Case report

Treatment of steroid-resistant idiopathic thrombocytopenic purpura in pregnancy with repeated high-dose intravenous immunoglobulin

SHINYA KIMURA¹,², JUNYA KURODA¹,², TERUAKI AKAOGI¹, HIDEO HAYASHI¹, YOSHIKO OGINO³, YUTAKA KOBAYASHI²,* and TOSHIKAZU YOSHIKAWA²

¹ Division of Hematology, Kyoto Second Red Cross Hospital, Japan
² First Department of Internal Medicine, Kyoto Prefectural University of Medicine, Japan
³ Division of Obstetrics and Gynecology, Kyoto Second Red Cross Hospital, Japan

Abstract—High-dose intravenous immunoglobulin (HD-IVIG) has temporary but reliable efficacy in idiopathic thrombocytopenic purpura (ITP). HD-IVIG has been described as the representative management in pregnant cases of refractory to corticosteroid or immunosuppressants. There have been few cases treated with repeated HD-IVIG to sustain pregnancy from the early phase of pregnancy. This case report describes a pregnant case of steroid-refractory ITP, treated with six times repeated HD-IVIG, resulting in the successful delivery of a healthy newborn with a normal platelet count. No adverse effects were observed.

Key words: High-dose intravenous immunoglobulin therapy; idiopathic thrombocytopenic purpura; pregnancy.

INTRODUCTION

Idiopathic thrombocytopenic purpura (ITP) often affects females of child-bearing age, so that the association of ITP and pregnancy is of special therapeutic significance. High-dose intravenous immunoglobulin (HD-IVIG) has been often utilized for pregnant ITP patients, to prevent massive haemorrhage at delivery [1]. However, few cases have been treated with repeated HD-IVIG to avoid miscarriage from the early phase of pregnancy. We report here a pregnant case with steroid-refractory ITP, who was given HD-IVIG six times.

*To whom correspondence should be addressed at First Department of Internal Medicine, Kyoto Prefectural University of Medicine, 465 Kajii-cho Kamigyo-ku, Kyoto 602-0841, Japan. Phone: +81-75-251-5505. Fax: +81-75-252-3721. E-mail: kobataka@koto.kpu-m.ac.jp
CASE REPORT

A Japanese female patient had been suffering from severe chronic ITP since she was 15 years old. She had refused a splenectomy and was given 10 mg/day of prednisolone and 100 mg/day of oxymetholone, resulting in a platelet count of around $20 \times 10^9$ per l. She stopped taking oxymetholone to become pregnant. She was impregnated but suffered a miscarriage at 8 weeks’ gestation when she was 29 years old, at which time her platelet count was $7 \times 10^9$ per l. She wanted another pregnancy and the dose of prednisolone was increased to 30 mg/day. Her second pregnancy was confirmed at 5 weeks’ gestation and the platelet count was maintained at over $20 \times 10^9$ per l until 18 weeks, when her platelet count fell to $6 \times 10^9$ per l and intractable genital bleeding was observed. To prevent miscarriage, one course of HD-IVIG administration (Venilon®, Teijin, Tokyo, Japan) at 400 mg/kg per day for three consecutive days was begun from 20 weeks, in addition to 30 mg/day of prednisolone. As a result, the platelet count rose to over $30 \times 10^9$ per l. The efficacy of HD-IVIG was temporary. Six administrations of HD-IVIG were required every 3 weeks. No bleeding was observed after the administration of HD-IVIG. When the patient suffered placental dysfunction at 36 weeks, she received 30 U of platelet transfusion and delivered a healthy newborn (1 min Apgar score 8, body weight 2480 g) by emergency Caesarean section. At delivery, the platelet counts of the mother and newborn were $96 \times 10^9$ and $200 \times 10^9$ per l, respectively (Fig. 1). Blood loss during the Caesarean section was 400 ml.

DISCUSSION

The American Society of Hematology guidelines indicates that management of maternal thrombocytopenia does not differ from that of non-pregnant patients [2]. Further treatments for ITP in addition to prednisolone were necessary for our patient because of an extremely low platelet count and genital bleeding. Repeated HD-IVIG had to be used in this case because the patient was refractory to prednisolone.

Figure 1. Clinical course of the present case. PC = platelet concentrate.