

Plasmaexchange application efficiency in critical care of myasthenic crisis and demyelinating diseases

Background and aims: One of the most efficient treatment modes under development of critical states in neurology is plasmaexchange (PE) execution. Brief analysis of PE using efficiency at severe course of myasthenia gravis and demyelinating diseases (DMD) is represented based on results obtained for last 4 years in the our centers. PE were done for 116 patients with myasthenia crisis (MC), DMD and objective status estimated on APACHEIII scale has been no less than 112,12 ± 4,10 points, lethality probability – 75-80%.

Methods: Monitoring of peripheral and central hemodynamics (PH,CH); estimation of neurologic status, respiratory impairment, electromyography.

PE has been done in the critical care (CC) complex, including ALV, infusion therapy for dyscrasia correction, antioxidants. PE séances have been done at severe MC and for DMD patients with expressed bulbar disturbances and other disorders. Substitution at PE has been done with using of crystalloids, albumin solutions, fresh frozen plasma, cryoprocessed patient autoplasm, obtained during previous PE séances. Active PE has been carried out for 1-2 weeks in the every other day regime until reaching of the clinical effect.

Findings data to demonstrate in tab.

Diagnosis		Plasmaexchange (PE)		
		Quantity of patients		Average number of operations (ANO); volume of PE for 1 patients (%)
		«COM.TEC»	«Haemonetics»	
A		B	C	D
2012	Myasthenia crisis	8 / 1 / 4	1 / 0 / 0	ANO = 3; 100 - 60 - 50, 60 - 50 - 50
	DMN	3 / 3 / 1	1 / 0 / 0	ANO = 3; 60 - 50 - 50
2013	Myasthenia crisis	5 / 1 / 4	1 / 0 / 0	ANO = 3; 100 - 60 - 50, 60 - 50 - 50
	DMN	3 / 4 / 0	0 / 0 / 0	ANO = 3; 60 - 50 - 50
2014	Myasthenia crisis	6 / 2 / 4	0 / 0 / 0	ANO = 3; 100 - 60 - 50, 60 - 50 - 50
	DMN	2 / 4 / 2	0 / 0 / 0	ANO = 3; 60 - 50 - 50
2015	Myasthenia crisis	5 / 1 / 3	0 / 0 / 0	ANO = 3; 100 - 60 - 50, 60 - 50 - 50
	DMN	4 / 3 / 1	0 / 0 / 0	ANO = 3; 60 - 50 - 50

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Results: In most cases, respiratory impairment regression, absence of pathologic muscle fatigability, PH,CH stabilization have been already observed after 2 PE séances at MC . Persistent positive clinical effect has been observed after 7 ± 2 days of CC. At DMD, persistent positive clinical effect has been also observed not early than 9 ± 1 days of CC.

Conclusion: Earlier incorporation of hardware PE in CC has had the most clinical efficiency at MC, it reduces the term of patient staying in the CC unit and period of their inpatient care.

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