QUALITY OF LIFE CHANGES AND PERITONEAL MEMBRANE FEATURES ACCORDING TO DOUBLE mini-PET

Alexander Zemchenkov[1,2,3], Anastasia Sabodash[2,4], Salikhova Karina[4], Roman Gerasimchuk[1,3], Tatiana Kostyleva[3], Alexander Rumyantsev[5,6],

[1]North-Western State medical university n.a.I.I.Mechnikov, Nephrology and dialysis department, Saint-Petersburg, RUSSIAN FEDERATION,

[2]First Saint-Petersburg State medical university n.a.I.P.Pavlov, Nephrology and dialysis department, Saint-Petersburg, RUSSIAN FEDERATION,

[3]City Mariinsky hospital, Dialysis unit, Saint-Petersburg, RUSSIAN FEDERATION,

[4]BBraun Avitum Russland Clinics, Dialysis unit, Saint-Petersburg, RUSSIAN FEDERATION,

[5]Saint-Petersburg State university, faculty therapy department, Saint-Petersburg, RUSSIAN FEDERATION,

[6]First Saint-Petersburg State medical university n.a.I.P.Pavlov, propedeutics of internal diseases department, Saint-Petersburg, RUSSIAN FEDERATION.

INTRODUCTION AND AIMS:

The quality of life parameters is important patient-centered outcome besides patients (pts) survival and technique survival in peritoneal dialysis (PD) patients. The association of quality of life and several unmodifiable factors (gender, age, diabetes status) was demonstrated in many studies. In the of prospective study we evaluated potentially modifiable parameters which could influence the changes in quality of life indicators including key performance indicators of quality care control in real contemporary practice.

METHODS

124 unselected PD patients with duration of PD treatment >12 months were included in prospective cohort study with repeated KDQoL-SF (1.3) questionnaire every 6 month.

The patients` age at study start was 54 ± 18 years; median for dialysis duration was 18 months (IR $8\div34$), 11% had diabetes.

The routine clinical and laboratory monitoring were performed on monthly (quarterly) basis according to quality care control program.

The peritoneal membrane function was evaluated with **standard PET-test and double mini-PET** (*two 1-hour exchanges with 4.25% and 1.5% glucose*). The glucose overload was assessed as total mass of glucose flooded in peritoneal cavity according the records of PD-regimen per month and totally during whole treatment.

RESULTS

KDQoL-SF scale	$M\pm SD$	KDQoL-SF scale	$M\pm SD$
S1 Symptom/problem list **	76±14	U1 Physical functioning **	57±28
S2 Effects of kidney disease *	72±18	U2 Role limitations-physical	44±39
S3 Burden of kidney disease	41±24	U3 Pain *	64±21
S4 Work status	36±33	U4 General health *	43±18
S5 Cognitive function *	74±19	U5 Emotional well-being	68±20
S6 Quality of social interaction	79±17	U6 Role limitations-emotional	61±41
S7 Sexual function	71±25	U7 Social function	70±24
S8 Sleep *	64±14	U8 Energy/fatigue *	56±17
S9 Social support	77±26	*Composite Scales SF-12*	
S10 Dialysis staff encouragement	77±17	PCS Physical Health **	38±9
S11 Overall health	55±16	MCS Mental Health	46±11
S12 Patient satisfaction	71±24		

Mean follow-up period since first KDQoL assessment was 25 ± 19 months; the two-years survival since study start was $81\pm4\%$, technique survival - $66\pm5\%$.

The baseline results of QoL parameters evaluation as well as its influence on survival in uni- (significant regression marked by *) and multivariate (marked **) Cox regression analysis are presented in table above. Adjustments were made for gender, age, diabetes status.

Osmotic conductance to glucose (OCG)
but not free water transport (FWT) was different for patients :

without peritonitis (5.8±2.1 µl/min/mmHg) and
with 1 episode (4.6±2.6, p=0.01µl/min/mmHg) or
with 3-4 episodes (3.1±1.0 µl/min/mmHg, p=0.002).

Free water transport (FWT) was linked with total glucose load:

in univariate regression model
(-0.43 mL per kg, p=0,004) and
in model adjusted for PD duration and number of peritonitis
(-0.37 mL per kg, p=0.05).

The decrease in S1, S4, S8, U1, U8 and PCS was linked to total glucose load;
The decrease in S1, S3, S5 and PCS was linked to FWT;
The decrease in S3, U1 and PCS - to OCG.

CONCLUSION

Peritoneal membrane features are associated with dynamics of QoL parameters as one of hard outcomes and potentially could predict its changes providing important information for further treatment decision-making beyond predicting survival.

REFERENCES

1. Mehrotra R. The Current State of Peritoneal Dialysis. JASN. 2016;27(11):3238-3252
2. van Esch S. The Natural Time Course of Membrane Alterations During PD Is Partly Altered by Peritonitis. Perit Dial Int. 2016;36(4):448-56.

PosterSessionOnline.com