

Fast Facts

- Low molecular weight (LMW) heparin is the anticoagulant of choice for most pediatric patients.
- Advantages include:
 - Minimal monitoring requirements.
 - Reduced interference of other drugs and diet.
 - Reduced heparin induced thrombocytopenia (HIT) risk vs. heparin.
 - Reduced risk of osteoporosis with long term use vs. heparin.
- Predictability of the anticoagulant effect is less than in adults, presumably due to altered plasma binding.
- Available products at CMH:
 - Enoxaparin (Lovenox®)
 - Dalteparin (Fragmin®) with hematology consult.
- Enoxaparin half-life is 6 hours.
- Enoxaparin has 110 anti-factor Xa units/mg.
- LMW heparin usually does not prolong the PTT.
- LMW heparin levels are followed using a LMW heparin level based on an anti-factor Xa methodology. LMW heparin levels should be ordered to monitor the effects of LMW heparin.
- LMW heparin is also referred to as fractionated heparin in many references.
- Do not confuse the heparin LMW heparin level with that for regular heparin.

Antithrombin III (AT III) is a cofactor for activity of the LMW heparins and therefore inadequate serum AT III might be a cause for poor response to LMW heparin.

References:

David, M., et al. Heparin and LMWH in Children. Thrombosis Interest Group of Canada. January 2007. <http://www.tigc.org/eguidelines/heparinchild07.htm>. Accessed 11/15/08.

Lexi-Drugs Online/Pediatric Lexi-Drugs Online, Enoxaparin,
<http://online.lexi.com/crlsql/servlet/crlonline>, Copyright © 1978-2008 Lexi-Comp, Inc,
Hudson, OH 44236

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Roach ES. Golomb MR. Adams R. Biller J. Daniels S. Deveber G. Ferriero D. Jones BV. Kirkham FJ. Scott RM. Smith ER. American Heart Association Stroke Council. Council on Cardiovascular Disease in the Young. Management of stroke in infants and children: a scientific statement from a Special Writing Group of the American Heart Association Stroke Council and the Council on Cardiovascular Disease in the Young. [Journal Article] Stroke. 39(9):2644-91, 2008 Sep.

These guidelines do not establish a standard of care to be followed in every case. It is recognized that each case is different and those individuals involved in providing health care are expected to use their judgment in determining what is in the best interests of the patient based on the circumstances existing at the time. It is impossible to anticipate all possible situations that may exist and to prepare guidelines for each. Accordingly these guidelines should guide care with the understanding that departures from them may be required at times.

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