact the pharmacy department for further advice if required.

Good Practice Advice

In each Medication Safety Bulletin we will endeavour to include a good practice section that highlights an area that has been raised as a concern from the analysis of Datix reports. These good practice points will not necessarily follow the main topic of the bulletin:

Oxycodone Prescribing

- Oral Oxycodone is manufactured as immediate release capsules or liquid (branded as Oxynorm) and as a slow release tablet (branded as Oxycontin).
- There have been reported incidents where the patient has received the wrong formulation and so has not had their pain adequately controlled.
- In order to minimise the risk of this please ensure that this product is always prescribed by Brand name with the correct form included. i.e.: Oxycontin Tablets (if slow release is required) or Oxynorm Liquid or Capsules (if immediate release is required)



For further details on any of the information in this bulletin please contact Catherine Scott/Gavin Gorman at BGH Pharmacy Department (01896) 827702

References: 1) Paracetamol IV SPC 2) NHS GG&C Leaflet 3) NHS Borders IV Paracetamol Dosing Guidance 2011 4) British National Formulary 5) MHRA Drug Safety Update July 2011.