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C4d Negative Antibody Mediated Rejection With High Anti-Angiotensin II Type I Receptor Antibodies In Absence Of Donor Specific Antibodies.

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#### AIMS:

Acute antibody mediated rejection can occur in absence of circulating donor specific antibodies. Agonistic antibodies targeting the anti-angiotensin II type 1 receptor are emerging as important non-HLA antibodies. Elevated levels of anti-angiotensin II receptor antibodies were first observed in kidney transplant recipients with malignant hypertension and allograft rejection. They have now been studied in three separate kidney transplant populations and associate to frequency of rejection, severity of rejection and graft failure.

#### METHODS:

We report eleven cases of biopsy proven, C4d negative, acute rejection occurring without circulating donor specific anti-human leukocyte antigen antibodies. In eight cases anti angiotensin receptor antibodies were retrospectively examined. The remaining three subjects were identified from our centre's newly instituted routine anti angiotensin receptor antibody screening.

#### RESULTS:

All subjects fulfilled Banff 2013 criteria for antibody mediated rejection and all responded to anti-rejection therapy, which included plasma exchange and angiotensin receptor blocker therapy.

#### CONCLUSIONS:

These cases support the routine assessment of anti-AT1R antibodies in Kidney transplant recipients to identify subjects at risk. Further studies will need to determine optimal assessment protocol and the effectiveness of pre-emptive treatment with angiotensin receptor blockers.