

소아 난치성 신증후군에서 리툽시맙의 치료효과와 안전성 : 다기관 임상시험

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Efficacy and Safety of Rituximab in Children with Refractory Nephrotic Syndrome; A Multicenter Clinical Trial

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Objectives: Rituximab (RTX), anti-CD20 monoclonal antibody, has been proposed as a rescue therapy for refractory nephrotic syndrome (NS) on the basis of favorable clinical observations. While reported efficacy of RTX on refractory NS is promising, the long-term effect obtained from randomized clinical trial is limited, let alone the long-term safety profile of RTX in these patients. To obtain solid evidence of efficacy and safety of this medication, we conducted a clinical trial to evaluate the efficacy and safety of RTX in children with refractory NS. Here we report the interim result.

Methods: A multicenter open-label trial was performed in Korean pediatric patients, a single-arm study for steroid and calcineurin inhibitor (CNI) resistant (resistant NS, RNS), and a randomized controlled trial for steroid and CNI-dependent NS (dependent NS, DNS) patients. Eight major centers of Korea participated in this trial. Patients received a single dose of intravenous RTX (375 mg/m²) and efficacy was monitored by clinical response and CD19 cell count. Primary end point was rate of remission achievement for RNS and maintenance of remission for DNS at 6 months after treatment. Steroid and CNI were slowly tapered as scheduled if remission was achieved.

Results: Nineteen patients (mean age 9.2±4.7 years) with RNS were enrolled and seven patients achieved complete remission after RTX treatment (remission rate 36.8%). Fifty-three children (mean age 13.0±4.9 years) with DNS were included and randomized to standard treatment or RTX (2:1). At six months after treatment, the remission rates were 77.1% in RTX arm (n=35) and 38.9% in standard therapy arm (n=18). The mean durations of remission maintenance were 5.2 months under slow-tapering standard therapy arm and undetermined in RTX arm. Twenty four patients (44.4% of 54 patients) experienced mild and transient infusion reaction during RTX administration. However, no serious side effect was observed.

Conclusions: In this interim analysis of clinical trial to evaluate the efficacy and safety of RTX in children with refractory NS, RTX treatment for refractory NS was safe and effective, especially in patients with DNS.

Key Words: 신증후군, 리툽시맙
 Nephrotic syndrome, Rituximab