

INDIAN IMMUNOHEMATOLOGY INITIATIVE

CASE OF THE MONTH: October, 2009

Case Study by Chun-Kwok Cheng, MSc, SBB(ASCP), CQA(ASQ) and Jim Perkins, M.D. (©2009)

History: A 30 years old Chinese woman was admitted for a cholecystectomy to a Chinese Hospital in Hong Kong. She had received eight units of red cells, four units of whole blood-derived platelets and 4 units of FFP during a surgical procedure after a car accident six months earlier in Taiwan, at which time her antibody screen was negative.

ABO Grouping & Rh Typing

| | | | | | |
|----|----|----------|---------|----|--------|
| <A | <B | A1 cells | B cells | <D | 6% alb |
| 4+ | 0 | 0 | 3+ | 4+ | 0 |

Antibody Screen (41059 Asian Type)

| Cell | Rh | D | C | E | c | e | V | K | k | Kp ^a | Kp ^b | Js ^a | Js ^b | Fy ^a | Fy ^b | Jk ^a | Jk ^b | Le ^a | Le ^b | P1 | M | N | S | s | Lu ^a | Lu ^b | Xg ^a | Mi ^a | LISS | | |
|------|------|---|---|---|---|---|---|---|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----|---|---|---|---|-----------------|-----------------|-----------------|-----------------|------|-----|----|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 37° | AHG | CC |
| OI | R1R1 | + | + | 0 | 0 | + | 0 | + | + | 0 | + | 0 | + | 0 | + | + | 0 | + | 0 | + | + | 0 | + | 0 | + | + | 0 | 0 | 0 | 0 | 2+ |
| OII | R2R2 | + | 0 | + | + | 0 | 0 | 0 | + | 0 | + | 0 | + | 0 | + | + | 0 | + | + | + | 0 | + | 0 | 0 | 0 | + | 0 | 0 | 0 | 2+ | |
| OIII | R1R2 | + | + | + | + | + | 0 | 0 | + | 0 | + | 0 | + | + | + | 0 | + | 0 | + | 0 | + | + | 0 | + | 0 | + | 0 | + | 0 | 3+ | |

Question:

1. How would you interpret the initial test results? What do you want to do next?

The patient's plasma was tested against an antibody identification panel at the test phase at which it had been reactive.

Initial Panel

| 8RA121 | | Rh System | | | | | | Kell | | | | | | Duffy | | Kidd | | Xg | Lewis | | MNSs | | | | P | Lutheran | | Other | LISS | | | |
|---------|-------|-----------|---|---|---|---|---|------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------|---|---|---|----|-----------------|-----------------|---------|----------------|-----|----|----|
| Cell | Rh | D | C | E | c | e | V | K | k | Kp ^a | Kp ^b | Js ^a | Js ^b | Fy ^a | Fy ^b | Jk ^a | Jk ^b | Xg ^a | Le ^a | Le ^b | S | s | M | N | PI | Lu ^a | Lu ^b | Typings | Cell | AHG | CC | |
| 1 | R1wR1 | + | + | 0 | 0 | + | 0 | 0 | + | 0 | + | 0 | + | + | + | + | 0 | + | 0 | + | 0 | + | + | + | + | + | 0 | + | C ^w | 1 | 0 | 2+ |
| 2 | R1R1 | + | + | 0 | 0 | + | 0 | + | + | 0 | + | 0 | + | + | + | 0 | + | + | 0 | 0 | + | 0 | + | + | + | 0 | 0 | + | | 2 | 0 | 2+ |
| 3 | R2R2 | + | 0 | + | + | 0 | 0 | 0 | + | 0 | + | 0 | + | 0 | + | + | + | 0 | 0 | + | + | + | + | + | +w | 0 | + | | 3 | 2+ | | |
| 4 | Ror | + | 0 | 0 | + | + | + | 0 | + | 0 | + | 0 | + | 0 | 0 | + | 0 | 0 | 0 | 0 | 0 | + | + | + | + | +s | 0 | + | | 4 | 0 | 2+ |
| 5 | r'r | 0 | + | 0 | + | + | 0 | 0 | + | 0 | + | 0 | + | + | + | + | 0 | + | 0 | + | 0 | + | 0 | + | + | 0 | + | | 5 | 0 | 2+ | |
| 6 | r''r | 0 | 0 | + | + | + | 0 | 0 | + | 0 | + | 0 | + | + | 0 | + | + | + | + | 0 | + | + | + | 0 | 0 | 0 | + | | 6 | 2+ | | |
| 7 | rr | 0 | 0 | 0 | + | + | 0 | + | + | 0 | + | 0 | + | 0 | + | + | 0 | + | 0 | + | + | + | + | + | +s | 0 | + | | 7 | 0 | 2+ | |
| 8 | rr | 0 | 0 | 0 | + | + | 0 | 0 | + | 0 | + | 0 | + | + | 0 | 0 | + | + | 0 | + | 0 | + | 0 | + | + | 0 | + | | 8 | 0 | 2+ | |
| 9 | rr | 0 | 0 | 0 | + | + | 0 | 0 | + | 0 | + | 0 | + | 0 | + | + | + | + | + | 0 | + | 0 | + | 0 | + | 0 | + | | 9 | 0 | 2+ | |
| 10 | rr | 0 | 0 | 0 | + | + | 0 | 0 | + | 0 | + | 0 | + | 0 | + | + | + | + | 0 | 0 | + | + | + | 0 | 0 | 0 | + | | 10 | 0 | 2+ | |
| 11 | R1R2 | + | + | + | + | + | 0 | + | + | 0 | + | 0 | + | 0 | + | 0 | + | + | + | 0 | + | + | + | 0 | 0 | + | + | | 11 | 2+ | | |
| Patient | | | | | | | | | | | | | | | | | | | | | | | | | | | | | AC | 0 | 2+ | |

Question:

- Based on the results of the antibody detection test and initial panel, what antibody(ies) do you suspect? Is any further workup needed to prove your hypothesis?

