RAVULIZUMAB LEADS TO RAPID AMELIORATION OF CLINICAL AND LABORATORY FINDINGS IN TREATMENT NAIVE PAEDIATRIC aHUS PATIENTS: SINGLE REFERRAL CENTRE REAL-LIFE EXPERIENCE

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AIMS:

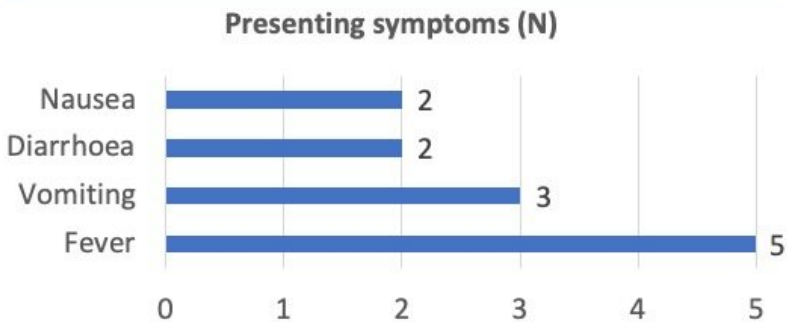
HUS represents a **heterogenous group of diseases** in terms of aetiology and management. STEC and SP negative HUS patients should be considered as having atypical form of the disease (aHUS) and treated with C5 inhibition. A new long-acting inhibitor **Ravulizumab (RAV)** has recently been approved, with only scarce reports of its use in clinical care of children with aHUS available.

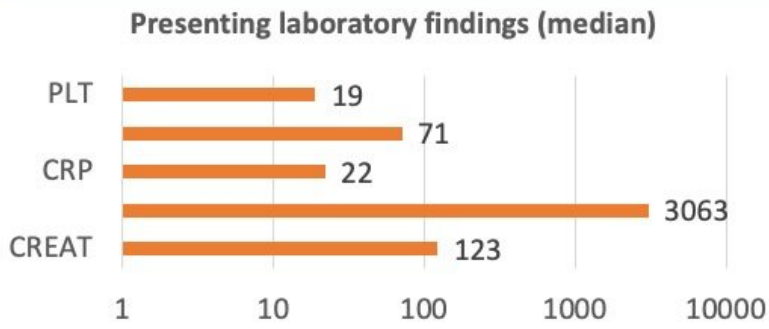
METHODS:

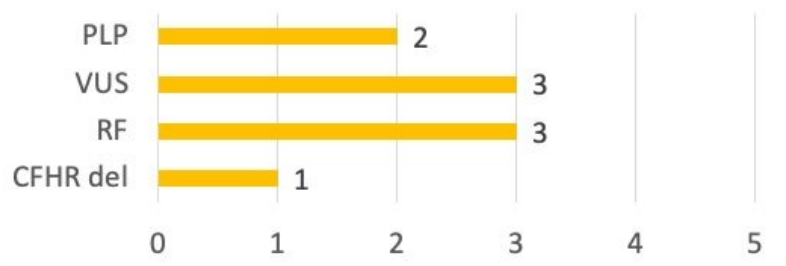
Retrospective study of treatment naïve aHUS patients receiving ≥3 doses of Ravulizumab and followed up ≥2 months.

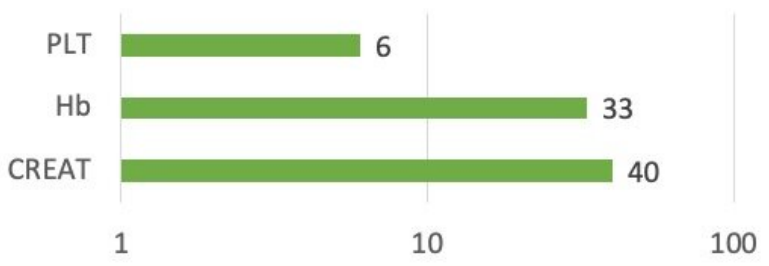
RESULTS:

All **5 patients (median age 5 years)** had increased CRP, LDH and creatinine, with decreased Hb, PLT and haptoglobin, schistocytes in peripheral blood, and signs of alternative pathway dysregulation. Moreover, 4 had proteinuria (3 nephrotic range). Extensive microbiology analysis revealed **SARS-CoV-2 in 2 and influenza A in 1** patient, while **1 had decreased level of FH** with moderately **high anti-FH autoantibody**. All the patients had **positive genetic findings**. Plasmapheresis and CRRT were employed in 1 patient. **The MD time to start RAV was 5 days after the disease onset.** The MD follow up was 3 months, during which 1 patient developed severe **eosinophilia** (>3.7 x10e9/L) along with rise in PR3 and MPO ANCA antibodies.









		Patient 1	Patient 2	Patient 3	Patient 4	Patient 5
Sex, Age		F, 116 months	F, 29 months	M, 20 months	F, 92 months	M, 64 months
Microbiology		/	SARS-CoV-2	SARS-CoV-2	Influenza A	/
Anti-FH		48 AU/mL	87 AU/mL	11 AU/mL	5 AU/mL	**387 AU/mL**
TREATMENT		RAV	RAV	CRRT + TPE + RAV	RAV	RAV + PDN
Eosinophils Highest		**3.7 x10^9/L**	0.45 x10^9/L	0.83 x10^9/L	0.25 x10^9/L	0.3 x10^9/L
Genetic variants	PLP	*MCP*	*C3*	/	/	/
	VUS	*C3*	*DGKE*	/	*MCP*	/
	Risk	*MCP, CFH*	/	*CFH*	*MCP, CFH*	*MCP, CFH*
	Del	/	/	/	/	*CFHR1,3*
Hb	Lowest	63 g/L	56 g/L	85 g/L	71 g/L	73 g/L
	Back to normal	68 days	17 days	33 days	30 days	48 days
PLT	Lowest	12 x10^9/L	35 x10^9/L	19 x10^9/L	20 x10^9/L	11 x10^9/L
	Back to normal	6 days	6 days	7 days	4 days	7 days
Creat	Highest	136 µmol/L	65 µmol/L	204 µmol/L	123 µmol/L	84 µmol/L
	Back to normal	37 days	17 days	43 days	45	48 days
LDH	Highest	1787 U/L	1128 U/L	3355 U/L	3584 U/L	3063 U/L
	Back to normal	37 days	17 days	73 days	30 days	48 days

CONCLUSION

RAV has led to **rapid and effective amelioration** of clinical and laboratory findings in an aetiologically diverse group of children with aHUS; Observation of persistent **eosinophilia** could possibly be a side-effect of RAV treatment.

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