Serology results

<table>
<thead>
<tr>
<th>Patient</th>
<th>Immune</th>
<th>Ortho</th>
<th>Bioclone</th>
<th>Seraclone blend</th>
<th>Blend</th>
<th>Fusion</th>
<th>Alpha</th>
<th>Delta</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-4+/1+</td>
<td>0/0</td>
<td>nm/nm</td>
<td>0/0</td>
<td>nm/nm</td>
<td>0/0</td>
<td>0/0</td>
<td>nm/nm</td>
<td>nm/nm</td>
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</tbody>
</table>

- RBCs reacted 3–4+ at immediate spin (IS) and weaker (1+) by indirect antiglobulin test (IAT) with Gammaclone anti-D.
- Her RBCs were very weakly (microscopic) reactive at IS and non-reactive at IAT with Series 5 and Albaclone blend anti-D. Microscopic reactivity was also observed with Alba alpha and delta anti-D at IS only.

DNA/RNA results

- **RHD**
  - genotype results:
    - Positive for hybrid Rhesus box.
  - **RHD** BeadChip results: hybrid RHD*DIIIa-CE(4-7)-D, that types D negative.
- **No** RHD gene present that encoding a D protein.
- **RHCE**
  - BeadChip results:
    - c.48G/C, c.733C/G, and c.1006G/T consistent with RHCE*ceS / ce
    - RHCE*ceS is commonly in cis with hybrid DIIAD-CE(4-7)-D
  - Sanger sequencing:
    - Confirmed c.48G/C, c.733C/G, and c.1006G/T changes.
    - Identified novel change c.462G>T (p.Arg154Ser) in exon 3 that was not found in gnomAD or dbSNP databases.
  - RhCE-cDNA analysis confirmed the c.462T is on RHCE*ceS allele and conventional RHCE*ce in trans

CONCLUSIONS

- We report a new RHCE*ceS allele with a c.462G>T (p.Arg154Ser) encoding p.154Ser.
- The D epitope expressed by this allele is strongly reactive with Gammaclone (GAMA401) anti-D, reminiscent of the reactivity associated with RHCE*ceCF (Crawford).
- That this amino acid is responsible for the reactivity with anti-D is supported by the previous report that a change at the same position, p.154Thr encoded by c.461C (RHCE*ceRT), is associated with D reactivity.
- Individuals with RHCE*ceS+c.462T are suspected to be at risk for allo anti-D despite an apparent D+ phenotype with Gammaclone anti-D.
- The patient would have been erroneously treated as D positive and not received Rh immune globulin (RhIG) using the D typing results performed by the commercial laboratory. Although the patient’s pregnancy did not go to term, she appropriately received RhIG.
- This case highlights the value of RHD genotyping in pregnancy.