

Management of Caucasian Anti-Jr^a Affected Pregnancy

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Background: Women with the Jr(a-) phenotype may be at risk for hemolytic disease of the fetus and newborn (HDFN) during pregnancy due to anti-Jr^a present in maternal serum.

Few cases of anti-Jr^a have been reported in the Caucasian North American population. We report the management of a Caucasian woman and fetus challenged by the presence of anti-Jr^a during pregnancy.

Case Report: A routine prenatal sample from a 21-year-old woman (G1 P0) from the Midwestern United States at our regional Immunohematology Reference Lab (IRL) showed the presence of a high-incidence antibody.

The patient was found to be Jr(a-) negative by a second regional IRL. The sample demonstrated AHG reactivity with a negative autocontrol, consistent with anti-Jr^a.

Conclusion: The patient donated one autologous unit in anticipation of delivery. No relatives were able to provide compatible directed donations.

The delivery was uncomplicated and no blood products were needed for the mother or newborn. Cord cell was weakly DAT positive with anti-Jr^a recovered in the eluate study and the last wash testing, consistent with a high titer of maternal anti-Jr^a.

Although anti-Jr^a reportedly has the potential to cause HDFN, there was no serologic or clinical evidence of this complication during this Jr^a pregnancy.

Initial and Subsequent Antibody Panels	All Cells Positive (2+) Anti-Jr ^a , detected at IAT		
Autocontrol	Negative		
Cord Cell at Delivery	Weakly Positive DAT (IgG and C3) Anti-Jr ^a recovered in eluate (Gamma ELU Kit II) Anti-Jr ^a in last wash, consistent with high titer maternal anti-Jr ^a		
Sample Dates	Initial 12/08/06	Second Sample 12/20/06	Delivery Sample 4/3/07
IgG Titer	128, score 71	256, score 55	256, score 53

	C	E	c	e	K	k	Fy ^a	Fy ^b	Jk ^a	Jk ^b	M	N	S	s	Le ^a	Le ^b	ABO/Rh	Jr ^a
Mother	+	0	+	+	0	+	+	+	+	0	0	+	0	+	0	+	B Pos	0
Father	0	0	+	+	+	+	0	+	+	+	0	+	0	+	0	+	0 Neg	+
Baby	+	0	+	NT	0	NT	+	+	+	+	NT	NT	NT	NT	NT	NT	0 Pos	+