The aim of this study was to investigate the relevance of the reported SNPs in patients receiving HPN, and to explore clinical risk factors associated with candidemia” Wouters et al (2019).

Abstract:

BACKGROUND: Patients receiving home parenteral nutrition (HPN) have an increased risk for central line-associated bloodstream infections (CLABSIs), including candidemia. Recently, 7 single-nucleotide polymorphisms (SNPs) in TLR1, CD58, LCE4A-Clorf68, and TAGAP have been associated with the development of candidemia. Identification of host-genetic as well as clinical risk factors may help to identify patients who have an increased susceptibility to such infections. The aim of this study was to investigate the relevance of the reported SNPs in patients receiving HPN, and to explore clinical risk factors associated with candidemia.

METHODS: We analyzed blood samples of adult patients who started HPN between 1976 and 2017 at our referral center for intestinal failure. Primary outcome was the association between TLR1, CD58, LCE4A-Clorf68, or TAGAP SNPs and candidemia. Secondary outcomes included the relation between severity of infection and these SNPs, and clinical risk factors for candidemia.

RESULTS: Of 341 included patients, 42 (12%) experienced a candidemia (range 1-6). None of the 7 SNPs were associated with candidemia or the severity of infection. The rate of non-Candida-related CLABSIs was significantly associated with candidemia (rate ratio, 1.29; 95% CI, 1.14-1.46; P < 0.001). CONCLUSIONS: None of 7 known SNPs in TLR1, CD58, LCE4A-Clorf68, or TAGAP were associated with candidemia or severity of infection in patients receiving HPN. The rate of non-Candida-related CLABSIs was significantly associated with the development of candidemia. The latter supports the key role of aseptic catheter handling with respect to Candida susceptibility in patients receiving HPN.

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