

Note from the editors for the Paediatric Protocols for Malaysian Hospital 4th Edition, 2nd Print (2019). August 2019

In the 2019 Print of the 4th Edition, we took the opportunity to make corrections for errors that were discovered after the document has been in circulation for some time. Minor corrections were made in a few documents.

Substantial changes made in 3 documents. In the Common Poisons chapter, an important correction was made to the N-Acetylcysteine regime for paracetamol poisoning and an expanded Toxidromes table amongst other corrections. Additional material was added to the Empyema Thoracis chapter and updates made to the Asthma chapter at the request of the Paediatric Respiratory Physicians.

List of Corrections or Changes made. Page numbers are as numbered in the first print (2018).

1) Childhood Immunisations

- a. Pg 16 Japanese Encephalitis: The vaccine used is IMOJEV which is a live, attenuated vaccine given subcutaneously.
- b. Pg 22. Table on “IMMUNISATION FOR CHILDREN WHO HAVE DELAYED FIRST VISIT TO THE CLINIC (NOT GIVEN IMMUNISATION).” In the row for 4th visit delete Hepatitis B (3rd dose) from both the 4th and 5th column.

2) Neonatal Hypoglycaemia

- a. Pg 113. Flowchart MANAGEMENT OF PERSISTENT HYPOGLYCAEMIA, Box “if still Hypoglycaemia” is: “Re-evaluate * see below, Give an initial 2-3 ml/kg IV 10% Dextrose bolus, followed by increase in glucose delivery”.

3) Asthma – major update

4) Empyema Thoracis

- a. Pg 203. Table 1.

Table 1: Recommended dosage for intra-pleural fibrinolytic therapy			
	Dose (weight < 10kg)	Dose (weight >= 10kg)	Duration of therapy (up to)
Urokinase	10,000 units in 10 - 40 ml normal saline. Given twice a day.	40,000 units in 40 ml normal saline. Given twice a day.	3 days

- b. Major additional text and addition to flow chart on Pg 204.

5) Diabetes Mellitus

- a. Pg 303: Table “Level of Control”, row “Biochemical assessment* SMBG values in mmol/L”

Level of Control				
Assessment	Ideal (non-diabetic)	Optimal	Suboptimal (action suggested)	High risk (action required)
<i>Biochemical assessment* SMBG values in mmol/L</i>				
<i>AM fasting or pre-prandial</i>	3.6 - 5.6	4 - 8	>8	>9
<i>Post-prandial</i>	4.5 - 7.0	5 - 10	10 - 14	>14
<i>Bedtime</i>	4.0 - 5.6	6.7 - 10	<4.2 or >9	<4.4 or >11
<i>Nocturnal</i>	3.6 - 5.6	4.5 - 9	<4.2 or >9	<4.0 or >11
<i>HbA1c DCCT (%) *</i>	<6.5	<7.5**	7.5 - 9.0**	>9.0***
<i>HbA1c IFCC (mmol/mol)**</i>	<48	<58	58 - 75	>75

6) Acute Glomerulonephritis

- a. Pg 330: Typo in the Heading "POST STREPTOCOCCAL AGN"

7) Nephrotic Syndrome

- a. Pg 337: Section "CORTICOSTEROID THERAPY", sub-section "Initial treatment", third bullet is: Alternate-day prednisolone of 40mg/m² per day for 4 weeks (maximum dose of 40mg/day), then taper over 4 weeks and stop.
- b. Pg 339, in Flow Chart. In box 2. RELAPSE, second bullet is: 40mg/m²/alternate day for 4 weeks then stop.

8) Acute Kidney Injury

- a. Pg 343
- i. Box title is “ECG changes in Hyperkalaemia”
 - ii. Last sentence is "Phosphate binders e.g. calcium carbonate orally with main meals”.

9) Paediatric HIV

- a. Pg 463: Flow chart “Management of HIV Exposed Infants” , in the last box under infected infant , the phrase “if indicated” is to be deleted.
- b. Pg 463: Under “Footnote” Scenario 2 should read: – infant at higher risk of HIV acquisition e.g. infant born to HIV-infected mother who:
- c. Pg 467: Under “which drugs to use” subsection “Not Recommended”. 2nd bullet is d4T + ZDV. 3rd bullet is d4T + ddl.

10) Dengue Viral Infections

a. Pg 487 – Formatting of Table

Criteria for dengue with or without warning signs	
<p>Probable Dengue</p> <p>*Live in and travel to dengue endemic area</p> <p>*Fever and any 2 of the following:</p> <ol style="list-style-type: none"> 1. Nausea, vomiting 2. Rash 3. Aches and pain 4. Positive Tourniquet test 5. Leucopenia <p>*Any warning signs</p>	<p>Warning Signs</p> <p><i>Clinical:</i></p> <p>Intense abdominal pain or tenderness</p> <p>Persistent vomiting</p> <p>Clinical fluid accumulation</p> <p>Mucosal bleed</p> <p>Lethargy, restlessness</p> <p>Liver enlargement > 2cm</p>
<p>Laboratory confirmed dengue (important when no sign of plasma leakage)</p>	<p><i>Laboratory:</i></p> <p>Increased in haematocrit with concurrent rapid decrease in platelet count</p>

b. Pg 488 – Formatting of Table

Criteria for Severe Dengue
<p>1. Severe plasma leakage leading to:</p> <ul style="list-style-type: none"> - Shocks (Dengue Shock Syndrome) - Fluid accumulation (pleural effusion, ascitic) with respiratory Distress
<p>2. Severe bleeding</p> <p>As evaluated by paediatrician</p>
<p>3. Severe organ involvement:</p> <ul style="list-style-type: none"> - Liver: elevated transaminase (AST or ALT ≥ 1000) - CNS: Impaired consciousness, seizures - Heart and other organ involvement

11) Juvenile Idiopathic Arthritis

- a. Pg 589 Under "Investigations". 6th Bullet is: Antinuclear antibody – a risk factor for uveitis. 7th Bullet is: Rheumatoid factor – assesses prognosis in polyarthritis and the need for more aggressive therapy.
- b. Pg 592: Flow Chart. Last sentence in last box is: Consider biologics (anti-TNF, anti-IL-6, anti-CD20).

12) Systemic Lupus Erythematosus

- a. Pg 597: Under "Other investigations (as indicated)". First bullet is: IgG, IgA, IgM: usually high IgG (chronic inflammation). Immunoglobulins also to rule out underlying primary immunodeficiency.
- b. Pg 598: Last line is "by gradual introduction"

13) Common Poisons – major changes

a. Pg 619 – Paracetamol Poisoning: Use of N-Acetylcysteine (NAC)

- i. Loading dose: 200mg/kg in 3mls/kg 5% dextrose over 4 hours, followed by 100mg/kg in 7mls/kg 5% dextrose over 16 hours.
- ii. If patient is on enzyme-inducing drugs, they should be given NAC if the paracetamol levels are 50% or more of the standard reference line.
- iii. Continue NAC beyond 24 hours at 100mg/kg in 7mls/kg 5% dextrose over 16 hours if the repeated LFT, lactate and INR levels worsen.
- iv. NAC can be stopped once there are clinical and laboratory improvement (ALT/ALP/INR/Lactate)

b. Pg 618 – Toxidromes Table expanded

TOXIDROMES				
TOXIDROME	REPRESENTATIVE AGENT	COMMON FINDINGS	ADDITIONAL SIGNS AND SYMPTOMS	POTENTIAL INTERVENTIONS
Opioid	Heroin Morphine	CNS depression, miosis, respiratory depression	Hypothermia, bradycardia, acute lung injury	Ventilation or naloxone
Sympathomimetic	Cocaine Amphetamine	Psychomotor agitation, mydriasis, diaphoresis, tachycardia, hypertension, hyperthermia	Seizures, rhabdomyolysis, myocardial infarction.	Cooling, sedation with benzodiazepines, hydration
Cholinergic	Organophosphates Carbamates	Salivation, lacrimation, diaphoresis, vomiting, urination, defecation, muscle fasciculations, weakness, bronchorrhea	Bradycardia, miosis, seizures, respiratory failure, paralysis.	Airway protection and ventilation, atropine, pralidoxime
Anticholinergic	Scopolamine Atropine	Altered mental status, mydriasis, dry/flushed skin, urinary retention, decreased bowel sounds, hyperthermia, dry mucus membranes	Seizures, dysrhythmias, rhabdomyolysis.	Physostigmine(if appropriate), sedation with benzodiazepines, cooling, supportive management
Salicylates	Aspirin Salicylate oils	Altered mental status, metabolic acidosis, tinnitus, hyperapnea, tachycardia, diaphoresis, vomiting	Low grade fever, ketonuria, acute lung injury	Alkalinisation of the urine with potassium repletion, hemodialysis, hydration
Hypoglycemia	Sulfonylureas Insulin	Altered mental status, diaphoresis, tachycardia, hypertension	Slurring of speech, seizures.	Intravenous glucose, oral feeding if able, frequent capillary blood for glucose measurement, octreotide
Serotonin Syndrome	Pethidine SSRI TCA Amphetamines	Altered mental status, hyperreflexia, hyperthermia, mydriasis, increased muscle tone	Intermittent whole body tremor.	Cooling, sedation with benzodiazepines, hydration, supportive management

c. Pg 621. Salicylate.

- i. 2nd bullet is: Ingestion of more than 125mg/kg will cause symptoms.
- ii. 3rd bullet is: The potentially fatal dose is estimated to be 200-500mg/kg
- iii. Table: Clinical Manifestations of Salicylate poisoning. Last line is: Serum salicylate level at least 4 hours after ingestion

- d. Pg 623, Iron. Management. Bullet is: "If serum iron is not available, severe poisoning is indicated by nausea, vomiting, leucocytosis $>15 \times 10^9$, metabolic acidosis and hyperglycemia >8.3 mmol/l.
- e. Pg 626. PSYCHIATRIC DRUGS-ANTIDEPRESSANTS, Management.
 - i. 8th Bullet: "QTc prolongation of more than 450ms"
 - ii. Add 10th bullet: "Haemodialysis / PD is not effective as tricyclics are protein bound. Important to avoid the use of flumazenil for reversal of co-ingestion of benzodiazepines as this can precipitate tricyclic induced seizure activity."
- f. Pg 628. Remove first sentence "Haemodiaysis/PD is not effective as tricyclics are protein bound. Important to avoid the use of flumazenil for reversal of co-ingestion of benzodiazepines as this can precipitate tricyclic induced seizure activity."
- g. Other minor changers.