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By Post
17 January 2017

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Dear Diana Lee

Advice on Intramuscular Injection in the Buttock Region

The Medical Council of Hong Kong ("the Council") has earlier set up a *"Task Force of the Medical Council on the Proper Administration of Intramuscular Injection in the Gluteal Region"* comprising members from the Council and the two local medical schools.

Having reviewed the current scientific literature, the Task Force has come up with a piece of advice on intramuscular injection in the buttock region, which has been endorsed by the Council and promulgated in the Council's Newsletter Issue No. 23 of December 2016.

I now attach a copy of the said advice for reference by fellows in the Nursing Council, please.

Yours sincerely,

(Prof. Joseph LAU, SBS)
Chairman,
The Medical Council of Hong Kong

Encl.

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Advice / Information for All Registered Medical Practitioners

Intramuscular injection in the buttock region

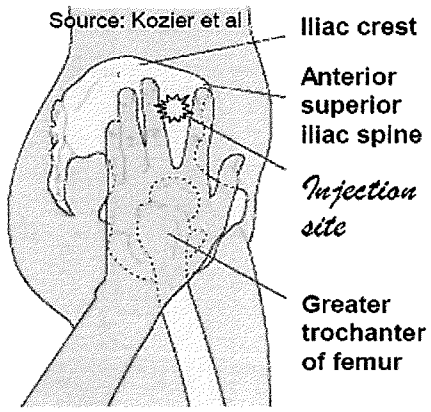
While intramuscular ("IM") injection in the buttock region is a commonplace procedure, improper administration of it may lead to sciatic nerve injury with devastating consequences, ranging from transient sensory disturbance to permanent paralysis and numbness. Over 20% reported cases of injury of IM injection involved damage to the sciatic nerve. Based on the latest literature, the Medical Council has recently reviewed the general principle in administering IM injection in the buttock region, and would like to promulgate the following advice to members of the profession to supersede the one published in the Newsletter Issue No. 16 of August 2009.

Historically, the dorsogluteal site (commonly known as the upper outer quadrant of the buttock) was the main site for IM injection. However, it risks damaging the sciatic nerve given the anatomical proximity of the injection to the sciatic nerve, particularly in young children under 3 years old. Vastus lateralis should be used for IM injection in infants or deltoid region in older children instead. For adults, there is a wide agreement in the literature that the ventrogluteal site is preferred to the dorsogluteal site for IM injection as it is farther away from the sciatic nerve. Moreover, it has a thinner layer of subcutaneous fat which makes inadvertent subcutaneous injection less likely particularly in obese adults. As such, the Medical Council would recommend the use of the ventrogluteal site given its anatomic advantages.

The patient should lie laterally with the femur rotated internally for ventrogluteal IM injection. The bony landmarks should be accurately identified by palpation rather than eyeballing, as illustrated in the figure on the right for ventrogluteal IM injection. The standing position is not recommended as it has a high risk of

Place your palm over the greater trochanter to form a 'V' with your middle finger (left hand) toward the iliac crest and index finger toward the anterior superior iliac spine.

Inject within the center of the 'V' below the iliac crest.



inaccurately identifying the bony landmarks. The needle should be injected at a 90 degree angle with the skin stretching taut, as it can maximize the depth of penetration into the muscle, making inadvertent subcutaneous injection less likely.

The above is only advice on the general principle in administering IM injection in the buttock region, and is by no means exhaustive. Doctors who administer the injection should choose the site based on good clinical judgment using the best evidence available and on individualized client assessment. They should continuously update their knowledge and skill on administration of intramuscular injection.

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