RHD Australia

ADMINISTERING BPG

INTRODUCTION

To prevent acute rheumatic fever (ARF) recurrence and to avoid and or minimise rheumatic heart disease (RHD), secondary prophylaxis with penicillin is required to stop infections with Group A Streptococcal, commonly referred to as 'Strep A'.

Secondary prophylaxis is commonly given as an intramuscular injection called benzathine penicillin g (BPG). It is the consistent and regular administration of antibiotics to people who have had ARF or RHD, to prevent future group a strep infections and the recurrence of ARF. BPG injections should be delivered no later than 28 days after the last injection.

This treatment is usually required throughout a person's life, a regular and ongoing treatment that is painful. As a clinician it is important to provide a culturally safe service and keep up to date with new approaches to manage pain, fear and distress.

Receiving secondary prophylaxis on time, every time is the best safeguard against a recurrence of ARF. BPG injections can be given before the 28 day due date, it is important that the interval between injection doses do not exceed 28 days.

IM Injection sites and methods

The choice of injection site depends on the clinician's experience, the patient's preference and the patients age and weight and your workplace clinical practice policy. As with all medications, clinicians should check and confirm the medicines six rights are consistent with the patient's prescription and local protocols for administration.

There are three sites for BPG administration: Ventrogluteal, Dorsogluteal and Vastus Lateralis.

VENTROGLUTEAL SITE (VG)

- The ventrogluteal site is emerging as a preferred site for intramuscular injection

The ventrogluteal site contains a greater thickness of muscle, a narrower layer of fat, and is relatively free of large nerves and blood vessels which can reduce the potential for significant injury or inadvertent injection into subcutaneous tissue.

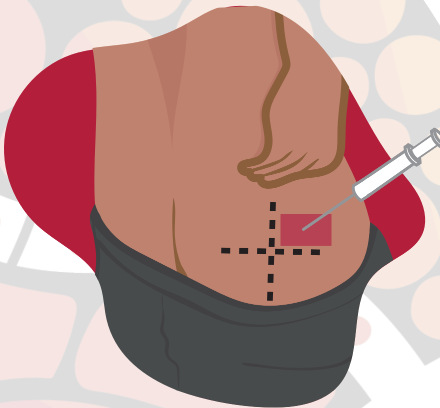
Ventrogluteal injection method

1. Place the patient in a side-lying position
2. Using your right hand on the patients left hip, or left hand on right hip
3. With the palm of your hand, locate the greater trochanter of the femur
4. Place your index finger towards the front or anterior superior iliac spine and fan the middle finger as far along the iliac crest as you can reach
5. The injection site is in the middle of the triangle between the middle and index fingers
6. Remove your fingers prior to inserting the needle

**** The thumb should always be pointed toward the front of the leg****

DORSOGLUTEAL (DG)

- The dorsogluteal site is located at the upper out quadrant of the buttock
- It is associated with risk of sciatic nerve injury, and this site must be used with caution



1. Place the patient in a prone (face down) position or lying on the side Some patients may prefer standing up. Patients with valve disease at risk of cardiac decompensation must lie down
2. The site of injection can be identified by either:
   a) Dividing the buttock into four quadrants, selecting the upper outer quadrant
   b) Drawing an imaginary diagonal line from the posterior superior iliac spine to the greater trochanter
   From the middle of the line move up and out

VASTUS LATERALIS (VL)

- The vastus lateralis site is the middle third of the anterolateral thigh
- Is an acceptable site for BPG injection

1. Place the patient in a supine or sitting position. Patients with valve disease a risk of cardiac decompensation must lie down.
2. Place one hand on patients thigh against greater trochanter, the other hand against the lateral femoral condyle near the knee.
3. Visualise a rectangle between the hands across the thigh

STRATEGIES FOR MANAGING INJECTION PAIN, FEAR AND DISTRESS

Patients of all ages should have control over how and where they receive their injection. Allowing patient choice enhances a person's sense of control and wellbeing. Injections should be delivered by culturally competent health care staff in a culturally safe environment.

It is vital to make each injection procedure as positive for the patient and family as possible, as a health professional it is important to take your time and promote a calm environment, especially for a new patient.

- Providing a patient-focussed, culturally safe environment
- Respect for the patient's preference for pharmacological pain management strategies and site of injection
- Family or involving family support person during injection procedures
- Minimal waiting time of injections
- Best practice injection technique
- Allowing skin swabbed with alcohol to dry before injection
- Injecting slowly
- Distraction during injection

The gate theory of pain proposes that a patient's interpretation of pain can be interrupted by applying direct stimulus at or near the injection site

- The use of hot or cool packs prior to injection
- Use of vibration such as the Buzzy ®
- Use of Shot Blocker

There are several pharmacological strategies for managing injection pain and distress and should be discussed with patients and their families and regularly reviewed.

- Oral paracetamol prior to injection and appropriate time intervals afterwards as required
- Topical Anaesthetic, use according to product information leaflet
- Lidocaine injected with BPG, refer to local policy and procedure

Reducing stress and inconvenience is important in facilitating injection administration.

- Understand and address the reason (s) why patients do not attend the clinic regularly
- If possible, provide transport services and explore outreach opportunities
- Recall for injection from the end of the 3rd week after their previous injection so that the next injection is given no more than four weeks, or 28 days later
- Provide ample and regular education and involve the patient's family and support group
  Education is a patient's right and a healthcare providers responsibility

Feeling cared for, nurtured, and having a sense of belonging to a health service and feeling valued may even be more significant than feeling no pain.