

Usefulness of the Multidimensional Prognostic Index (MPI) in older patients on haemodialysis: a multicenter study.

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Background: The Multidimensional Prognosis Index (MPI), a validated Comprehensive Geriatric Assessment (CGA)-based prognostic index for mortality, has been recently demonstrated to be clinically useful in predicting mortality in older subjects with Chronic Kidney Disease (CKD); no data exists on the use of the MPI in older patients with end-stage CKD on haemodialysis.

Methods: We carried out a multicenter study in 4 HD units in Italy. All older patients (≥ 65 years) underwent a standardized CGA that included data about ADL and IADL, cognitive status (SPMSQ) nutritional status (MNA), the risk of pressure sores (Exton-Smith Scale, ESS), comorbidity (CIRS), number of medications taken and co-habitation status (alone, institution, in family). These data were used to calculate the MPI, expressed as 0.0 to 1.0 value; a three-grade scale of risk was used according to validated cut-off values (MPI-1 0.0-0.33=low; MPI-2 0.34-0.66=moderate; MPI-3 0.67-1.0=severe risk of mortality).

Results: 309 older patients with end-stage CKD on haemodialysis (men=193, 62,46%; women=116, 37,54%; mean age $76,40 \pm 6,53$ years; range=65-96 years). 114 subjects (36,9 %) were in MPI-1 grade, 164 subjects (53,1%) were in MPI-2 grade and 31 subjects (10,0%) were in MPI-3 grade group. Results are shown in Table n. 1.

DOMAIN	MPI 1 (n. 114)	MPI 2 (n. 164)	MPI 3 (n.31)	p value per trend
Age	74.7 \pm 5.5	76.6 \pm 6.6	81.3 \pm 6.6	<0.001
ADL (Activities of daily living)	5.6 \pm 0.8	4.8 \pm 1.5	1.5 \pm 1.1	<0.001
IADL (Instrumental-ADL)	6.1 \pm 2.1	4.6 \pm 2.6	1.3 \pm 1.1	<0.001
SPMSQ (Mental Status)	2.2 \pm 3.5	4.3 \pm 3.8	4.6 \pm 3.2	<0.001
CIRS (Comorbidity)	3.4 \pm 1.7	4.4 \pm 1.6	4.3 \pm 2.0	0.82
Number of drugs	6.0 \pm 2.7	7.1 \pm 3.1	6.6 \pm 3.7	0.49
MNA (Nutrition)	23.0 \pm 3.5	21.2 \pm 3.6	15.1 \pm 3.9	<0.001
ESS (Pressure sore risk)	18.8 \pm 1.7	17.5 \pm 2.3	13.4 \pm 2.0	<0.001

Conclusion: The CGA-based MPI is a feasible tool that may identify older haemodialysis patients at different risk of mortality. Further studies are needed to evaluate the potential usefulness of the MPI in clinical decision making.

