Comment on: Morbidity and mortality associated with the restrictive spirometric pattern: a longitudinal study

We read with interest the paper by Guerra et al1 profiling the demographic/clinical characteristics and prospectively assessing the prognosis of subjects with a restrictive spirometric pattern enrolled in the TESAOD population-based study. The manuscript has the merit of following up a large number of patients for 14 years and investigating how selected co-morbidities are relevant to survival.2

The results of this study deserve comparison with those published in 2008 by our research group on 1265 subjects aged 65–97 years.3 First, in an older population (mean age 73.4 years) we found a comparable prevalence of restriction at spirometry (12% vs 10.9%), although restriction is an age-related phenomenon and, thus, is expected to be much lower in the younger population (ie, 6.6% in a population aged 42.2 years).4 Second, the study by Guerra and colleagues strongly reproduces the increased mortality risk rates (MRRs) observed in our work: for all (HR 1.89; 95% CI 1.3 to 2.3) and cardiac (MRR 1.51; 95% CI 0.60 to 3.78) (Scarlata et al4 vs HR 2.0; 95% CI 1.5 to 3.1 (Guerra et al)) and cerebrovascular (MRR 4.79; 95% CI 1.54 to 14.84 (Scarlata et al) vs HR 2.4; 95% CI 0.9 to 6.3 (Guerra et al)). This finding is consistent with restrictive lung dysfunction affecting survival in a predictable manner.

At variance with our study, that of Guerra and colleagues lacks information about clinical correlates of restrictive pulmonary disease. The Cox proportional hazard models are adjusted only for sex, age and body mass index, but not for concomitant conditions known to be associated with restriction. Indeed, we found that co-morbidities such as kyphosis of the spine (OR 2.40; 95% CI 1.58 to 3.64) and diabetes mellitus (OR 1.66; 95% CI 1.00 to 2.74) as well as the physical (Activities of Daily Living scale, OR 2.17; 95% CI 1.32 to 3.58; 6 minute walking test, OR 1.75; 95% CI 1.15 to 2.67) and cognitive (Mini Mental State Examination, OR 2.05; 95% CI 1.27 to 3.32) status are strong independent correlates of restriction. In conclusion, the paper by Guerra and colleagues has the merit of confirming that the restrictive spirometric pattern is highly prevalent and is associated with a clinical profile and risk factors differing from those of obstructive lung disease. However, research is needed to expand our knowledge of the mechanisms underlying restriction as well as to explain the link between restriction and frailty. Clarifying these issues will allow the implementation of both guided screening and preventive interventions.

Simone Scarlata,1 Claudio Pedone,1 Filippo L Fimognari,1,2 Vincenzo Bellia,3 Francesco Forastiere,4 Raffaele Antonelli Incalzi1,5

1Unit of Respiratory Pathophysiology, Chair of Geriatrics, University Campus Bio-Medico, Rome, Italy; 2Unit of Respiratory Physiopathology, Internal Medicine Division, Ospedale ‘I Parodi Delfino’, Colleferro, Rome, Italy; 3Institute of General Medicine and Pneumology, Università di Palermo, Palermo, Italy; 4Department of Epidemiology, Roma E Health Authority, Rome, Italy; 5San Raffaele Foundation, Cittadella della Carita, Taranto, Italy

Correspondence to Simone Scarlata, Servizio di Fisiopatologia Respiratoria, Università Campus Bio-Medico, Via A. del Portillo, 200, Rome, Italy; s.scarlata@unicampus.it

Competing interests None.

Provenance and peer review Not commissioned; not externally peer reviewed.

Accepted 30 August 2010

Thorax 2010;65:1. doi:10.1136/thx.2010.149419

REFERENCES

Comment on: Morbidity and mortality associated with the restrictive spirometric pattern: a longitudinal study

Simone Scarlata, Claudio Pedone, Filippo L Fimognari, Vincenzo Bellia, Francesco Forastiere and Raffaele Antonelli Incalzi

*Thorax* published online October 22, 2010

Updated information and services can be found at:
http://thorax.bmj.com/content/early/2010/10/22/thx.2010.149419

These include:

**References**
This article cites 4 articles, 2 of which you can access for free at:
http://thorax.bmj.com/content/early/2010/10/22/thx.2010.149419#BIBL

**Email alerting service**
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Notes**

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/