PT-INR LEVELS

Nurses in every setting, but especially Cardiology, are familiar with the PT/INR. This test, in conjunction with other variables, help the physician determine the proper amount of anticoagulant a patient should take.

PT stands for prothrombin time. It is a measure of how quickly blood clots. A PT test may also be called an INR test, which stands for International Normalized Ratio. INR allows results to be compared to others regardless of where the result was drawn or tested. So, in simple terms, the INR is just the standard unit used to report the result of a PT test.

Did you know that an individual whose blood clots normally and who is not on anticoagulation should have an INR of approximately 1? The higher the INR level, the longer it takes blood to coagulate or clot. On the other end of the continuum, as an INR level decreases so does the risk for developing clots.

Is there an ideal range for an INR level? The ideal INR range varies. Factors such as the reason for taking anticoagulants, other medical conditions, tobacco or alcohol use, exercise regimen and dietary concerns including use of herbal medications must be taken into consideration when the physician is determining a patient's ideal range. The most common INR target range for someone on an anticoagulant is between 2.0 and 4.0.

INRs of 5 or more typically are avoided because the risk of bleeding increases significantly at INRs above 5.

PT/INR too high- If a PT/INR test result is too high, it means that the persons' blood is clotting too slowly, and is at risk of bleeding; their dose of warfarin is too high. On the other hand, if the PT/INR test result is too low, their dose of warfarin may not be enough to protect the blood from clotting.

Symptoms of high INR: Patients may complain of easy bruising or small cuts taking longer to clot than normal. Patients also may experience frequent nosebleeds or their gums may bleed when brushing their teeth.

Treatment of high INR- hold dose of anticoagulant, monitor PT/INR and recalculate dose. for moderate to severe bleeding the physician may consider giving fresh frozen plasma (FFP) with Vitamin K infusion.

PT/INR too low- A low INR means indicates the patient's anticoagulation dose is too low and their blood is clotting too quickly putting them at risk for a blood clot.

Symptoms of a low INR- Patients may not always know if their INR levels are too low until they experience symptoms of a clot, either DVT, PE or CVA. These symptoms may include swelling, redness, tenderness and/or warmth in one leg or one area of one leg and generalized leg pain, difficulty breathing, chest pain, shortness of breath, breathing quickly, dizziness,

increased heart rate or low blood pressure, partial or total paralysis, inability to speak or swallow, sudden and severe headache, vision changes, loss of coordination or difficulty walking, confusion, facial drooping, dizziness, nausea or vomiting.

Treatment of Low PT/INR- Treatment of a low INR level with symptoms of a DVT, PE or CVA requires immediate evaluation by a physician. If the patient is asymptomatic and the low level is picked up on a routine lab draw, then the treatment can range from simply monitoring the level if slightly low, increasing the patient's oral intake of Vitamin K in diet or increasing the dose of the patient's anticoagulant.

Sources:

Medlineplus.gov

inrtracker.com

www.kfreedaily.com