Clinical risk factors for non-convulsive status epilepticus in the elderly.

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Background

The nonconvulsive status epilepticus (NCSE) represents about 25-50% of all types of status epilepticus and its incidence presents an age-dependent trend. Despite significant advances in research, controversy remains regarding the diagnosis, causes, risk factors and treatment of this disease.

The aim of our study is to identify clinical features and possible risk factors for development of NCSE in elderly.

Patients and Methods

We performed a single-center retrospective cohort study of 100 consecutive cases of epileptic disorder in adults older than 65 years, hospitalized between 2015 and 2010 in E. Agnelli Hospital of Pinerolo. 50 of them had a NCSE and the other had focal or generalized seizures. We used odds ratios (ORs) and 95% confidence intervals (CIs) to test the association between NCSE and clinical characteristics, internistic and neurologic acute and chronic comorbidities, EEG patterns, acute and chronic treatments. We constructed a multivariable logistic regression model with backwards stepwise elimination to identify clinical predictors of NCSE.

Results

Dementia, dysmetabolic causes (disionia, liver, kidney or respiratory failure), sepsis and antibiotics showed significantly higher incidences in the NCSE cohort compared with the seizure cohort, with odds ratios of 8.8 (CIs 3.3-23), 9.4 (CIs 3.2-26.9), 10.2 (CIs 3.0-34.2), 4.6 (CIs 1.3-16.3) respectively. Multivariate analysis revealed that only dementia was an independent risk factor for NCSE (ORs 8.1 CIs 2.7-24).

Conclusions

In our study, patients with dementia presented an increased risk to develop NCSE. Comorbidities as metabolic syndrome and sepsis or concomitant assumption of antibiotic drugs look to be other possible predisposing factors.

Patients characteristics	Seizure	NCSE
Age (median)	77	79,5
Males	25	8
Females	25	42
Internistic Comorbidities	1,66	2
Chronic cerebrovascular disease (TC)	33	41
Brain atrophy (TC)	28	34
Previous stroke	14	18
Acute stroke	0	2
Previous head trauma	2	2
Brain tumor	6	1
Dementia	11	38
Mild	*5*	*13*
Moderate	*3*	*9*
Severe	*3*	*16*
Previous diagnosis of epilepsy	15	19
Symptomatic	*12*	*15*
Cryptogenic	*2*	*4*
Idiopathic	*1*	*0*
Epileptic medication intake	9	27
Neuroleptic drugs	*5*	*12*
Antibiotics drugs	*4*	*15*
Dysmetabolic causes	6	31
Sepsis	*4*	*25*
Disionia	*3*	*10*
Kidney failure	*0*	*6*
Liver failure	*0*	*1*

Number of patients with dementia in the two chorts
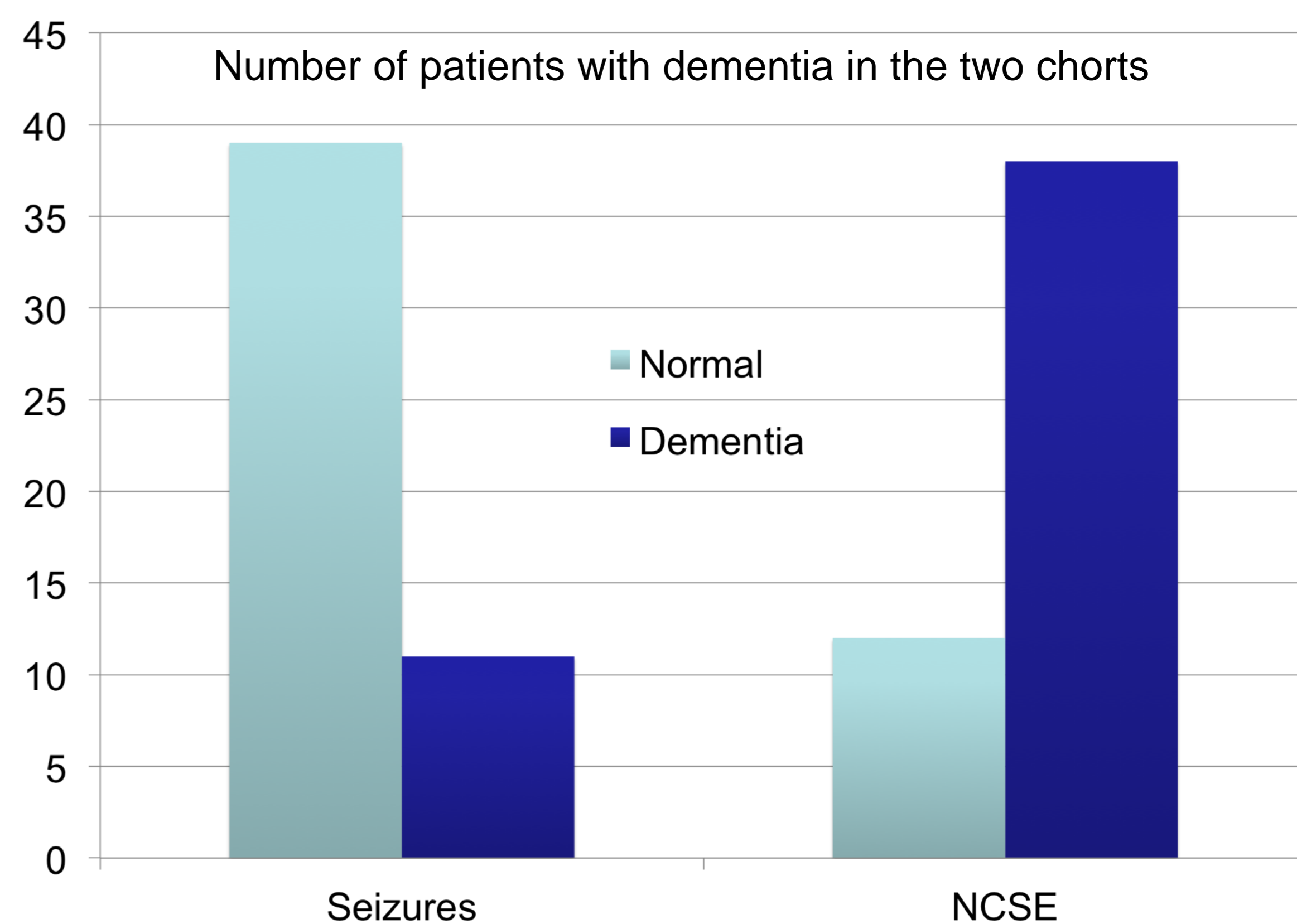
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