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Alloimmunization in Egyptian children with transfusion-dependent B thalassemia: A major challenge

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Aim: B thalassemia is a common health issue in Egypt. However, few national studies were carried out to address the problem of alloimmunization and common alloantibodies in multi-transfused thalassemia patients. This study was designed to address those issues with the aim of optimizing the management in those patients.

Methods: The study included 281 multi-transfused B thalassemia Egyptian children from Delta region. Antibody screening and identification were carried out using column agglutination technology.

Results: 67 patients (23.8%) were found to have alloantibodies. Anti-kell and anti E were the most commonly encountered antibodies seen in 37.3% and 34.3% of patients, respectively. There was no significant difference in alloimmunization rate between males and females or between patients with thalassemia major and intermediate.

Conclusion: Alloimmunization is seen in nearly quarter of multi-transfused B thalassemia patients. Development of RBCs antibodies is multifactorial; however, a significant proportion of those can be prevented if pre-transfusion testing involved cross matching for the most immunogenic minor RBCs antigens. Although this would increase the upfront cost, the long term cost is likely to fall and is likely to improve patients' management.

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Association of xenobiotic metabolizing enzymes gene polymorphism with hepatocellular carcinoma in Egyptian patients

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Background & Aim: Xenobiotics are metabolized by a large number of metabolizing enzymes, genetic polymorphism of their genes are suggested as modifiers of cancer risk. The present study aimed to investigate the association between xenobiotic metabolizing enzymes [cytochrome P450 (CYP), N-acetyl transferase 2 (NAT2) and UDP-glucuronosyltransferase (UGT)] gene polymorphism with the risk of HCC in patients with chronic HCV-induced cirrhosis.

Methods: This study was performed on 354 subjects, divided into three groups, (group I: 150 hepatocellular carcinoma (HCC) patients, group II: 104 patients with HCV-related chronic liver disease (CLD) and group III: 100 apparently healthy control). The studied genes were genotyped using polymerase chain reaction-restriction fragment length polymorphism and allelic discrimination assays.

Results: Genetic polymorphic patterns of NAT2 (M1 and M3), CYP2D 6*6, CYP2D 6*4 and CYP2D 6*3 showed a significant difference in HCC group compared to other groups. NAT2 M2 slow acetylator, CYP2D6*6 and CYP2D6*3 poor metabolizers and CYP2D 6*4 rapid metabolizer were associated with increased HCC risk (OR: 1.23, 4.0, 3.32 and 2.3 respectively).

Conclusion: Increased risk for hepatocellular carcinoma in Egyptian patients infected with HCV may be associated with the genotypes: NAT2 (M2), CYP2D 6*6, CYP2D 6*4 and CYP2D6*3 and thus could help in tailoring individualized therapy and serve as potential target sites for chemotherapy.

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