

ICTERUS PRAECOX

Case Study by Jim Perkins and Ken Beck (©2009)

A 26 year old Caucasian woman was found to be group O, Rh positive with a negative antibody screen on routine prenatal testing. Her first delivery had been uneventful. On this occasion spontaneous vaginal delivery at term yielded a 3259 gm (7# 3oz) boy. Cord blood testing demonstrated the infant to be group O, Rh positive, with a 2+ DAT using polyspecific anti-human globulin. Nine hours after delivery the infant was noted to have mild jaundice, and phototherapy was started. A type-and-screen on the mother again showed her to be group O, Rh positive with a negative antibody screen. The mother's serum failed to react with any cells on a standard antibody identification panel. An eluate from the infant's RBCs was also non-reactive.

- WHAT TEST SHOULD BE PERFORMED NEXT? -

A crossmatch between the mother's serum and father's RBCs reacted 2+ at the 37° incubation and AHG phases. A panel of RBCs expressing low frequency antigens was assembled. One of 4 Co(b+) RBC samples reacted; the reactive cell was Co(a+b+), and one non-reactive cell was Co(a-b+). The infant's eluate also reacted with the one Co(b+) cell, the same one which had reacted with maternal serum. The problem was referred to the Blood Center of South-Eastern Wisconsin.

The newborn's laboratory test results included:

Day	Time	Dir/Indir bilirubin	Hct	Retic
1	cord	3.1 (total)		
	1030	10.3/0.5		
	1600	12.7/0.4		
	2100	14.7/0.6	38	10.7
2	0200	11.8/0.4		
	0710	12.1/0.4		
3	0600	9.9/0.4		

The blood center reference laboratory demonstrated maternal anti-C^x, with the Rh phenotype DCce. The father's phenotype was DCC^xce (most probable genotype R^{lxr}). The baby's phenotype was DCC^xe (most probable genotype R^{lxR'}, and there was anti-C^x in his eluate.

4 months after the delivery the mother and father were recruited as donors for SCARF. At this time the mother's antibody titer against the father's RBCs was 128. Consultation with the manufacturer of the Co(b+) panel cell with which the serum and eluate reacted revealed that the cell was also C^x+

**WHAT IS ICTERUS PRAECOX?
WHAT DOES IT HAVE TO DO WITH THIS CASE?**