The usefulness of pedometry in patients with chronic obstructive pulmonary disease

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Body: Introduction. Effort tolerance and daily physical activity (DPA) is predictive of quality of life and survival in COPD patients, but still remains difficult to assess them on their real life. Aim: how to relate pedometry with other classical parameters commonly used in pulmonary rehabilitation (PR). Methods. DPA has been evaluated by pedometry to 74 patients with COPD, age 63.55±8.73 (12 stage II, FEV1=60.16±7.78%; 29 stage III, FEV1=39.07±6.30%; 33 stage IV, FEV1=23.1±7.18%). Monitoring for a period of 7 days has been done before and 6 months after a PR of 3 weeks. Results. Values have been widely dispersed with a maximum of 17420 and minimum of 964 steps/24hrs. Average values acquired: lowest in COPD stage IV, still with the highest increase over 6 months of PR +636 steps/24hrs (2476.32±2104.12→3112.63±2088.46 steps/24hrs, p < 0.02); in COPD stage III the increase of DPA was +597 steps/24hrs over 6 months (5627.44±2152.95→6224.42±2105.19, p <0.04), in COPD stage II was the lowest increase +540 steps/24hrs (8724.33 ±2908.34→9264.16±2405.18, p <0.13), probably because the subjects belonging to this stage had the best preserved DPA. A low correlation was found with the 6-minute-walk distance and with the total score Saint George Respiratory Questionnaire (r=0.2). However it demonstrated the positive effects of PR even after 6 months on DPA. Conclusions. DPA decreased opposite COPD stage, it is fluctuant with every subject, dependant of clinical status, weather and daily schedule. Wearing pedometers is very easy and motivational, provided that patients realize that they are being “watched”.