

The Other Side of L-Asparaginase

We read the article on diabetic ketoacidosis (DKA) with L-asparaginase therapy by Mondal, *et al.* with interest [1]. They have reported two children with acute lymphoblastic leukemia (ALL) who developed DKA after treatment with L-asparaginase. We report our experience with L-asparaginase during treatment of children with ALL treated from 2005 to Aug 2011 on UKALL-XI protocol. Out of 235 patients of ALL, nine children had pancreatic complications- three DKA, three hyperglycemia and three acute pancreatitis. All of them recovered.

Thrombosis, another well described complication with L-Asparaginase [2], was seen in 14 (5.96 %) children. Ten happened during the induction phase and four in re-induction phase of therapy. Twelve patients had seizure and MRI revealed superior sagittal thrombosis in five and infarcts in seven patients. Two patients developed lower limb thrombosis. Median fibrinogen in these 14 patients was 1 g/L (range 0.9 to 1.4 g/L). Two patients expired during this episode and one went into vegetative state [3].

Fourteen patients developed hypersensitivity, four developed localized reaction and ten had generalized

hypersensitivity reaction requiring change of medication.

We suggest children undergoing L-asparaginase therapy should not only have regular blood sugar monitoring and screening for DKA but also have serum fibrinogen monitoring for prevention and early imaging for detection of thrombosis. In case of systemic allergic reaction, change to alternative preparation should be considered.

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