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TELEHEALTHCARE IN COPD – IMPACT ON DRUG ADHERENCE AND GUIDELINE-CONFORM TREATMENT

Master thesis

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Abstract

Background

Telehealthcare (THC) is a new and promising approach for an earlier detection and prevention of acute exacerbations of COPD. Comorbidities and thus polypharmacy being relevant in these patients, it is interesting to consider their medication and to assess the impact of THC on drug adherence and guideline-conform treatment.

Objectives/Aims

To describe the patient cohort, assess the conformity of medication with the international COPD GOLD-guidelines 2015, screen the drugs with the aid of interaction platforms (pharmavista and mediQ) and analyse patients' adherence to medication and THC.

Methods

Data from 40 patients participating in the pilot study "Telehealthcare in COPD – A feasibility trial" has been analysed in this thesis. The cohort has been described according to pulmonology reports. Treatments have been assessed regarding their conformity to the GOLD guidelines 2015, potential drug-drug interactions (IA) have been checked with the aid of two platforms (pharmavista and mediQ) and patients' adherence to medication has been analysed with the aid of a questionnaire including a self-reported adherence method (MMAS-4). Further, patients' adherence to THC has been studied.

Results

The cohort had a mean age of 64.2 ± 8.5 and 55% of the study participants were men. Because of an already high guideline-conformity at the beginning, it has not been possible to show here an impact of THC. Interaction checks with the two platforms at the beginning (mean 6.7 ± 3.8 drugs per patient) and in the end (mean 7.1 ± 4.0 drugs per patient) revealed for pharmavista 66 IA at the beginning vs. 87 in the end, respectively for mediQ 321 IA at the beginning vs. 355 in the end. For pharmavista, at the beginning only 47% of these interactions (31 IA) vs 48% (42 IA) in the end were clinically relevant, respectively 10% (32 IA) at the beginning vs. 12% (43 IA) in the end for mediQ. Neither the presence of IA for each patient, nor the number of IA per patient or the number of clinically relevant IA per patient did vary significantly over the study period. Concerning patients' adherence to medication, 25 patients (63%) reached a maximum score of 4 points in MMAS-4 and so a very good adherence. 27 patients (67%) got drugs from the physician and 25 trial participants (63%) declared not to procure regularly additional OTC drugs. Analysis of the VAS showed that 29 patients out of the cohort (78%) estimated their adherence to COPD medication as 100% both times. Analysis of adherence to THC showed that the study cohort has answered 88% of the online questions and 94% of the trial participants completed the study.

Conclusions

Age and sex of the study cohort answered to our expectations. Effect of THC on conformity of treatments with the GOLD guidelines 2015 could not be assessed in closing manner. Even though interaction checks revealed an important amount of IA, the clinically relevant ones are limited and most of the time well known by the clinician. Serious IA detected were a rare event. Also the effect on patients' adherence to medication was difficult to determine, in view of an already high presence of self-reported good-adherence in the study cohort at the beginning. Excellent adherence was found concerning adherence to THC.