August 2023

Lipase to Replace Amylase Testing

Effective 7th August 2023 all Pathlab sites will be offering Lipase as a better alternative to Amylase.

Amylase and lipase are digestive enzymes normally released from the acinar cells of the exocrine pancreas into the duodenum. Following injury to the pancreas, these enzymes are released into the circulation and cause a subsequent increase in their measured activity. Both amylase and lipase are low-molecular weight enzymes (40-50 kDa) and are filtered by the kidneys.

Amylase is filtered but not reabsorbed and is the only plasma enzyme present in urine. Lipase is also filtered but reabsorbed by the kidneys and therefore not detectable in urine.

Most of the amylase present in plasma is of salivary gland or pancreatic origin but may also originate from testes, ovaries, fallopian tubes muscle, lungs, and adipose tissue. Macroamylase is present in 1% of the population and may cause an elevated amylase.

The RCPA Pathology Testing in the Emergency Department guidelines referrer to Lipase when investigating severe upper GI pain. Lipase has been in use for more than 10 years at Waikato ED.

Lipase is more specific (80 – 100%) than Amylase (20 – 60%) for pancreatitis. Sensitivity is similar early after onset of pancreatitis, but amylase levels decrease faster than lipase levels. **Lipase offers better performance than Amylase**. Replacing Amylase with Lipase may mean less diagnostic confusion and fewer unnecessary workups for a patient with a nonspecific increase in amylase activity.

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CLINICAL UPDATE

Please ensure all personnel of your institution receive a copy of this clinical update.