HSGB DIAMS QUICK GUIDE:

DRUG PROTOCOLS

Antibiotic Desensitization Protocol

Amphotericin B Protocol

Ganciclovir Inj. Protocol

Prepared By:

Izyana Munirah Idham & Hannah Md Mahir (AMS Pharmacists),
Mariah binti Zakaria (Clinical Pharmacist),
Pharmacy Resources Information Center (PRIC) Unit

Reviewed & Endorsed By:

Dato' Dr Suresh Kumar a/l Chidambaram & Dr Benedict Sim Lim Heng
ID Consultants
Hospital Sungai Buloh

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Prepared By: Izyana Munirah Idham & Hannah Md Mahir (AMS Pharmacists), Mariah Zakaria (Clinical Pharmacist) & Abby Ang (PRIC Pharmacist).
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ANTIBIOTIC DESENSITIZATION

AMPHOTERICIN B PROTOCOL

GANCICLOVIR PROTOCOL

DISCLAIMER

This guide provides general advice based on published evidence and expert opinion for standardization of practice. This guide may not cover all aspects of clinical practice, thus healthcare practitioners are encouraged to review patient details and professionally assess the relevance of this protocol to each clinical situation.
This guide is subject to periodic updates.
We assume no responsibility for any party who referred to an outdated version of this guide.

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Antibiotic Desensitisation Protocol

ANTIBIOTIC DESENSITIZATION
AMPHOTERICIN B PROTOCOL
GANCICLOVIR PROTOCOL

Co-trimoxazole (Bactrim) Desensitization Protocol

Penicillin Desensitization Protocol

Cephalosporin Desensitization Protocol

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Co-trimoxazole (Bactrim) Desensitisation Protocol for PCP Prophylaxis

BACTRIM TOXICITY GRADING SCALE FOR ADULT & ADOLESCENT:

GRADES	CLINICAL DESCRIPTIONS
GRADE 1	Erythema
GRADE 2	Diffuse maculopapular rash, dry desquamation
GRADE 3	Vesiculation, mucosal ulceration
GRADE 4	Exfoliative dermatitis, Stevens-Johnson syndrome (SJS) /erythema multiforme, moist desquamation

Desensitization can be attempted **two weeks** after a **non-severe (grade 3 or less**) reaction that has resulted in a temporary interruption of Bactrim. It should **NOT** be attempted in individuals with a history of grade 4 reactions to previous Bactrim or other sulfa drugs.

It is recommended to commence an **antihistamine of choice one day before starting the regimen** and to continue daily until completing the dose escalation.

PROTOCOL FOR BACTRIM DESENSITIZATION AMONG ADULTS	
STEPS	**DOSES**
DAY 1	80 mg SMX + 16 mg TMP (**2 mL** of Bactrim syrup)
DAY 2	160 mg SMX + 32 mg TMP (**4 mL** of Bactrim syrup)
DAY 3	240 mg SMX + 48 mg TMP (**6 mL** of Bactrim syrup)
DAY 4	320 mg SMX + 64 mg TMP (**8 mL** of Bactrim syrup)
DAY 5	**1 tablet** (400 mg SMX + 80 mg TMP)
DAY 6 ONWARDS[b]	**2 tablets** (800 mg SMX + 160 mg TMP)

Management of Reaction during Desensitization:

- If a minor reaction occurs, repeat the same step for an additional day.
  - If the reaction subsides, advance to the next step.
  - If the reaction worsens, the desensitization regimen is terminated.
- If a severe reaction occurs, the desensitization regimen is terminated.

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Penicillin Desensitisation Protocol

- **Preferred Route:** Use **Oral Phenoxymethylpenicillin (Penicillin V)** rather than parenteral benzylpenicillin.
- **Potential Reactions:** About 1 in 3 patients may experience mild and transient reaction during desensitization or treatment.
- **Precautions:**
  - Stop all β-blockers before starting.
  - Ensure IV access is available.
  - Keep epinephrine, ECG, and a spirometer on hand.
- **Contraindications:** Do not perform desensitization if the patient has a history of:
  - Stevens-Johnson Syndrome (SJS)
  - Exfoliative dermatitis
  - Erythroderma
- **Preparation & Administration:**
  1. Use Penicillin V oral solution (125 mg/5 mL) to prepare dilutions as per the table below
  2. Give each dose at 15-minutes interval, mixed with **30 mL of water or a flavored beverage.**
  3. After step 14, observe the patient for 30 minutes.
  4. Then, administer the full therapeutic dose via the route of choice

Step	Drug Preparation		Volume (mL) to be administered	Drug Dose Per Step		Cumulative Dose Administered	
	Dilution	(mg/mL)		mg	units	mg	Units
1	**1 ml** of Syr. Penicillin V 125 mg/5 ml diluted to **50 ml**	0.5	**0.1**	0.05	80	0.05	80
2		0.5	**0.2**	0.1	160	0.15	240
3		0.5	**0.4**	0.2	320	0.35	560
4		0.5	**0.8**	0.4	640	0.75	1200
5		0.5	**1.6**	0.8	1280	1.55	2480
6		0.5	**3.2**	1.6	2560	3.15	5040
7		0.5	**6.4**	3.2	5120	6.35	10,160
8	**2 ml** Syr. Penicillin V 125 mg/5 ml diluted to **10 ml**	5	**1.2**	6	9600	12.35	19,760
9		5	**2.4**	12	19,200	24.35	38,960
10		5	**4.8**	24	38,400	48.35	77,360
11	Syr. Penicillin V 125 mg/5 ml	25	**2**	50	80,000	98.35	157,360
12		25	**4**	100	160,000	198.35	317,360
13		25	**8**	200	320,000	398.35	637,360
14		25	**16**	400	640,000	798.35	1,277,360

If allergy /reaction occur during desensitization procedure:

- Stop the procedure immediately.
- If symptoms persist, symptomatic treatment should be given.

Symptoms	Treatment
Mild skin reaction (i.e., erythema, rash, pruritis, urticaria)	**PO Cetirizine 20 mg STAT**
Systemic reaction (i.e., hypotension, wheezing, bronchospasm, angioedema)	**IM Epinephrine 0.3 mg STAT** **IV Methylprednisolone 125 mg STAT** **MDI Salbutamol with aerochamber 4 – 8 puffs** (if respiratory involvement)

- When the symptoms have resolved, the protocol can be resumed by repeating the dose that caused the reaction or restarting at a lower dose.
- However, the procedure should be discontinued if severe reactions (such as serum sickness, laryngeal edema that does not respond to epinephrine).

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Cephalosporin Desensitisation Protocol

- This protocol is only recommended for patients who had an allergy towards cephalosporins with a reaction of either immediate HSR or those with non-severe delayed HSR.
- IV cephalosporins that can be used in this protocol included **cefazolin**, **ceftriaxone,** and **cefepime.**
- Administer each dose at **15-minute intervals.**
- Use Table 1 when the dose prescribed is **1 g/dose** and Table 2 when the dose prescribed is **2 g/dose.**

Drug	Brand	Reconstitution *(Solution A)*	Dilution for **(Solution B)** *Diluent: NS or D5*
Ceftriaxone 1 g	Unocef	9.6 ml WFI	further dilute up to 100 ml to make 10 mg/mL
Cefazolin 1 g	Cefazolin-AFT	3 ml WFI	further dilute up to 100 ml to make 10 mg/mL
Cefepime 1 g	Cefmex Vaxcel Cefepime	10 ml WFI	further dilute up to 100 ml to make 10 mg/mL

Table 1: Therapeutic dose 1 g Cephalosporin

Steps	Futher Drug Dilution	Concentration (mg/mL)	Dose (mg)	mL to be administered	Cumulative Dose (mg)
1	Take **1 ml** of **(Solution B)** and further dilute in **100 mL**	0.1	0.1	**1**	0.1
2		0.1	0.2	**2**	0.3
3		0.1	1.0	**10**	1.3
4		0.1	2.0	**20**	3.3
5	Use **(Solution B)** (10 mg/mL)	10	10.0	**1**	13.3
6		10	20.0	**2**	33.3
7		10	70.0	**7**	103.3
8	Take a **new vial** and reconstitute and **further dilute up to 25 mL**	40	200.0	**5**	303.3
9		40	700.0	**17.5**	1003.3

- The interval between doses is 15 minutes, with a total time of 2 hours and 15 minutes.
- Observation before the full therapeutic dose is 30 mins.

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Table 2: Therapeutic dose 2 g Cephalosporin

Steps	Further Drug Dilution	Concentration (mg/mL)	Dose (mg)	mL to be administered	Cumulative Dose (mg)
1	Take **1 ml** of **(Solution B)** and further dilute in **100 mL**	0.1	0.1	**1**	0.1
2		0.1	0.4	**4**	0.5
3		0.1	1.0	**10**	1.5
4		0.1	4.0	**40**	5.5
5	Use **(Solution B)** (10 mg/mL)	10	10.0	**1**	15.5
6		10	40.0	**4**	55.5
7		10	140.0	**14**	195.5
8	Take **TWO** new vials and reconstitute and further dilute up to **25 ml diluent** for **each** vial	40	400.0	**10**	595.5
9		40	1400.0	**35**	1995.5

- The interval between doses is 15 minutes, with a total time of 2 hours and 15 minutes.
- Observation before the full therapeutic dose is 30 mins.

If allergy /reaction occur during desensitization procedure:

- Stopped the procedure immediately.
- If symptoms persist, symptomatic treatment should be given.

Symptoms	Treatment
Mild skin reaction (i.e., erythema, rash, pruritis, urticaria)	**PO Cetirizine 20 mg STAT**
Systemic reaction (i.e., hypotension, wheezing, bronchospasm, angioedema)	**IM Epinephrine 0.3 mg STAT** **IV Methylprednisolone 125 mg STAT** **MDI Salbutamol with aerochamber 4 – 8 puffs** (if respiratory involvement)

- When the symptoms have resolved, the protocol can be resumed by repeating the dose that caused the reaction or restarting at a lower dose.
- However, the procedure should be discontinued if severe reactions (such as serum sickness, laryngeal edema that does not respond to epinephrine).

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Alternative Approach & Reference for Reported Antibiotic Allergy

Source: BC Medical Journal vol. 61 no. 9 | November 2019

Beta-lactam Antibiotic Cross-Allergy Chart

Beta-lactams	AMOXICILLIN*	AMPICILLIN	CLOXACILLIN	PENICILLIN	PIPERACILLIN*	CEFADROXIL	CEFAZOLIN	CEPHALEXIN	CEFOXITIN	CEFPROZIL	CEFUROXIME	CEFIXIME	CEFOTAXIME	CEFTAZIDIME	CEFTRIAXONE	CEFEPIME	ERTAPENEM	IMIPENEM	MEROPENEM
AMOXICILLIN*		X1	X5	X4	X3	X1	✓	X1	✓	X2	✓	✓	✓	✓	✓	✓	✓	✓	✓
AMPICILLIN	X1		X5	X4	X3	X2	✓	X2	✓	X2	✓	✓	✓	✓	✓	✓	✓	✓	✓
CLOXACILLIN	X5	X5		X5	X5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PENICILLIN	X4	X4	X5		X5	✓	✓	✓	X3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PIPERACILLIN*	X3	X3	X5	X5		X3	✓	X3	✓	X3	✓	✓	✓	✓	✓	✓	✓	✓	✓
CEFADROXIL	X1	X2	✓	✓	X3		✓	X1	✓	X2	✓	✓	✓	✓	✓	✓	✓	✓	✓
CEFAZOLIN	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CEPHALEXIN	X1	X2	✓	✓	X3	X1	✓		✓	X2	✓	✓	✓	✓	✓	✓	✓	✓	✓
CEFOXITIN	✓	✓	✓	X3	✓	✓	✓	✓		✓	X2	✓	✓	✓	✓	✓	✓	✓	✓
CEFPROZIL	X2	X2	✓	✓	X3	X2	✓	X2	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
CEFUROXIME	✓	✓	✓	✓	✓	✓	✓	✓	X2	✓		X3	X1	X3	X1	X2	✓	✓	✓
CEFIXIME	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X3		X3	X3	X3	X3	✓	✓	✓
CEFOTAXIME	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X1	X3		X3	X1	X1	✓	✓	✓
CEFTAZIDIME	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X3	X3	X3		X3	X3	✓	✓	✓
CEFTRIAXONE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X1	X3	X1	X3		X1	✓	✓	✓
CEFEPIME	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X2	X3	X1	X3	X1		✓	✓	✓
ERTAPENEM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		X5	X5
IMIPENEM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X5		X5
MEROPENEM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X5	X5	

* Also applies to beta-lactamase inhibitor combinations (amoxicillin-clavulanate and piperacillin-tazobactam)

AVOID ALL beta-lactam antibiotics if:

- ICU admission related to allergy
- Delayed beta-lactam antibiotic allergy causing:
  - interstitial nephritis
  - hepatitis
  - hemolytic anemia
- Delayed severe skin allergic reactions:
  - Stevens-Johnson syndrome
  - toxic epidermal necrolysis
  - exfoliative dermatitis
  - acute generalized exanthematous pustulosis (AGEP)
  - drug reaction with eosinophilia and systemic symptoms (DRESS)

LEGEND:	
Penicillins	
1st Generation Cephalosporins	
2nd Generation Cephalosporins	
3rd Generation Cephalosporins	
4th Generation Cephalosporins	
Carbapenems	
✓	Different structure. CONSIDERED SAFE TO PRESCRIBE
Reaction likely based on side chain:	
X1	Same side chain - clinical evidence of cross reaction. DO NOT PRESCRIBE
X2	Same side chain - Theoretical risk of cross reaction, no clinical studies. DO NOT PRESCRIBE
X3	Similar side chain - Potential for cross reaction. DO NOT PRESCRIBE
Reaction likely based on Beta-lactam ring	
X4	Clinical evidence of cross reaction. DO NOT PRESCRIBE
X5	Theoretical risk of cross reaction, no clinical studies. DO NOT PRESCRIBE

Figure 1. Beta-lactam cross-allergy chart.
Source: Source: Interior Health Authority

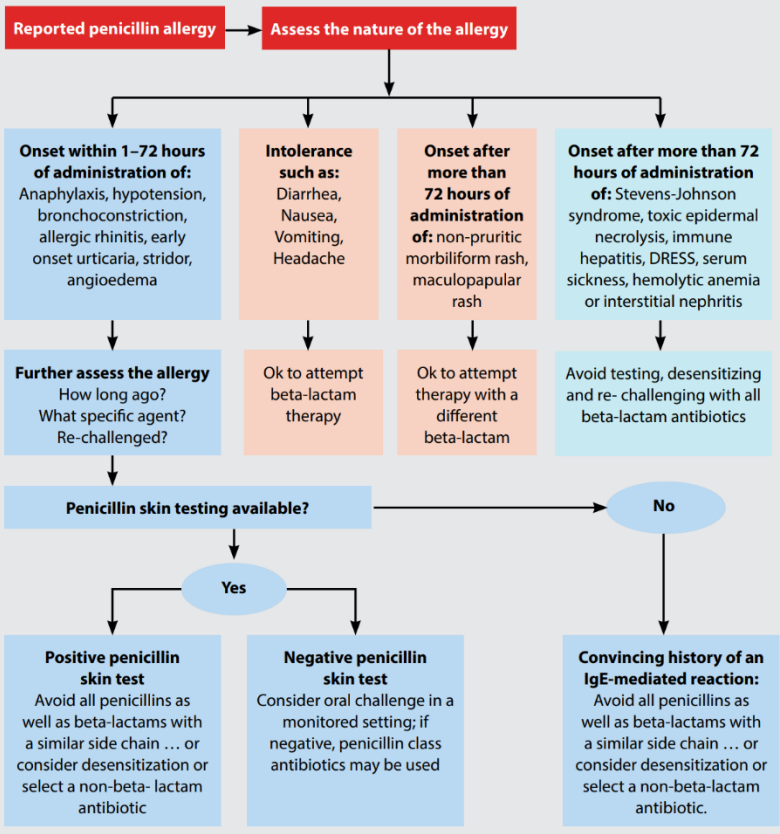

Figure 2. Flowchart from New Brunswick for assessing penicillin allergy.

Source: New Brunswick Provincial Health Authorities Anti-infective Stewardship Committee (https://en.horizonnb.ca/media/951180/antimicrobial_treatment_guidelines_for_common_infections_en.pdf

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Amphotericin B Protocol

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Amphotericin B:
Formulations Available in HSgB

Amphotericin B:
Administration Guide

Amphotericin B:
Adverse effects & Monitoring parameters

Amphotericin B LIPOSOMAL:
Algorithm for Crypt Meningitis

Amphotericin B:
Alert Note Upon Discharge

Amphotericin B:
Administration & Chart:

1. IV Amphotericin B **DEOXYCHOLATE** Chart
2. IV Amphotericin B **LIPID COMPLEX (ABLC)** Chart
3. IV Amphotericin B **LIPOSOMAL** Chart

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Amphotericin B: Formulations Available in HSgB

Amphotericin B Formulations	IV Amphotericin B **Deoxycholate** 50mg/mL	IV Amphotericin B **Lipid Complex (ABLC)** 50mg/mL	IV Amphotericin B **Liposomal** 50mg/mL
Prescriber Category	A	UKK (ID) *(Not listed in blue book)*	UKK (ID) *(Not listed in blue book & not registered in Malaysia)*
Dose	0.5 – 1 mg/kg OD	5 mg/kg OD	**Cryptococcal meningitis:** 10 mg/kg STAT on Day 1 **Others:** 3 – 6 mg/kg OD
Renal Dose	No dose adjustment		
Nephrotoxicity	++++	++	+
Hepatotoxicity	+	++	++
Anemia	++	+++	+
Infusion related toxicity	+++	++	+
Pregnancy	B	Use only when benefit > risk	Use only when benefit > risk
Breastfeeding	Limited studies, use only when benefit > risk		
Price	~ RM 38.57	~ RM 481.18	~ RM 250.00
Prescribing Restriction based on HSgB Antimicrobial Policy	**Yellow Category**	**Red Category (ID)**	**Red Category (ID)**

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Amphotericin B: Administration

Test Dose

- 1 mg in 20-100 ml D5W infused over 10 – 30 minutes without premedication
- To assess for anaphylaxis/adverse reaction

Pre-Hydration

- 250 – 1000 mL NS with 1.5 g KCL for 2 hours prior to infusion (if patient is not on continuous IV drip).

Pre-Medication

- Given 30 minutes prior to Ampho B for 1st 3 doses or 1st week. IF NO REACTION, OMIT!
  - **Fever:** Hydrocortisone 25 – 50 mg IV/Infusate (mixed with reconstituted Ampho B preparation) OR T Paracetamol 1 g STAT.
  - **Nausea/Vomiting:** Syr Diphenydramine 10-15 ml STAT/ IV Promethazine 12.5 mg STAT.
  - **Rigors:** IV Pethidine 25 – 50 mg PRN
  - **Thrombophlebitis:** Add 1000 unit Heparin for infusion through peripheral line OR add into reconstituted Ampho B solution to prevent thrombophlebitis.

Electrolyte Supplementation

- Start **Potassium supplementation** with:
  - **Tab Slow K 1200 mg BD**

    or
  - **Potassium Chloride Powder 1.5 g TDS** (for patient on Ryles Tube).

  *However, if patient has pre-existing renal impairment or hyperkalemia, potassium should not be given or give with caution.

- Start **Magnesium supplementation** with:
  - **Tab MMT 250 mg BD**

    or
  - **Syr $MgSO_4$ 5 ml OD.**

Maintenance dose

- Refer to the **Amphotericin B Administration & Chart** Section:

  1. IV Amphotericin B **DEOXYCHOLATE** Chart

  2. IV Amphotericin **B LIPID COMPLEX (ABLC**) Chart

  3. IV Amphotericin B **LIPOSOMAL** Chart

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Amphotericin B: Adverse Effects & Monitoring Parameters

1. Infusion-Related Reactions

- Monitor closely for infusion-related reactions (**fever, chills, rigors, and nausea)**, especially **during the first week** of therapy.

2. Electrolytes

- **Frequency**: Check electrolytes **every other day (EOD)** (daily if hypokalemia or hypomagnesemia is present).
- **Potassium (K) Management**:
  - Maintain **K > 4 mmol/L**.
  - Start **potassium supplementation** simultaneously with **IV Amphotericin B initiation** and adjust accordingly (**Exclusion**: Patients with **renal impairment** or **underlying hyperkalemia)**.
  - If **K < 3.3 mmol/L**, increase **K supplementation in drip to 3 g** (infusion rate not to exceed 1.5 g/hr).
- **Magnesium (Mg) Management**:
  - Monitor for **hypomagnesemia**.
  - Start supplementation with **Tab MMT 250 mg BD** or **Syr $MgSO_4$ 5 mL OD (8 mEq)** upon initiation and adjust accordingly.

3. Nephrotoxicity

- **Renal Profile (RP)**:
  - Monitor RP **EOD** (daily if RP is deranged).
  - Watch for signs/symptoms of renal dysfunction**.**
- **Management of Deranged RP**:
  - **If creatinine doubles** → **Hold Amphotericin B** and increase **maintenance IV fluids to 1L TDS**.
  - **Restart** IV Amphotericin B deoxycholate at **half of the original dose** once stabilized.
  - If **creatinine remains elevated**, consider switching to **IV Amphotericin B lipid complex** or an **alternative regimen**.

4. Severe Anemia

- Monitor **FBC weekly.**
- **If Hb < 6.5 g/dL + clinically symptomatic** → **Transfuse** and consider **alternative therapy** if prolonged treatment is required.

5. Thrombophlebitis

- **Carefully monitor the infusion site daily** for signs/symptoms of **thrombophlebitis**.
- If using a **peripheral line**, add **1000 units of Heparin** into **reconstituted Amphotericin B** to reduce risk of thrombophlebitis.

⚠ **IMPORTANT WARNINGS:**

- **Do NOT** administer **concurrently** with other **medications or blood products**.
  - **COMPATIBLE** with HYDROCORTISONE, HEPARIN, SODIUM BICARBONATE & D5W only.
- **Do NOT** administer Amphotericin B **within 4 hours of all blood products** as this has been associated with **severe pulmonary reaction**.

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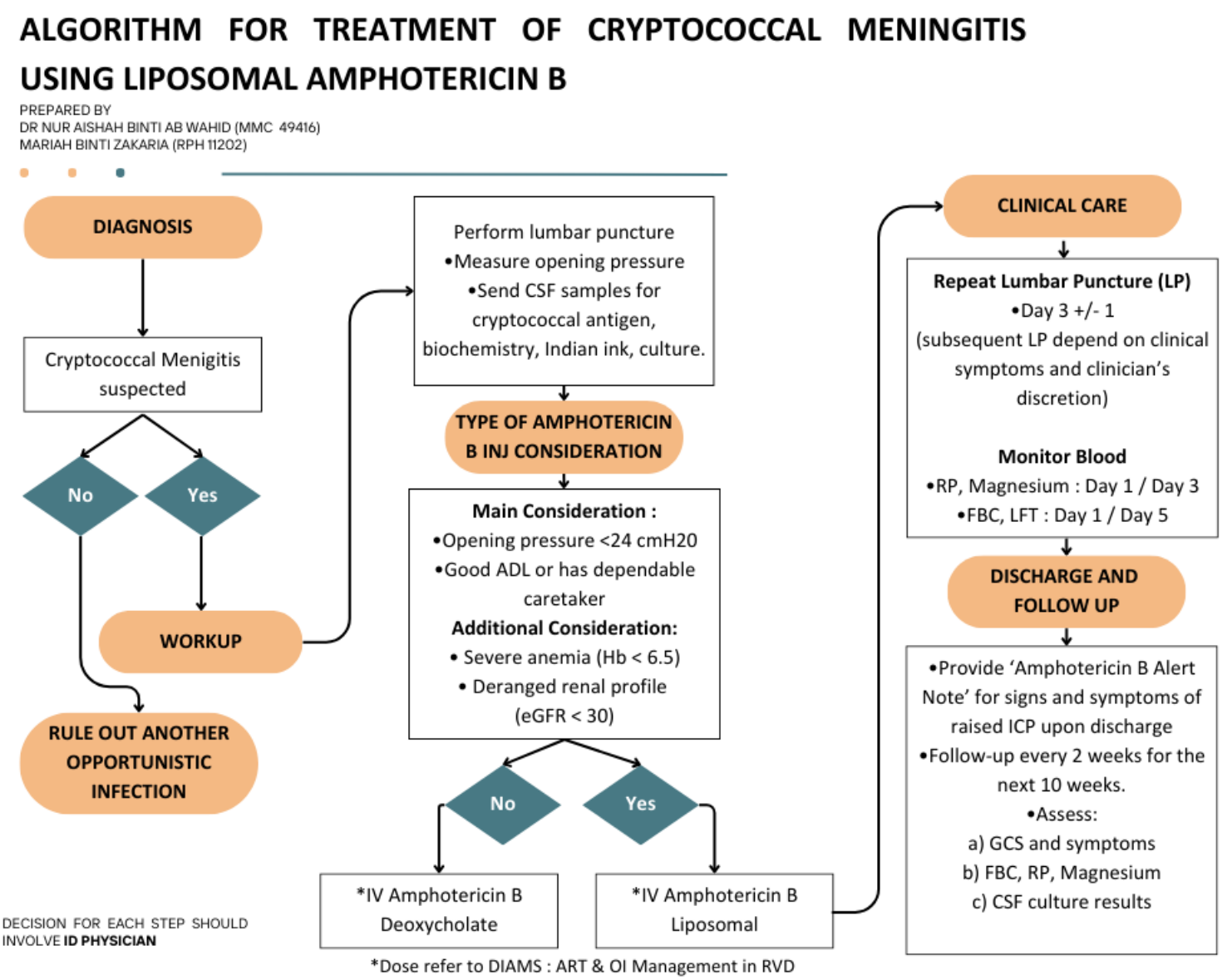
Amphotericin B LIPOSOMAL Algorithm for Cryptococcal Meningitis



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Amphotericin B: Alert Note (Upon Discharge)

AMPHOTERICIN B ALERT NOTE

NOTA WASPADA AMPHOTERICIN B

New onset and persistent headache /
Sakit kepala berpanjangan

Persistent vomiting /
Muntah yang berterusan

Blurring of vision /
Penglihatan menjadi kabur

Please come immediately to hospital if you experience any of the following.

Sila hadir ke hospital dengan segera sekiranya anda mengalami salah satu gejala berikut.

For further queries, please contact:-
Untuk sebarang pertanyaan lanjut, sila hubungi:-

Wad 4C, Hospital Sungai Buloh 03 - 61454333

Change of behaviour /
Perubahan sikap atau perangai

Seizure / *Sawan*

Loss of consciousness /
Pengsan atau tidak sedarkan diri

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Amphotericin B Administration & Chart

1. IV Amphotericin B DEOXYCHOLATE Chart

Click here for a printable version of the Amphotericin B DEOXYCHOLATE Administration Chart

- **TEST DOSE:**
  - **1 mg** in **20-100 ml D5W** infused **over 10 – 30 minutes** without premedication.
  - To assess for anaphylaxis/adverse reaction.

- **MAINTENANCE DOSE:**

IV Amphotericin B DEOXYCHOLATE 50 mg/mL	
Dose	• **0.5 – 1 mg/kg OD** ○ Gradual increase dose until therapeutic dose is achieved. ○ E.g: Day 1 : Half dose Day 2 onwards : Increase to 0.6 – 1 mg/kg (if tolerated Day 1).
Reconstitution	• Reconstitute each vial with **10 ml WFI** (5 mg/ml)
Dilution	• Dilute in **500 ml D5**
Maximum concentration	• ≤ 0.1 mg/mL
Stability after dilution	• Use immediately after dilution
Administration & Duration of Infusion	• Infuse **over 4 – 6 hours** to prevent infusion related reactions.

- **PRE-HYDRATION AND ELECTROLYTE SUPPLEMENTATION**
  - 250 – 1000 mL NS with 1.5 g KCL for 2 hours prior to infusion (if patient is not on continuous IV drip).
  - Start Potassium supplementation with **Tab Slow K 1200 mg BD** or **Potassium Chloride powder 1.5 g TDS** (should not be given if patient has pre-existing renal impairment or hyperkalemia).
  - Start Magnesium supplementation with **Tab MMT 250 mg BD** or **Syr MgSO4 5 ml OD.**

- **PRE –MEDICATION**
  - Given 30 minutes prior to Ampho B for 1st 3 doses or 1st week
  - IF NO REACTION, OMIT!
  - Types of pre-meds based on type of infusion-related reaction:
    - **Fever**: Hydrocortisone 25 – 50 mg IV/Infusate (mixed with reconstituted Ampho B preparation) OR T Paracetamol 1 g STAT.
    - **Nausea/Vomiting**: IV Promethazine 12.5mg STAT/ Syr Diphenhydramine 10-15 ml STAT.
    - **Rigors**: IV Pethidine 25 – 50 mg PRN. If rigors is predicted, add Pethidine 20 – 30 mins before infusion.
    - **Thrombophlebitis**: Add 1000 unit Heparin for infusion through peripheral line OR add into reconstituted Ampho B solution to prevent thrombophlebitis.

Prepared By: Izyana Munirah Idham (AMS Pharmacists), Mariah Zakaria (Clinical Pharmacist) & Abby Ang (PRIC Pharmacist).
Only for internal circulation (HSgB). For further enquiries, kindly contact ext. 4126

BACK

AMPHOTERICIN B DEOXYCHOLATE CHART

NAME :	**SB NO :**
BODY WEIGHT :	**DOSE :**

NO	DATE	TIME STARTED	TIME COMPLETED	DOSE	GIVEN BY

MONITORING AMPHOTERICIN B-RELATED TOXICITY

- Monitor RP and electrolyte EOD.
- Monitor Hb weekly.
- Monitor I/O chart daily.

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2. IV Amphotericin B LIPID COMPLEX (ABLC) Chart

Click here for a printable version of the Amphotericin B LIPID COMPLEX Administration Chart

- **TEST DOSE:**
  - **1 mg** in **20-100 ml D5W** infused over **10 – 30 minutes** without premedication.
  - To assess for anaphylaxis/adverse reaction.

- **MAINTENANCE DOSE:**

IV Amphotericin B LIPID COMPLEX (ABLC) 50 mg/mL	
Dose	• **5 mg/kg OD**
Reconstitution	• Shake the vial until no evidence of yellow sedimentation. • Withdraw required dose from required number of vials into sterile syringe using 18 G needle. • Replace 18 G needle with 5 µ filter needle provided in the package [1 filter can be used up to eight 50 mg vials (400 mg)]. • Empty the syringe into the IV bag (500 mL D5) using the filter needle to final concentration of 1 mg/ml. • Shake the bag till mixed thoroughly prior infusion.
Dilution	• Dilute in **500 ml D5**
Maximum concentration	• ≤ 1 mg/mL • Patients with restriction of fluids (ROF) : ≤ 2 mg/mL
Stability after dilution	• Room temperature (<25°C) : 6 hours • Fridge (2-8°C) : 48 hours
Administration & Duration of Infusion	• Infuse at rate 2.5 mg/kg/hr • May prolong infusion over 2 hours to reduce infusion related reaction • If infusion time more than 2 hours, infusion container should **be shaken every 2 hours.**

- **PRE-HYDRATION AND ELECTROLYTE SUPPLEMENTATION**
  - 250 – 1000 mL NS with 1.5 g KCL for 2 hours prior to infusion (if patient is not on continuous IV drip).
  - Start Potassium supplementation with **Tab Slow K 1200 mg BD** or **Potassium Chloride powder 1.5 g TDS** (should not be given if patient has pre-existing renal impairment or hyperkalemia).
  - Start Magnesium supplementation with **Tab MMT 250 mg BD** or **Syr MgSO4 5 ml OD.**

- **PRE –MEDICATION**
  - Given 30 minutes prior to Ampho B for 1st 3 doses or 1st week
  - IF NO REACTION, OMIT!
  - Types of pre-meds based on type of infusion-related reaction:
    - **Fever**: Hydrocortisone 25 – 50 mg IV/Infusate (mixed with reconstituted Ampho B preparation) OR T Paracetamol 1 g STAT.
    - **Nausea/Vomiting**: IV Promethazine 12.5mg STAT/ Syr Diphenhydramine 10-15 ml STAT.
    - **Rigors**: IV Pethidine 25 – 50 mg PRN. If rigors is predicted, add Pethidine 20 – 30 mins before infusion.
    - **Thrombophlebitis**: Add 1000 unit Heparin for infusion through peripheral line OR add into reconstituted Ampho B solution to prevent thrombophlebitis.

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BACK
ANTIBIOTIC DESENSITIZATION
AMPHOTERICIN B PROTOCOL
GANCICLOVIR PROTOCOL

AMPHOTERICIN B LIPID COMPLEX (ABLC) CHART

NAME :	**SB NO :**
BODY WEIGHT :	**DOSE :**

NO	DATE	TIME STARTED	TIME COMPLETED	DOSE	GIVEN BY

MONITORING AMPHOTERICIN B-RELATED TOXICITY

- Monitor RP and electrolyte EOD.
- Monitor Hb weekly.
- Monitor I/O chart daily.

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3. IV Amphotericin B LIPOSOMAL Chart

Click here for a printable version of the Amphotericin B LIPOSOMAL Administration Chart

- **TEST DOSE:**
  - **1 mg** in **20-100 ml D5W** infused over **10 – 30 minutes** without premedication.
  - To assess for anaphylaxis/adverse reaction.

- **MAINTENANCE DOSE:**

IV Amphotericin B LIPOSOMAL 50 mg/mL	
Dose	• Cryptococcal meningitis : **10 mg/kg STAT** • Others : **3 – 6 mg/kg OD**
Reconstitution	• Reconstitute each vial with 12ml WFI (4mg/ml) • Use sterile 18G Blunt fill needle with 5-micron filter provided in the package to instil the reconstituted product into a sterile container containing calculated amount of D5.
Dilution	• Dilute in **500 ml D5**
Maximum concentration	• 0.2mg – 2mg/ml
Stability after dilution	• Use immediately after dilution. • Fridge (2-8°C) : 24 hours
Administration & Duration of Infusion	• Infuse over 2 hours. • Infusion time may reduce to 1 hour if patient able to tolerate.

- **PRE-HYDRATION AND ELECTROLYTE SUPPLEMENTATION**
  - 250 – 1000 mL NS with 1.5 g KCL for 2 hours prior to infusion (if patient is not on continuous IV drip).
  - Start Potassium supplementation with **Tab Slow K 1200 mg BD** or **Potassium Chloride powder 1.5 g TDS** (should not be given if patient has pre-existing renal impairment or hyperkalemia).
  - Start Magnesium supplementation with **Tab MMT 250 mg BD** or **Syr MgSO4 5 ml OD.**

- **PRE –MEDICATION**
  - Given 30 minutes prior to Ampho B for 1st 3 doses or 1st week
  - IF NO REACTION, OMIT!
  - Types of pre-meds based on type of infusion-related reaction:
    - **Fever**: Hydrocortisone 25 – 50 mg IV/Infusate (mixed with reconstituted Ampho B preparation) OR T Paracetamol 1 g STAT.
    - **Nausea/Vomiting**: IV Promethazine 12.5mg STAT/ Syr Diphenhydramine 10-15 ml STAT.
    - **Rigors**: IV Pethidine 25 – 50 mg PRN. If rigors is predicted, add Pethidine 20 – 30 mins before infusion.
    - **Thrombophlebitis**: Add 1000 unit Heparin for infusion through peripheral line OR add into reconstituted Ampho B solution to prevent thrombophlebitis.

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BACK

AMPHOTERICIN B LIPOSOMAL CHART

NAME :	**SB NO :**
BODY WEIGHT :	**DOSE :**

NO	DATE	TIME STARTED	TIME COMPLETED	DOSE	GIVEN BY

MONITORING AMPHOTERICIN B-RELATED TOXICITY

- Monitor RP and electrolyte EOD.
- Monitor Hb weekly.
- Monitor I/O chart daily.

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Ganciclovir Protocol

INDICATION & DOSE:

- Indication: Treatment of cytomegalovirus (CMV) disease in immunocompromised patients
- Treatment Dose: 5 mg/kg BD for 14 - 21 days
- Maintenance Therapy/Secondary Prophylaxis Dose: 5 mg/kg OD till VL suppressed & CD4 > 100 cells/µL
  (*In RVD patients, maintenance therapy is generally not necessary; ART offers best hope for prevention of relapses*)

HANDLING

⚠ **Caution!** Ganciclovir is a **potential teratogen and carcinogen**, thus requires special precaution during handling.

- Use **full PPE** when reconstituting Ganciclovir in the treatment room.
- Wear **latex gloves** for drug administration.
- Avoid inhalation or direct contact of the powder contained in the vials or direct contact of the reconstituted solution with the skin or mucous membranes.
- For contact with the skin or mucous membranes, **wash thoroughly with soap and water for at least 15 mins.**
- For eye exposure, **rinse thoroughly with plain water.**

RECONSTITUTION & DILUTION

- Reconstitute 1 vial with 10 ml sterile WFI. Shake the vial to dissolve the drug & inspect for the presence of particles.
  (do not use bacteriostatic WFI containing parabens. It is incompatible with Ganciclovir and may cause precipitation)
- Further dilute the required dose with 100 mL NS/D5W/Ringer's/lactated Ringer's (Max conc: 10 mg/mL)

ADMINISTRATION

- **DO NOT ADMINISTER BY RAPID OR BOLUS IV INJECTION, IM OR SC.**
- Administer via IV Infusion - Infuse over 1 hour

STABILITY

- After reconstitution: To be used immediately. Reconstituted solution MUST NOT BE REFRIGERATED.
- After dilution: 24 hours (FRIDGE). Put the bottle in a sealed plastic bag & label it before refrigeration.

DISPOSAL

- All syringes, unused meds or tubing should be disposed into the **sharps bin** (smallest size)
- Contaminated sharps bin should be disposed of once it's full.
- The bin should be covered with **two (2) clinical waste bags** and **sealed with a plastic tag** (to request from Radicare).
- Inform Radicare to handle the waste in a manner **similar to handling cytotoxic drugs** when disposing of these meds.

ADVERESE EFFECTS & MONITORING:

- Watch out for neutropenia (reversible), thrombocytopenia & anaemia
- Monitor **FBC** 2-3 times/week
- Discontinue Ganciclovir or add G-CSF (Neupogen/Filgrastim) if Absolute Neutrophil Count (**ANC**) drops to < 0.5 x 10^9/L (Dose reduction should be avoided due to concerns for antiviral resistance).
- G-CSF (Neupogen/Filgrastim) dose: 5 mcg/kg SC or IV OD [300 mcg = 30 mu].
- Discontinue Ganciclovir if **platelet** < 25 x 10^9/L or consider platelet support if platelet < 20 x 10^9/L
- Consider discontinuing Ganciclovir if **Hb** < 8 g/dL

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References

Bactrim Desensitization Protocol:
Adapted from:

1. WHO Guidelines on Co-Trimoxazole Prophylaxis for HIV-Related Infections Among Children, Adolescent and Adults 2006

Penicillin Desensitization Protocol:
Adapted from:

1. Sanford Guide to Antimicrobial Therapy. (Jun, 2020)
2. NB Provincial Health Authorities Anti-Infective Stewardship Committee. Antimicrobial Desensitization. (2019). Accessed from: https://en.horizonnb.ca/media/1036904/antimicrobial_desensitization.pdf

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Reference:

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3. HSgB DIAMS – RVD & OI Quick Guide
4. HSgB Drug Dilution by PRIC