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Case Report
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Rh-Positive Patients Having Anti-D Antibody with Cross Match Compatible with Rh-Positive

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Case Presentation

The 13-year-old patient was voluntarily hospitalized to create a fistula despite having many underlying medical conditions, including renal cell carcinoma and epilepsy. Due to his underlying chronic renal illness, children had a history of receiving frequent unremarkable pack cell transfusions for symptomatic anemia. He was admitted to having Hb 3.2 g/dl, a total WBCs 7.3 × 10^9/L, and a PLTs count of 180 × 10^9/L. The patient's urea level was 40.3 mmol/L and his creatinine level was 19.3 mmol/L, respectively. The blood group is O Rh positive, and antibody screening was found positive during this pre-transfusion work-up (Figure 1). All previously reported antibody testing came out negative. According to the worksheet, the antibody identification panel demonstrated the specificity of Anti-D with positive A/C and DAT (+1). Anti-D (Figure 2). Elution research wasn't conducted. O RhD+ was compatible with his plasma.

Outcomes and Follow-up

A few days later, findings from a second antibody test were negative. He had a packed cell transfusion since his hemoglobin level at the time of his current arrival was 3.0 g/dL and there was no substantial bleeding. And Cross match compatible unit was given (Figure 3). There is no development of any transfusion reaction with having Anti-D antibodies in the patient's serum, the pattern of Anti-D antibodies is given in the panel.

Discussion

Anti-D development is often rare in RhD-positive patients. So, if present, it is necessary to take into account anti-LW, partial-D, with allo Anti-D and auto Anti-D antibodies and Anti-D are the same [1-5]. Since the patient in this instance is RhD+ and the antibody identification test

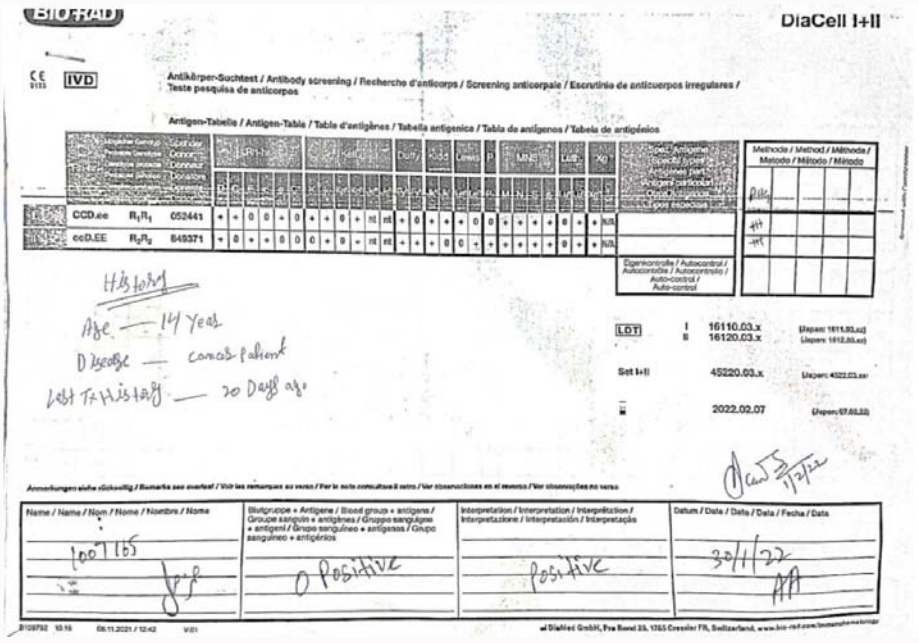

Figure 1: Antibody screening positive, two cell panel AHG phase giving 3+ reaction.

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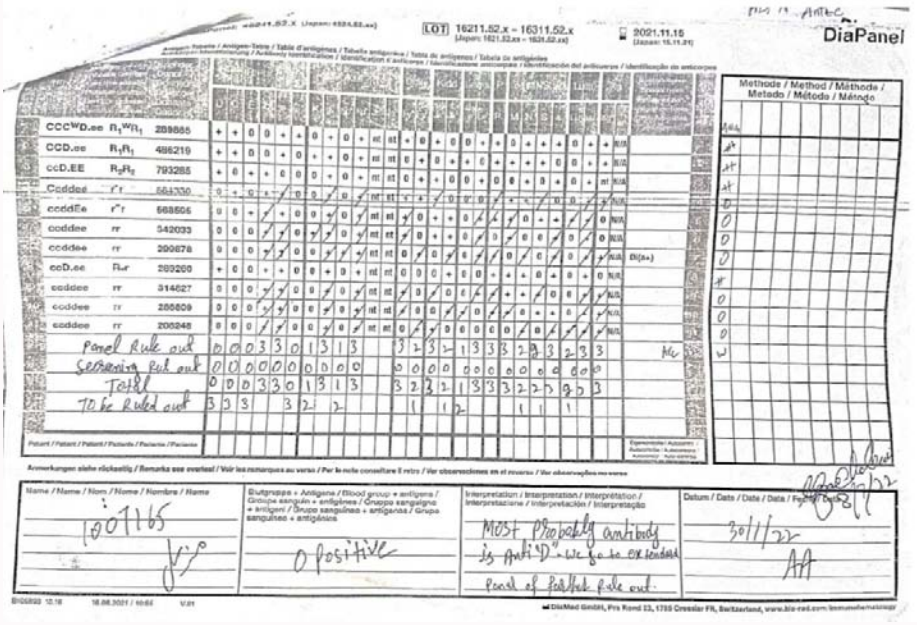

Figure 2: Identification panel demonstrated the specificity of Anti-D with positive A/C.

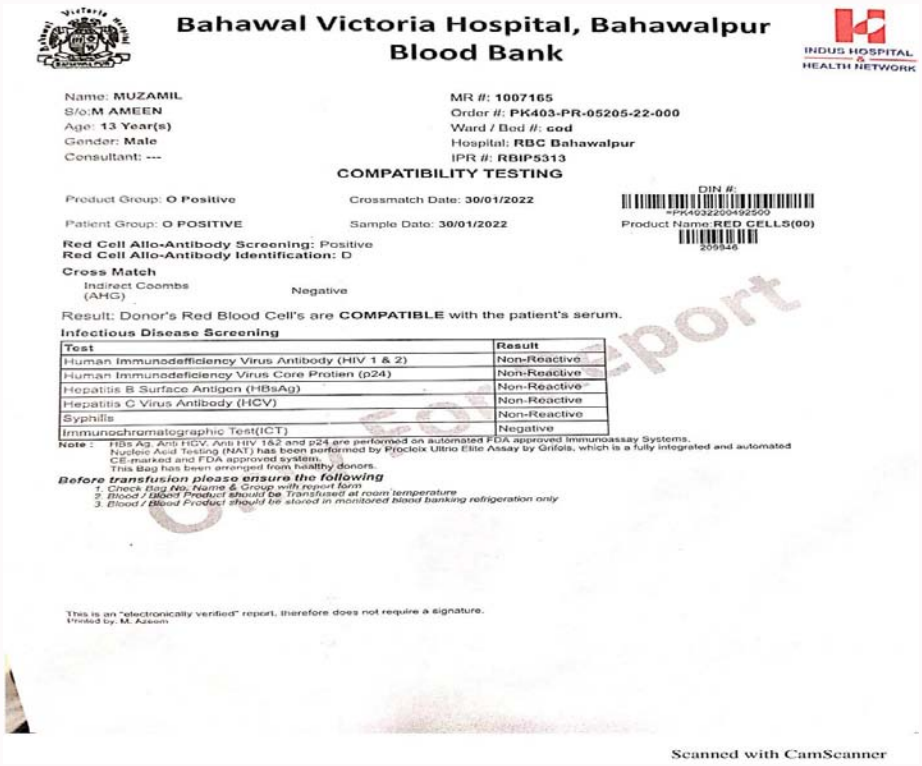

Figure 3: Cross match compatible report with red cell alloantibody identification of D in Rh-positive blood group.

revealed specificity Anti-D with (+1) DAT positive, LW/auto-Anti-D is a possibility. However, anti-LW and auto-Anti-D have not been validated due to repeated antibody screening that produced a negative result rate. This is most likely due to anti-LW or auto-Anti-D fleeting character. Anti-LW is not clinically significant, and auto Anti-D seldom ever causes hemolytic transfusion response. It is crucial to distinguish between the two antibodies as a result [4-6]. after receiving repeated transfusions of D Rh-positive blood, certain D Rh-positive patients may have transitory auto-Anti-D with (+1) DAT positive, as was the case in the currently being discussed case. Even though auto anti-LW is rare, it may be created when LW antigens are temporarily lost or suppressed without any visible exposure. Pregnancy and several disorders, including Hodgkin's disease, lymphoma, leukemia, and sarcoma, may cause a temporary loss or suppression of LW antigens [5-7]. However, these diseases can recover their normal or almost normal expression following delivery and therapy. Rh phenotyping for this patient revealed R1r with a high response [1,2]. However, it is also necessary to identify weak D and

incomplete D, particularly when D antigen phenotyping revealed lesser responses. In order to avoid anti-D alloimmunization, it is also necessary to distinguish anti-LW antibodies from anti-D [3,4,7].

Conclusion

Although the Anti-LW antibody has limited clinical significance and no major hemolytic transfusion response or hemolytic illness of the renal cell carcinoma patient has been described, it is nevertheless critical to detect Anti-LW and since Anti-D is a therapeutically relevant antibody, it was differentiated with Anti-D.

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