

Respiratory Medicine in general practice: what is the role of the pulmonary specialist?

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Aside from their specific topic, two papers in the present issue of the journal [1, 2] can be also viewed as a topical contribution to the debate on the role of the General Practitioner (GP) and the level of interaction between the GP and the Pulmonary Specialist that is expected to achieve correct management of respiratory patients in primary care.

The results of the two studies differ largely in their outcome. The article on pneumonia [1] concludes that in Italy, management of community acquired pneumonia (CAP) by GPs is effective, and only in severe cases referral to the specialist or hospital is really necessary. Obviously, different steps are still in need of significant improvement, such as prompt access to radiology and laboratory. About 40% of patients received a diagnosis of CAP based only on clinical data having had no chest X-ray, but the outcome of CAP was not influenced by the performance of a chest X-ray. It is interesting to note from the literature that radiographic features of acute infection do seem to influence the management of lower respiratory tract infections in the community [3], but the different settings of the two studies do not allow a comparison of results. Fortunately, the empirical antibiotic treatment of CAP was effective in most cases, avoiding a large number of hospital admissions (only 8.5% of all patients needed hospitalisation for worsening of the clinical picture, with a figure of about 14% in patients of ≥ 65 years of age, comorbidities and monotherapy). Interestingly, about 64% of all patients reported at least one concomitant chronic disease as a risk factor. The paper is descriptive and it is therefore not possible to have comparison data between different antibiotic regimens. The first choice agents of Italian GPs are quite different from those recommended by most guidelines: parenteral 3rd generation cephalosporins represented the most used antibiotics (more than 50% of patients, alone or in combination). Further prospective studies would be needed to evaluate whether the peculiar prescrip-

tion habits of Italian GPs have a significant influence on the high rate of success in domiciliary treatment of CAP. In addition, despite the present high success rate of empirical management, prospective studies are needed on the impact of instrumental diagnosis on CAP management and outcomes in general practice.

On the contrary, the article on chronic obstructive pulmonary disease (COPD) [2] is somewhat disappointing in concluding that spirometry is not yet a common standard for diagnosis, despite large accreditation of guidelines, such as GOLD [4] or ERS/ATS guidelines [5], also by GPs' scientific societies. Discrepancies between guideline recommendations and COPD management in general practice have been underlined by several surveys in different European countries [6-8].

There is a general agreement that spirometry must be implemented because of the large underdiagnosis of COPD at present and of the epidemiological trend alerting physicians and health authorities that this is merely the tip of the iceberg [4, 5].

What is the gap between implementation of guidelines and their current application? The problems may be set at three different levels: cultural (e.g. graduate and post-graduate education), organizational, and economical. The first level is one causing the most worry, since according to G. Caramori's study 30% of Italian GPs think that spirometry is not necessary to diagnose COPD [2]. It is not known whether this figure is decreasing following the numerous CME (continuous medical education) meetings on COPD guidelines held all over Italy in the latest years, mainly sponsored by drug companies and held by Pulmonologists. It is suspected that guidelines written and presented by specialists, reflect a compromise among specialists and does not take many GPs' problems into account. Therefore, although scientifically correct and eventually agreed on by all parties (which does not seem to be the case regarding spirometry for 30% of Italian GPs), their implementation may prove very difficult. It is

well known that there is an important gap between evidence, as integrated and reported by guidelines, and clinical practice, particularly in primary care [9]. In my experience, there is in some cases a misunderstanding that asthma or COPD can be treated in the same way with a combination (may be a very practical fixed combination) of inhaled corticosteroids and long-acting beta-2-agonists, therefore respiratory function does not add much to management criteria. This is obviously an error, because many patients are at risk of over or under-treatment, in particular if we think that asthma or COPD management is not only drug therapy and drug treatment *per se* may be not the same in the different stages of severity [4, 5].

Secondly, referral to specialist facilities is often problematic dissuading GPs from requesting a spirometry [2]. Office spirometry, as an alternative, is being supported by many specialist centres in different countries, but results have been up to now inconsistent according to the different experimental setting. In general, all studies agree that office spirometry is feasible [10, 11], but studies on a large scale show contradictory results in the regular application of spirometry by GPs [12, 13] as compared to studies on a small number of general practices and strict control of technical variables and quality control [14, 15]. The experience in Italy on large numbers of general practices is disappointing, as stated by G. Caramori *et al.* commenting on the VEMS project that was terminated before conclusion [2]. On the same line, another large study, the SPACE (office spirometry in asthma and COPD, a comparative evaluation) involving 570 GPs all over Italy confirmed the feasibility of office spirometry. However it also demonstrated great difficulties in routine application and limited impact on daily practice in the diagnosis of asthma and COPD as compared to conventional evaluation of patients, including case history supported by a detailed questionnaire and physical examination [16]. Nevertheless, it should be noted that studies with negative results are not necessarily negative due to the advancing of knowledge and the implementation of good clinical practice: the VEMS and SPACE studies may mean that office spirometry, if carried out in the way they have been up to now in Italy (i.e. giving the spirometer to the individual GPs and expecting him/her to perform and interpret as many spirometries as possible, may be in every smoker, or performing the test and transmitting data to a specialist for interpretation) is bound to fail. As a matter of fact, the individual GP is overwhelmed by clinical and bureaucratic commitments, and spirometry is not like passive instrumental tests such as EKG: it requires time to explain the procedure to the patient and is highly cooperation-dependent; it must be performed at least three times in order to select the best flow/volume loop; interpretation of the test can be automatically supported by some devices, but either way it requires a certain degree of experience. In fact, it is not the ideal type of instrumental test for most single Italian GPs at the moment, but the data in literature and the new plans

for re-organising general practice in Italy show us a way with a greater likelihood of success. A vast general practice held by a number of GPs with different areas of medical interest working together, one or two of them in charge of respiratory evaluations, a nurse or a technician supporting all the instrumental diagnostics of the practice, including spirometry; finally, a close connection with a reference specialistic centre for referral of difficult cases and quality control.

Last but not least, strictly connected to the organisation of spirometry services in general practice are the economical issues. In Italy, office spirometry is not yet reimbursed by the National Health Service, in contrast with other countries, such as UK, where the test is regularly reimbursed and GPs work in group with the support of technical personnel.

In conclusion, a great need for close interaction and partnership between GPs and Pulmonologists emerges strongly. Agreement on guidelines and their dissemination must not be unidirectional (GPs must be invited to contribute to the development of guidelines from the beginning, and post-graduate education must be planned by GPs and Pulmonologist cooperatively). In each geographic area application of international guidelines must be translated into the specific regional context by GPs and specialists in a collaborative way, adapting practical implementation to the organizing and economical peculiarities of the local health system. Specialistic facilities must be available more promptly (e.g. chest x-ray or laboratory for CAP and spirometry for COPD or asthma), and whenever possible conditions must be ensured to be applied directly in a practical and reliable manner to general practice through instrumental diagnostics such as the case for spirometry in asthma and COPD. A good premise is the increasing involvement of Pulmonologists' and GPs' scientific societies in common projects and meetings (see as an example the close link between the European Respiratory Primary Care Conference and the European Respiratory Society Annual meeting 2004 last September in Glasgow); the same is for different scientific societies in Italy. We are all aware that the distance towards a true partnership between GPs and Pulmonologists for the standard management of respiratory patients, in particular those requiring long-term care, such as in chronic obstructive disorders, is quite long, but I am confident that we are moving (slowly) in the right direction.

References

1. Sanguinetti CM, De Benedetto F, Donner CF and the ISOCAP Study Group. GP management of community-acquired pneumonia in Italy (ISOCAP study). *Monaldi Arch Chest Dis* 2005; 63: 23-29.
2. Caramori G, Bettoncelli G., Tosatto R, Arpinelli A, Visonà G, Invernizzi G, Gerace A, Adcock IM, Ciaccia A. Underuse of spirometry by general practitioners for the diagnosis of COPD in Italy. *Monaldi Arch Chest Dis* 2005; 63: 6-12.

3. Simpson JCG, Hulse P, Taylor PM, Woodhead M. Do radiographic features of acute infection influence management of lower respiratory tract infections? *Eur Respir J* 1998; 12: 1384-1387.
4. HLBI/WHO Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease. *Am J Respir Crit Care Med* 2001; 163: 1256-1276.
5. Celli BR, MacNee W, and ATS/ERS Task Force. Standards for the diagnosis and treatment of patients with COPD: a summary of the ATS/ERS position paper. *Eur Respir J* 2004; 23: 932-946.
6. Trakada G, Spiropoulos K. Chronic obstructive pulmonary disease management among primary healthcare physicians. *Monaldi Arch Chest Dis* 2000; 55: 201-204.
7. Decramer M, Bartsch P, Pauwels R, Yernault JC. Management of COPD according to guidelines: a national survey among Belgian physicians. *Monaldi Arch Chest Dis* 2003; 59: 62-80.
8. Rutschmann OT, Janssens JP, Vermeulen B, Sarasin FP. Knowledge of guidelines for the management of COPD: a survey of primary care physicians. *Respir Med* 2004; 98: 932-937.
9. De Maeseneer JM, van Driel ML, Green LA, van Weel C. The need for research in primary care. *Lancet* 2003; 362: 1314-1319.
10. Griffiths C, Feder G, Wedzicha J, Foster G, Livingstone A, Marlowe GS. Feasibility of spirometry and reversibility testing for the identification of patients with chronic obstructive pulmonary disease on asthma registers in general practice. *Respir Med* 1999; 93: 903-908.
11. Ferguson GT, Enright PL, Buist AS, Higgins MW. Office spirometry for lung health assessment in adults. A consensus statement from the National Lung Health Education Program. *Chest* 2000; 117: 1146-1161.
12. Chan B, Anderson G, Dales RE. Spirometry utilization in Ontario: practice patterns and policy implications. *CMAJ* 1997 Jan 15; 156: 169-176.
13. Dowson LJ, Yeung A, Allen MB. General practice spirometry in North Staffordshire. *Monaldi Arch Chest Dis* 1999 Apr; 54: 186-188.
14. Buffels J, Degryse J, Heyrman J, Decramer M; DIDASCO Study. Office spirometry significantly improves early detection of COPD in general practice: the DIDASCO Study. *Chest* 2004; 125: 1394-1399.
15. Schermer TR, Jacobs J E, Chavannes NH, Hartman J, Folgering HT, Bottema BJ, van Weel C. Validity of spirometric testing in a general practice population of patients with chronic obstructive pulmonary disease (COPD). *Thorax* 2003; 58: 861-866.
16. Donner CF, Lusuardi M, De Benedetto F, Paggiaro PL, Sanguinetti CM, Poli A, Ferri P, Brazzola G. General practice and office spirometry in asthma and COPD: preliminary data from the prospective, randomized, comparative "SPACE" Italian study. *Eur Respir J* 2004; 24 (suppl. 48): 87s.

