ADMINISTRATION OF VENTROGLUTEAL INTRAMUSCULAR INJECTION

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This education material has been created as a part of our thesis. The aim has been to create simple and functional education material on how to administer a ventrogluteal intramuscular injection.
The history of ventrogluteal injection

- Hochsetter was the first who recommended the use of ventrogluteal injection in 1954
- Ventrogluteal injection has been presented in Finnish literature for the first time in 2006
- Ventrogluteal injecting is not used much in Finland while overseas it is commonly used.
General information about ventrogluteal injection:

- It is much safer than dorsogluteal (= buttock side)
- The right place of injection is easy to find, because it is based on anatomic landmarks.
- Injection site is painless
- Less irritation to tissues, less complications, for example boils.
- Can be injected safely for children over 7 months.
- VG (ventrogluteal) injection cannot be used for vaccine administration -> There is not enough researched data available!
<table>
<thead>
<tr>
<th>Ventrogluteal</th>
<th>Dorsogluteal</th>
</tr>
</thead>
<tbody>
<tr>
<td>• there are no nerves or big veins in injection site.</td>
<td>• there are nerves and big veins</td>
</tr>
<tr>
<td>• adipose tissue is low</td>
<td>• adipose tissue is high</td>
</tr>
<tr>
<td>• Injection site is not sensitive to pain</td>
<td>• Injection site is sensitive to pain</td>
</tr>
<tr>
<td>• can be injected when patient is sitting, standing or lying down</td>
<td>• can be injected when patient is standing or lying on stomach</td>
</tr>
</tbody>
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Injection site

- VG is injected to the middle and small gluteus
- Injection site is in the middle of triangle formed by femur trochanter, anterior iliac crest and iliac ridge
- The easiest way to find injection site is done by palpating anterior iliac crest and iliac ridge. Then index finger is placed on top of anterior iliac crest. (left hand is used when injecting right side and vice versa)
- Next slide the hand down so that greater trochanter is inside the palm. (hold the index finger pointing towards anterior iliac crest all the time)
- After this the middle finger is placed towards iliac ridge (patient ear, the body center line), so that index finger and middle finger form letter V
- Injection site is in the middle of letter V.
Photos of how to administer a ventrogluteal intramuscular injection
Equipment needed for injection. Take sufficiently long needle, at least 40mm. Gather all equipment ready before washing hands or preparing injectable medicine. Remove all jewellery.
After all equipment are ready, wash your hands carefully. Dry your hands to a paper towel. Close the tap with a paper towel or an elbow.
Use hand disinfectant. Remember to rub your hands carefully as long as your hands are dry. Remember not to shake your hands dry!
After hand disinfection put on clean disposable gloves.
Once you have gloves on pull the medicine into the syringe. (3ml-5ml can be injected). Remember to change the needle after pulling. Use a filter needle when pulling medicine from glass ampoule.
Start finding the injection site by palpating the anterior iliac crest and iliac ridge. After this place your index finger on top of anterior iliac crest.
Keep your index finger towards anterior iliac crest and slide your hand down so that trochanter is inside your palm.
Next place your middle finger pointing towards patient’s iliac ridge. You can also imagine to place your middle finger towards patient’s ear and body center line. Injection site is in the middle of V letter formed by the fore and middle finger.
Injection site
Hochsetter’s triangle, consists of anatomic landmarks. Injection site is in the middle.
Disinfect the injection site. Keep your hand still in the injection site to avoid losing it. Let disinfectant dry before injecting.
Hold the syringe like a pencil. Insert the needle in 90-degree angle into the injection site. Remember to tell when injecting. Keep yourself calm and secure. Aspirate by pulling the needle piston before injecting medicine. By doing this you will be sure, that needle is not in the vein and medicine goes to the right place, muscle. Remember to use Z track technique when injecting, so medicine will stay in muscle.
Injection site for kids is easier to locate by palpating with fingers. Use index finger to find trochanter, bend middle finger/ring finger to the highest place of iliac. You will feel the front part of iliac under your palm. Injection site is in the middle of fore and middle finger. You can also turn your hand downward same way as injecting adults.
Put the used needle in to sharps collection container. Do not cap the needle unless necessary.
Dorsogluteal injection has long been practiced. Therefore, many nurses are using it for intramuscular injections, although there is no scientific proof about its safety.

Instead of ventrogluteal injection there is scientific proof and researched data which shows it to be safe for intramuscular injection.

You as a healthcare professional or healthcare student have an opportunity to affect attitudes at your work and bring knowledge about ventrogluteal injection.
TEST YOUR KNOWLEDGE

1. Ventrogluteal injection is safer than dorsogluteal?
2. There are no big veins or nerves in the site of ventrogluteal injection?
3. Ventrogluteal injection is used a lot in Finland?
4. VG is injected into big gluteus?
5. DG injection can be given when the patient is sitting?
6. Right length of the needle is 50mm in VG?
7. VG injection is recommended when vaccinating children?
8. VG is injected in 90-degree angle?
9. The VG site of injection is not sensitive to pain?
10. Dorsogluteal injection has long been practiced?
ANSWERS:

1. right
2. right
3. wrong, little scientific proof in Finland
4. wrong, inject to the middle and small gluteus the greater trochanter
5. wrong, lying down or standing
6. wrong, 40mm
7. wrong, there is not enough researched data and under 7 months old child’s muscles are not developed yet.
8. right
9. right
10. right
Sources/ more to read and watch


Karttunen m. 2012. lihaksensisäinen injektio ventroglutealiseesti näyttöön perustuen. spirium 2/2012.


http://www.youtube.com/watch?v=Ip2hbl_k_vc

http://www.youtube.com/watch?v=tKM7yvaJDms