

Information for General Practitioners

Management of community-associated MRSA (CA-MRSA)

January 2011

The specific CA-MRSA strain acquired by the patient notified to you for follow-up, is known to possess unique virulence factors such as Panton-Valentine leukocidin (PVL). CA-MRSA strains primarily cause purulent skin and soft tissue infections that often progress rapidly, recur and spread easily within households and close groups.

Key Points

- **Antimicrobial therapy**
 - CA-MRSA strains are resistant to all beta-lactam antibiotics including flucloxacillin, augmentin and all cephalosporins
 - refer overleaf for antibiotic therapy recommendations.
- **Appropriate treatment of CA-MRSA infections**
 - incision and drainage, whenever possible, as a priority
 - modify antibiotics according to susceptibilities
 - review patient to ensure the infection is resolving.
- **Decolonisation treatment**
 - arrange decolonisation treatment for the case to reduce their risk of recurrent infections and spreading the infection to others
 - obtain a history of recurrent infections occurring in the case and their household contacts
 - decolonisation of household contacts is recommended if they report recurrent infections in the household, are at increased risk of acquiring infections (e.g. immunocompromised people), or are a potential risk to others (e.g. healthcare workers or carers)
 - consider referral to an Infectious Diseases Physician or Clinical Microbiologist for cases and/or families with recurrent infections following decolonisation treatment.
- **Education**
 - instruct the patient to return promptly if the infection worsens or if infections recur
 - instruct patient to cover wounds at all times and reinforce hygiene to prevent spread
 - information and resources are at: <http://www.public.health.wa.gov.au/3/896/3/camrsa.pm>

Clinical evaluation of severity of infection and management

Mild Disease	Moderate Disease	Severe Disease
<ul style="list-style-type: none"> ▪ No systemic symptoms ▪ Patient not unwell 	<ul style="list-style-type: none"> ▪ Nil or minimal systemic symptoms 	<ul style="list-style-type: none"> ▪ Systemic symptoms present ▪ Patient unwell
Types of Infections		
<ul style="list-style-type: none"> ▪ Small abscesses ▪ Boils ▪ Infected wounds 	<ul style="list-style-type: none"> ▪ Cellulitis ▪ Moderate sized abscesses 	<ul style="list-style-type: none"> ▪ Extensive cellulitis ▪ Large / multiple / deep abscesses ▪ Osteomyelitis / septic arthritis ▪ Necrotising pneumonia / fasciitis.
Management		
<p>Incision and drainage may be sufficient</p> <ul style="list-style-type: none"> ▪ Cover draining lesions with dressing ▪ Antibiotics required if significant co-morbidities or unable to drain abscess ▪ Close follow up recommended. 	<ul style="list-style-type: none"> ▪ Incision and drainage recommended ▪ Oral antibiotic therapy is indicated ▪ Obtain blood cultures if febrile ▪ Close follow up recommended ▪ May require management in hospital and consultation with an Infectious Diseases Physician or Clinical Microbiologist. 	<ul style="list-style-type: none"> ▪ Likely to require management in hospital, intravenous therapy and consultation with an Infectious Diseases Physician or Clinical Microbiologist.



Antibiotic therapy recommendations for CA-MRSA infections

Note: beta-lactam antibiotics e.g. flucloxacillin, augmentin and cephalexin are not effective.

ANTIBIOTIC THERAPY

- The decision to prescribe antibiotics requires clinical judgement and an assessment of the severity of the infection. The choice of antibiotics is dependent on the age, allergy history and co-morbidities of the patient.
- It is strongly advised that you discuss with an Infectious Diseases Physician/Clinical Microbiologist if:
 - the patients symptoms are worsening despite therapy
 - the patient has multiple drug allergies
 - the isolate is resistant to suggested antibiotic agents
 - the patient is a neonate (< 2 months).

ADULTS

In order of preference	Antibiotic	Dose	Pregnancy Category #
First line	Clindamycin ^Δ	450mg tds orally for 7 days	A
Second line	Trimethoprim with sulphamethoxazole	160+800mg bd orally for 7 days	C
Third line	Doxycycline	100mg bd orally for 7 days	D

CHILDREN

In order of preference	Antibiotic	Dose
First line	Trimethoprim with sulphamethoxazole	4+20mg/kg (up to max 160+800mg) per dose orally, 12 hourly for 7 days Tablets / oral suspension available on PBS (See Note 1 below)
Second line	Clindamycin ^Δ	10mg/kg (up to max 450mg) per dose orally, 8 hourly for 7 days *(suitable for older children if able to swallow 150mg capsule) Oral suspension not on PBS list nor readily available off PBS
Third line	Doxycycline	ONLY Suitable for Children >8 years: 2.5mg/kg (up to max 100mg) orally, 12 hourly for 7 days Tablets and capsules available on PBS

Therapeutic Guidelines Antibiotic Version 14,

Δ Clindamycin should NOT be used for MRSA isolates RESISTANT to erythromycin and related macrolide class antibiotics (azithromycin, clarithromycin, roxithromycin). PBS restricted benefit listing for clindamycin courses of ≤24 150mg capsules. PBS authority prescription required for courses >25 150mg capsules (Indication: gram-positive coccal infections where these cannot be safely and effectively treated with penicillin).

Note 1: Where trimethoprim with sulphamethoxazole is not appropriate (MRSA is resistant or patient allergy) and second line agent clindamycin capsules cannot be swallowed or taken, consider use of PBS listed erythromycin ethyl succinate oral suspensions, provided MRSA sensitivity to erythromycin has been demonstrated.

Note 2: Neonates (<2 months) requiring antibiotic therapy should be discussed with relevant specialist colleagues with paediatric expertise.

Note 3: Group A streptococci (GAS) are another common cause of skin and soft tissue infection, particularly cellulitis and impetigo. If GAS infection is suspected, therapy should include an agent active against this organism (beta-lactam or clindamycin). Tetracyclines and Trimethoprim- sulphamethoxazole, although active against MRSA, are not recommended treatments for suspected GAS.

