

Our subcutaneous immunoglobulin replacement therapy experience with intravenous preparation

Abstract

Introduction: Intravenous immunoglobulin (IVIG) has been used for primary immune deficiency (PID) treatment for many years. Recently, immunoglobulin (Ig) administration via subcutaneous route has become popular. Subcutaneously administered immunoglobulin (SCIG) provides more stable serum Ig levels and has lower incidence of systemic adverse effects than intravenous route. This method increases quality of life by self administration or parent-administration at home. Immunoglobulin preparations designed for subcutaneous administration became available in Europe and USA by 2006. However, now there has not been subcutaneous preparation available in Turkey. In that case, some of IVIG preparations could be given subcutaneously. Here, our aim is to reveal our clinical experience with 3 PID patients in whom we used IVIG preparation (Kiovig®) for subcutaneous route.

The patient and methods: Three patients with PID were selected for SCIG. The patient have been treated with IVIG (0.4- 0.6gr/kg/dose) every 3-4 weeks. 3-4 week dosage calculated, then divided into 3-4 doses and given. They have been followed up for the last 4-5 months since then.

Case1: 19-year-old male was diagnosed with CVID with complaints of recurrent lower respiratory tract infections 4 years ago. He was treated with IVIG every 3-4 weeks according to his Ig levels and clinical evaluations. He weighs at 78 kilograms and was taking 35g IVIG every 3-4 weeks. For the last 5 months, he has been treated with 10g IVIG per week subcutaneously. First 6 doses were given in hospital under medical supervision, but now he is taking SCIG at home. Both he and his parents are capable of performing the procedure. His symptoms due to lung problem (bronchiectasis) and spirometry evaluation as well as serum Ig levels got better.

Case2: 10-year-old female was diagnosed with CVID and was treated with IVIG every 3-4 weeks according to her Ig levels and clinical evaluations. She weighs at 20 kilograms and was taking 10g IVIG every 2-3 weeks. For the last 4 months she has been treated with 5g SCIG per week. First 8 doses were given in hospital under medical supervision until her mother learned the procedure. But now she is taking her SCIG at home. At the beginning, she experienced urticarial rash a couple of time over the skin SCIG given.

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Case3: 7-year-old male was diagnosed with hyper immunoglobulin M syndrome 5 years ago with complaints of recurrent fever until 6 month-year-old. He was treated with IVIG every 3-4 weeks according to his Ig levels and clinical evaluations. He weighs at 19.5 kilograms and was taking 10g IVIG every 2-3 weeks. For 2 months he has been treated with 5g SCIG per week. First 8 doses were given in hospital under medical supervision until his mother learned the procedure. In fourth dose, mild local reactions including swelling, redness, and burning sensation were reported at the infusion site that disappeared within 4-6 hours. His clinic, lung symptoms and serum IgG levels got better and his prophylactic therapies with TMP/SMX and budesonide were stopped.

Conclusion: Our 3 patients tolerated subcutaneous use of intravenous preparation very well. We observed mild local skin reactions but there weren't any systemic complications. All of our patients' clinical symptoms, spirometric evaluations and serum Ig levels got better after SCIG. Our clinical experience showed that subcutaneous use of same preparation is safer, more effective and has fewer side effects than intravenous utilization.

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Conflicts of interest

Authors declare that there is no conflict of interest.

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