Asparaginase Toxicities

Identification and management in patients with acute lymphoblastic leukemia

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BACKGROUND: Acute lymphoblastic leukemia (ALL) is a common cancer in children, and outcomes have greatly improved because of the refinement of multiagent chemotherapy regimens that include intensified asparaginase therapy. Asparaginase, a cornerstone of modern pediatric chemotherapy regimens for ALL and asparaginase-containing protocols, is increasingly used in adolescent and adult patients historically treated with asparaginase-free regimens.

OBJECTIVES: This article is an overview of commonly encountered asparaginase-associated toxicities and offers recommendations for treatment management.

METHODS: A literature review was conducted, reviewing asparaginase and common toxicities, specifically hypersensitivity, pancreatitis, thrombosis, hyperbilirubinemia, and hyperglycemia.

FINDINGS: The rapid identification and management of common asparaginase-associated adverse events can reduce symptom severity and limit potential interruptions to therapy, possibly improving outcomes.

KEYWORDS: acute lymphoblastic leukemia; toxicities; asparaginase, hypersensitivity

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