

ROLE OF COMORBIDITY IN MULTIPLE SCLEROSIS: PREVALENCE IN A SINGLE CENTER

Zanchi C, La Gioia S, Barcella V, Gardinetti M, Conti MZ, Frigeni B, Vedovello M, Rottoli MR.
Multiple Sclerosis Center, Neurology Department, Papa Giovanni XIII Hospital, Bergamo, Italy

OBJECTIVES:

Comorbidity is an area of increasing interest in multiple sclerosis (MS): 40-65% of MS patients have at least one other disease. Several studies showed that comorbidities have been associated to diagnostic delay, increased hospitalization and mortality. Moreover the presence of comorbidities should be considered during the choice of disease-modifying drugs (DMDs) and may affect the MS therapy adherence and response. Our aims were to characterize the comorbidities of the Bergamo Multiple Sclerosis Center.

MATERIALS AND METHODS:

We retrospectively evaluated the clinical history of 601 consecutive patients afferent to our MS center in 2016. We have reported all comorbidities which could be relevant to health care utilization and could influence treatment choices in MS patients.

RESULTS:

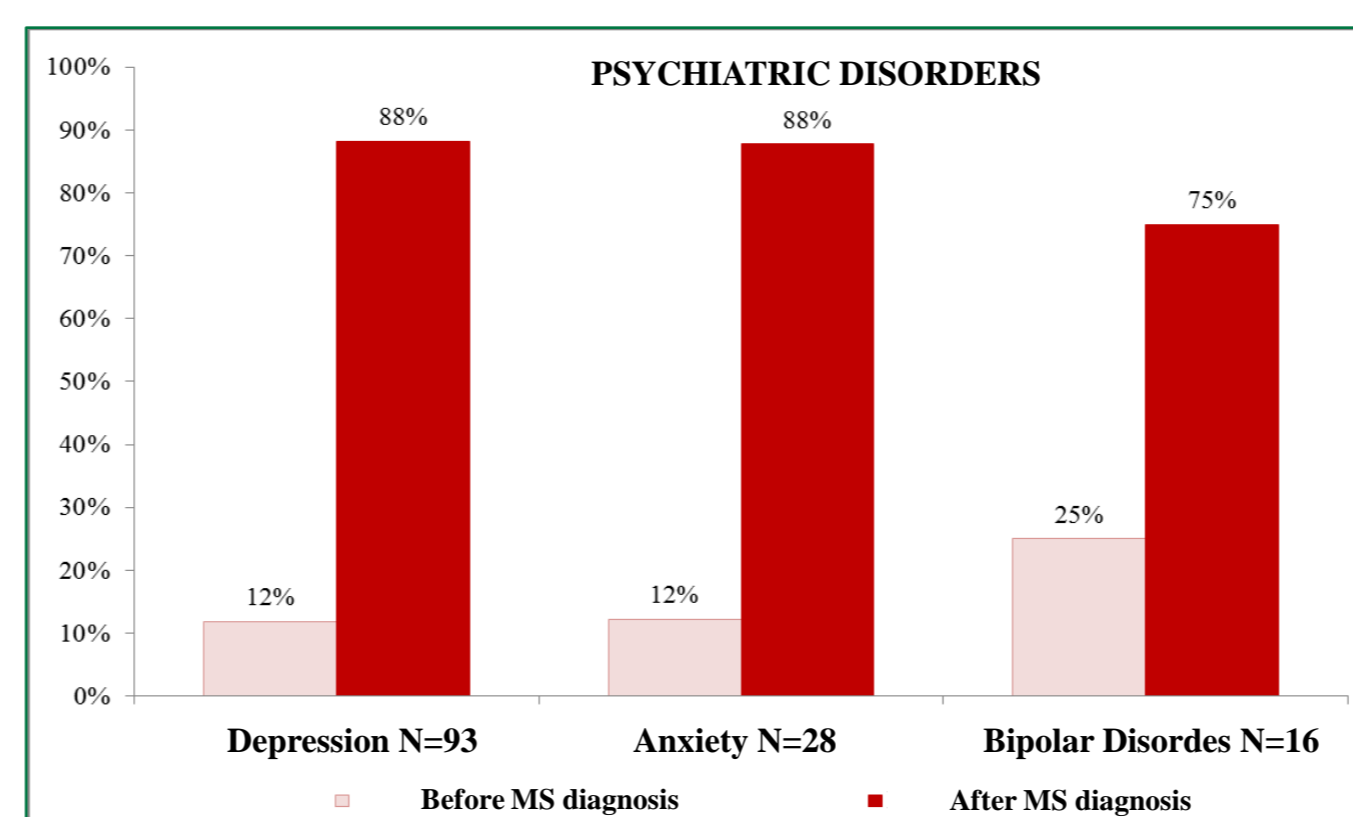
We evaluated the data of 601 patients, 487 patients with relapsing remitting MS, 103 patients with secondary progressive MS and 11 patients with primary progressive MS. Mean age was 43.9 years old (SD 11.7). Median EDSS was 2.7 (SD 1.9). (Table 1)

42.2% of patients had at least one comorbidity (28.2% only one comorbidity, 14.0% two or more comorbidities). At least one comorbidity was already present at diagnosis in 8.8% of our sample; 33.4% of subjects developed at least one comorbidity during MS disease course.

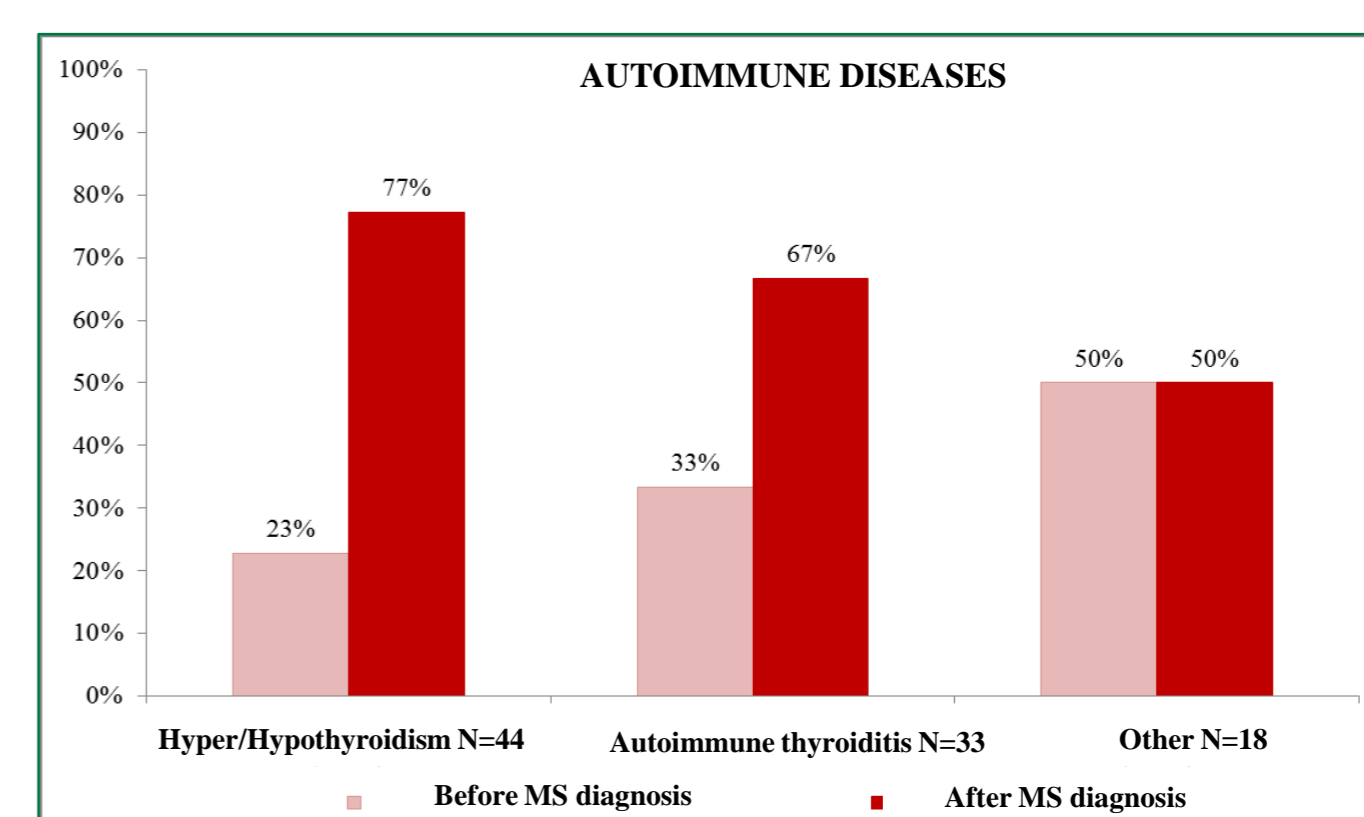
9.8% of our patients were affected by hypertension, 5.8 % by dyslipidemia, 2.3% by diabetes, 2.8% by cardiac diseases, 4.7% by malignant tumors (21.4% breast cancer, 25.0% genito-urinary tumors, 7.1% gastrointestinal tumors, 3.6% lung cancer, 32.1% skin cancers, 10.8% other tumors), 20% by psychiatric disorders (86.6 % anxiety-depressive disorder, 13.4% psychosis or bipolar disorder) and 9.7% by autoimmune diseases (64,7% autoimmune thyroiditis, 9.8% psoriasis, 7,8% celiac disease, 17,7% other mixed autoimmune diseases). Diabetes type II and autoimmune disorders (except for thyroid dysfunctions) were equally detected before and after MS diagnosis, while the remaining comorbidities onset was more frequent during MS disease course. (Graphics 1-4)

	N=601 N (%)
AGE, Mean ±SD	43.9 ± 11.7
EDSS, Mean ±SD	2.7 ± 1.9
≤ 3	460 (73.6%)
3.5-6.5	109 (18.2%)
≥ 7	33 (5.5%)
SM TYPE	
Primary progressive	11 (1.2%)
Secondary progressive	103 (16.5%)
Relapsing remitting	482 (80.2%)
GENDER	
Males	195 (32.4%)
Females	406 (67.6%)

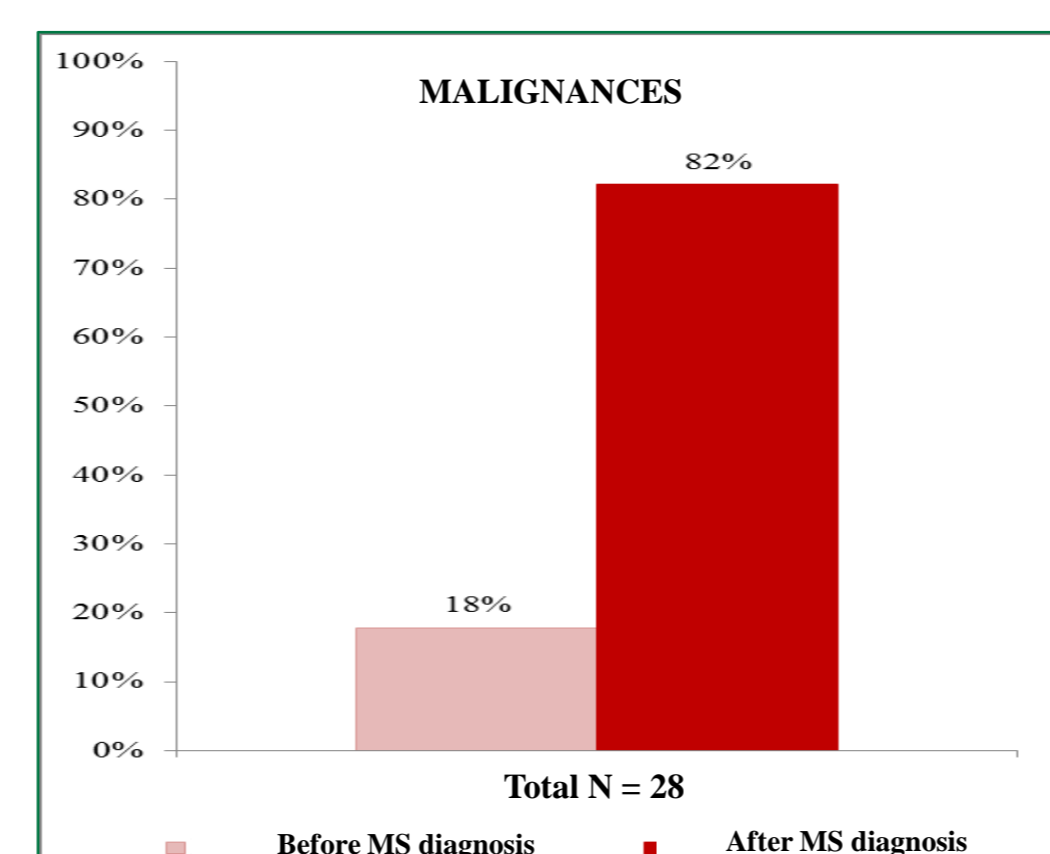
Table 1: Demographic and clinical characteristics of the patients



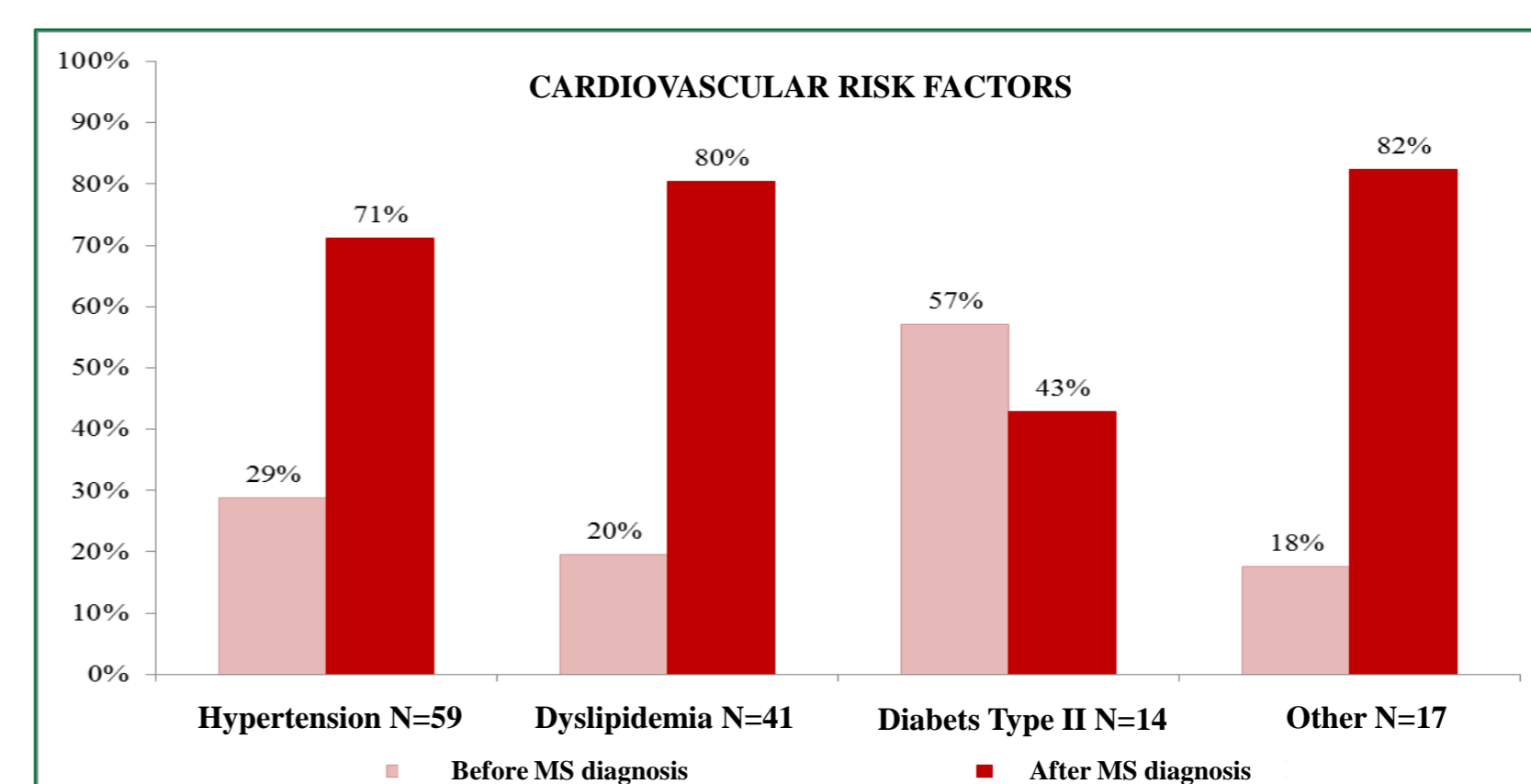
Graphic 1: % of patients with psychiatric disorders before/after MS diagnosis



Graphic 2: % of patients with autoimmune diseases before/after MS diagnosis



Graphic 3: % of patients with malignancies before/after MS diagnosis



Graphic 4: % of patients with cardiovascular risk factors before/after MS diagnosis

DISCUSSION AND CONCLUSIONS:

We reviewed the prevalence of comorbidities in a single MS center. The high prevalence of comorbidities in our cohort underlines the complexity of MS patients, which is not confined to MS direct complications. A high rate of subjects developed comorbidities after diagnosis. An adequate identification and a prompt management of comorbidities during MS disease course is essential and might be the key to ameliorate the health care utilization, prevent serious adverse events during MS treatment and obtain better clinical outcomes.

References

- Marrie RA, Cohen J, Stuve O, et al. A systematic review of the incidence and prevalence of comorbidity in multiple sclerosis: overview. *Multiple sclerosis* 2015;21:263-281.
- Culpepper WJ, 2nd. The incidence and prevalence of comorbidity in multiple sclerosis. *Multiple sclerosis* 2015;21:261-262.
- Marrie RA, Horwitz R, Cutter G, Tyry T, Campagnolo D, Vollmer T. Comorbidity delays diagnosis and increases disability at diagnosis in MS. *Neurology* 2009;72:117-124.

