Letters to the Editor should be typed doubled-spaced (including references) with conventional margins. The overall length is limited to five manuscript pages, including not more than one figure or one table.

Serum Amylase and Lipase Values in Acute Renal Failure

To the Editor:

Acute renal failure (ARF) frequently is mentioned when nonpancreatic causes of increased amylase in serum are considered (1, 2), and it is questioned if lipase values could be helpful in properly identifying the pancreatic insult. In view of recent investigations on renal handling of pancreatic lipase (3) we decided to investigate this question systematically. In 40 consecutive patients, 24 men and 16 women, mean age 61.4 (range ± 15.1) years, admitted to the hospital with ARF, we measured amylase and lipase with use of 1,4-α-D-glucanohydrolase (EC 3.2.1.1; Boehringer Mannheim) as standard for α-amylase and triacylglycerol acylhydrolase (EC 3.1.1.3; Boehringer Mannheim) for lipase.

Serum creatinine concentration on admission ranged from 217 to 1282 μmol/L (mean 624, SD 277 μmol/L). The causes of ARF were prerenal (four cases), postrenal (seven cases), and intrinsic renal disease (29 cases), as determined by the clinical context and urinary indices.

Amylase values exceeding twice the upper limit of normal (means ± 2.5 SD) were found in 19 cases (48%), hyperlipasemia in 26 cases (65%). In three patients with combined ARF and pancreatitis, amylasemia was 23-, 39-, and 11-fold the upper limit; lipasemia was respectively 2.2-, 5.3-, and 3.5-fold. Mean amylase and lipase values were respectively 4.6 ± 3.1-fold and 3.5 ± 3.9-fold the upper limit in the patients with no clinical evidence of pancreatitis.

We saw no correlation with age, sex, cause of ARF, or initial creatinine value. The mortality rate, however, was 46% in patients with increased amylasemia and lipasemia vs 17% in the group with normal values (p < 0.05). We conclude that, in ARF, only amylase values of more than 10-fold the upper limit may indicate pancreatic injury, and that hyperlipasemia has no diagnostic value but only a prognostic importance in this setting.

References

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Crystals in Bone Marrow

To the Editor:

Carter et al. (1) describe a case of crystal formation in bone marrow. They state that the acicular, negatively birefringent crystals are not monosodium urate monohydrate. It is not clear if this statement is based on a negative reaction with uricase or the x-ray powder diffraction data. They state that the uricosuric results are diffcult to interpret. The x-ray data presented would not rule out a polymorphic or twinned form of monosodium urate monohydrate or monosodium urate with a different number of water molecules of crystallization. However, twinning of the crystals would probably have been detected during examination with a polarizing microscope. Polymorphism is a common phenomenon and increases the risk of misidentification of crystals based on morphology or birefringence.

If the crystals are an exogenous drug or drug metabolite, a search of more extensive x-ray powder diffraction files such as those of the American Society for Testing and Materials (ASTM) might allow identification of the crystals. For this purpose it would be useful to know the relative intensities of the strongest lines and for a correction of the d spacings in their Table 1. Lines 4 and 5 are shown with identical d spacings of 0.3629 nm and would not be resolved.

If there is insufficient material for destructive techniques of identification, recrystallization of larger crystals for nondestructive single-crystal x-ray diffraction studies would be advantageous.

Reference

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Technique for Handling Fragile or Large DALT Gels

To the Editor:

A way to avoid tears in fragile or large DALT gels is to use sheets of 006-gauge Mylar to support the gels at any transfer point. The Mylar is cut to a size such that it overlaps the gel by about 2.5 cm on all sides. It is advantageous to mark the edges of the sheet distinctively with marking ink—e.g., wobbly lines near one edge, straight on another. When the gel holders are on the unloading lecturn, and the plates have been separated, place the Mylar sheet against the gel. Close the plates, lay them flat on the bench, with the sheet beneath the gel, and carefully begin separating the gel from the glass. It adheres to the Mylar, and then may be picked up with complete assurance that the gel will not tear. If numbers in the gel face toward the sheet, simply place the gel upside down in the fixative, the gel instantly peels away from the sheet with the numbers up. If the numbers originally face away from the sheet, position the sheet in fixative with the numbers up and then, with rapid small back-and-forth motions and a gentle push, slide the sheet away and free the gel.

This procedure is effective with 7.5% gels, 19 × 19 cm, and surely would be useful for still softer and even for "gi-