

## Experience of use of reslizumab in a patient with eosinophilic granulomatosis with polyangiitis

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**Introduction:** We report a patient with Eosinophilic granulomatosis with polyangiitis(EGPA) who was safely treated with reslizumab, an interleukin (IL)-5 inhibitor, in acute hepatitis status.

**Case description:** A 59-year old male with history of asthma, sinusitis, diabetes mellitus, and hypertension visited the emergency department for hematochezia. His vital sign was stable with fever of 38.1℃, and blood test showed increased inflammatory markers and hypereosinophilia (7,800/mL). Endoscopy showed no current bleeding. However, the patient started to complain of motor and sensory abnormality of left arm, and stated that migrating neuropathy began a week ago. Neurologic exam and NCV test confirmed mononeuritis multiplex (MM). Since he had asthma, chronic sinusitis, MM and eosinophilia, we considered the possibility of EGPA. Moreover, immunologic tests revealed p-ANCA of 100 AU/mL. Sural nerve biopsy was performed and reported necrotizing vasculitis with eosinophilic infiltration, which confirmed the diagnosis of EGPA. We initiated steroid therapy with 125 mg of methylprednisolone for three days and tapered to 60mg of prednisolone (PD). Then, his eosinophil count decreased and systemic symptoms improved. However, his liver enzyme level started to increase as shown in the Table, even after we discontinued all the possible hepatotoxic agents. High dose corticosteroid induced hepatotoxicity was suspected, and the dosage of PD was reduced. Though the level of liver enzyme decreased with the reduced steroid dosage, eosinophil count started to increase again. Non-hepatotoxic immunosuppressant was needed in this progressive EGPA patient rather than conventional induction therapy with cyclophosphamide or rituximab. Therefore, we used reslizumab as an initial induction therapy. The use of reslizumab was very effective not only in suppressing the disease activity, but also in reducing the dosage of steroid without any notable side effects. And, we could successfully complete 9 cycles of cyclophosphamide therapy for additional 6 months.

**Conclusion:** Reslizumab could be used as a safe and effective induction therapy in patients with EGPA with acute hepatitis

HOD	#1	#7	#8	#9	#11	#16	# 17	#18	#19	#21	#22	#23	#24	#28
WBC (mg/dL)	18750	26550		21060	18500	12540	13700		13650	13520			12980	10010
Eosinophil (mg/dL)	7800	15620		510	150	450	1140		370	110			230	240
AS (U/L)	30				54	73		60				16	14	11
ALT (U/L)	40				120	191		170				60	47	22
Medication (mg)		MPD 40	MPD 125	MPD 125	PD 60	PD 40	PD 40	PD 40	PD 40	PD 40	PD 30	PD 30	PD 30	MPD 125
								Reslizumab 100					CP 900	