Outreach

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Tables of Contents from Respiratory journals

The links below will take you to the full Tables of Contents.

If you require full articles please email: library@uhbristol.nhs.uk

Thorax
September 2015, Volume 70, Issue 9

Chest
September 2015, Volume 148, Issue 3

European Respiratory Journal
September 2015, Volume 46, Issue 3

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The BIG 4 Bulletin

New NICE Guidance

NG15 Antimicrobial stewardship: systems and processes for effective antimicrobial medicine use
Latest relevant Systematic Reviews from the Cochrane Library

Long-acting muscarinic antagonists (LAMA) added to inhaled corticosteroids (ICS) versus the same dose of ICS alone for adults with asthma

Prolonged antibiotics for non-cystic fibrosis bronchiectasis in children and adults

NHS Behind the Headlines

Is incense smoke more dangerous than tobacco smoke?

Wednesday Aug 26 2015

"Incense may need a health warning over 'toxic’ smoke, claims research,” The Daily Telegraph reports. Analysis of incense smoke, used in both western and Asian religious ceremonies for possibly thousands of years, found it contains many chemicals...

E-cigarettes '95% less harmful than smoking' says report

Wednesday Aug 19 2015

"E-cigarettes are 95% less harmful than tobacco and could be prescribed on the NHS in future to help smokers quit,” BBC News reports. This is the main finding of an evidence review carried out by Public Health England…

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New activity in Uptodate

Direct diaphragmatic pacing potentially harmful in patients with amyotrophic lateral sclerosis (August 2015)

Noninvasive ventilation (NIV) is first-line therapy for patients with amyotrophic lateral sclerosis (ALS) who have ventilatory failure. Based upon preliminary studies in this population that suggested a delay in the need for full mechanical ventilation and improved survival, direct diaphragmatic pacing stimulation (DPS) was approved for humanitarian use. However, a randomized trial of 74 patients with respiratory failure from ALS reported reduced survival when DPS was used in combination with NIV, compared with patients treated with NIV alone (11 versus 23 months) [6]. Thus, we suggest that NIV continues as first-line therapy in this population and that DPS remain investigational until larger randomized trials clarify whether or not it has true benefit. (See "Pacing the diaphragm: Patient selection, evaluation, implantation, and complications", section on 'Amyotrophic lateral sclerosis'.)

Adjunctive glucocorticoids for adults with severe community-acquired pneumonia (August 2015)

For hospitalized patients with community-acquired pneumonia (CAP), glucocorticoids as adjunctive therapy to antibiotics have the potential to reduce the inflammatory response and decrease morbidity. A 2015 meta-analysis of randomized trials that included hospitalized patients with CAP suggested a modest mortality benefit for adjunctive glucocorticoids [7]. A reduction in all-cause mortality was of borderline statistical significance (relative risk [RR] 0.67, 95% CI 0.45-1.01; risk difference 2.8 percent). Rates of mechanical ventilation and acute respiratory distress syndrome were decreased, as were time to clinical stability and duration of hospitalization; rates of hyperglycemia requiring treatment increased.

Clinicians should make the decision whether or not to give glucocorticoids on a case-by-case basis, especially in patients with an elevated risk of adverse effects. Limited evidence suggests that infections caused by certain pathogens (eg, influenza virus, Aspergillus spp) may be associated with worse outcomes in the setting of glucocorticoid use [8,9]; given these concerns, we avoid adjunctive glucocorticoids if one of these pathogens is detected. (See "Treatment of community-acquired pneumonia in adults who require hospitalization", section on 'Glucocorticoids'.)

Cognitive-behavioral therapy for insomnia (August 2015)

Cognitive-behavioral therapy for insomnia (CBT-I) is a safe and effective alternative to medication in patients with chronic insomnia. A 2015 meta-analysis identified 20 randomized trials of CBT-I in over 1100 participants with chronic insomnia; CBT-I approaches incorporated at least three of the following: cognitive therapy, stimulus control, sleep restriction, sleep hygiene, and relaxation [33]. Compared with inactive control conditions, CBT-I improved sleep on a variety of outcome measures, including sleep onset latency, wake time after sleep onset, and sleep efficiency. CBT-I is a particularly
good option for patients who are more susceptible to side effects of medication (eg, older adults, patients with multiple medical comorbidities). (See "Treatment of insomnia", section on 'Cognitive behavioral therapy'.)

**Lumacaftor-ivacaftor for patients with cystic fibrosis and homozygous for the F508del mutation (August 2015)**

Lumacaftor-ivacaftor is a combination of two cystic fibrosis transmembrane conductance regulator (CFTR) modulators that was approved by the US Food and Drug Administration in July 2015. The approval was based on two randomized trials with 1100 homozygous F508del subjects ages 12 years and older [64]. Compared with placebo, the groups receiving lumacaftor-ivacaftor for 24 weeks had small but statistically significant improvements in percent predicted FEV1 and body mass index (BMI), and reduced frequency of pulmonary exacerbations. Adverse effects included chest discomfort and dyspnea and were more common in subjects with worse baseline lung function. The improvement in absolute FEV1 from baseline compared with placebo (2.6 to 4 percentage points) is similar in magnitude to that achieved by treatments with inhaled dornase alfa or tobramycin. We suggest use of lumacaftor-ivacaftor for F508del homozygotes because it has modest short-term benefits and is tolerated by most patients. However, the expense of the drug and drug-drug interactions should be considered when deciding on its use. (See "Cystic fibrosis: Overview of the treatment of lung disease", section on 'Efficacy'.)

**E-cigarette use and use of combustible tobacco products (August 2015)**

Studies have associated e-cigarette use with an increased risk of conventional cigarette smoking among youth. A new prospective study was conducted in 2530 ninth-grade students who had never used a combustible tobacco product and compared students who had ever used e-cigarettes with never users [17]. Compared with never users, ever users of e-cigarettes were more likely to report use of any combustible tobacco product at both 6-month (31 versus 8 percent) and 12-month (25 versus 9 percent) follow-up. Additionally, after adjusting for other risk factors for smoking, baseline e-cigarette use was associated with a greater likelihood of use of any combustible tobacco product (OR 2.7), including conventional cigarettes, cigars, and hookahs. (See "E-cigarettes", section on 'Effect on smoking initiation among youth'.)
Forgotten how to conduct a search using the NHS Health Databases Advanced Search (HDAS)? Not sure how to get the best out of your search strategy? This quick guide will help you fill in the blanks...

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1) Choose your databases (or select all)
2) Enter in your search terms
   - Choose which fields to search (the default is title and abstract)
   - Break each concept down into all possible terms (British/American spellings, acronyms, alternative terms etc), then combine using ‘OR’
   - More useful database search tips:
     - **Truncation**: A substitute for any letters (or none)  
       E.g. p*ediatric* = paediatric, pediatrics, paediatrician etc.
     - **Inverted commas**: Specifies that adjacent words should be searched as phrases  
       E.g. “noninvasive ventilation”
     - **ADJ**: Adjacency  
       Specifies the maximum number of words that can appear between two search terms  
       E.g. Random* ADJ1 trial
3) Combine the different search concepts using ‘AND’
4) Apply limits e.g. publication date
5) Remove duplicates (this function can be slow)
6) Click on ‘unique results’ to see you results

But remember, the Library team can carry out searches on your behalf or provide you with assistance. Email [library@uhbristol.nhs.uk](mailto:library@uhbristol.nhs.uk) for help with literature searches.
Title: Long-term effect of a low-intensity smoking intervention embedded in an adherence program for patients with hypercholesterolemia: Randomized controlled trial

Citation: Preventive Medicine, August 2015, vol./is. 77/(155-161), 0091-7435;1096-0260 (August 01, 2015)


Abstract: Objective: We evaluated the long-term effect of a smoking intervention embedded in an adherence program in patients with an increased risk for cardiovascular disease. Method: Secondary analysis of a randomized controlled trial: In 2002-2004, 8108 patients with hypercholesterolemia were enrolled from general practices in Germany. Patients received a 12-month adherence program and statin medication (intervention) or statin medication only (control). The program aimed to improve adherence to medication and lifestyle by educational material, mailings, and phone calls. Smoking was self-reported at baseline and every 6. months during the 3-year follow-up. Results: In total, 7640 patients were analyzed. At baseline, smoking prevalence was 21.7% in the intervention and 21.5% in the control group. Prevalence decreased in both groups to 16.6% vs. 19.5%, 15.3% vs. 16.8%, and 14.2% vs. 15.6% at the 12-, 24-, and 36-month follow-up. The intervention had a beneficial effect on smoking differing over time (group x. time: P=0.005). The effect was largest after 6 and 12. months [odds ratios (95% confidence intervals): 0.67 (0.54-0.82) and 0.63 (0.51-0.78)]. The effect decreased until the 18-month follow-up [0.72 (0.58-0.90)] and was not significant after 24. months. Conclusion: A low-intensity smoking intervention embedded in an adherence program can contribute to smoking cessation although the intervention effect diminished over time. Trial Registration: ClinicalTrials.gov (www.clinicaltrials.gov): NCT00379249.

Title: Vitamin D and asthma: Current perspectives

Citation: Current Opinion in Allergy and Clinical Immunology, August 2015, vol./is. 15/4(375-382), 1528-4050;1473-6322 (23 Aug 2015)

Author(s): Jiao J., Castro M.

Abstract: Purpose of review To review the current evidence on the relationship between vitamin D and asthma. Recent findings The rising morbidity and tremendous socioeconomic burden of asthma have prompted efforts to seek modifiable environmental and nutritional factors that contribute to the asthma epidemic. The association between low levels of vitamin D and asthma has been supported by many, but not all observational and epidemiologic studies. Recently, several controlled clinical trials have been undertaken to explore the effect of vitamin D supplementation on asthma control and respiratory tract infections. While some trials support the beneficial role of vitamin D supplementation in reducing asthma severity in children, several trials have found no beneficial role in adults. Summary Given the high prevalence of vitamin D insufficiency in children and adults worldwide and recent randomized controlled trials of vitamin D in asthma, supplementation with vitamin D cannot be recommended as adjunctive therapy for asthma.

Title: Rehabilitation in patients with radically treated respiratory cancer: A randomised controlled trial comparing two training modalities

Citation: Lung Cancer, August 2015, vol./is. 89/2(167-174), 0169-5002;1872-8332 (01 Aug 2015)

Abstract: Introduction: The evidence on the effectiveness of rehabilitation in lung cancer patients is limited. Whole body vibration (WBV) has been proposed as an alternative to conventional resistance training (CRT).

Methods: We investigated the effect of radical treatment (RT) and of two rehabilitation programmes in lung cancer patients. The primary endpoint was a change in 6-min walking distance (6MWD) after rehabilitation. Patients were randomised after RT to either CRT, WBVT or standard follow-up (CON). Patients were evaluated before, after RT and after 12 weeks of intervention. Results: Of 121 included patients, 70 were randomised to either CON (24), CRT (24) or WBVT (22). After RT, 6MWD decreased with a mean of 38. m (95% CI 22-54) and increased with a mean of 95. m (95% CI 58-132) in CRT (p< 0.0001), 37. m (95% CI -1-76) in WBVT (p= 0.06) and 1. m (95% CI 34-36) in CON (p= 0.95), respectively. Surgical treatment, magnitude of decrease in 6MWD by RT and allocation to either CRT or WBVT were prognostic for reaching the minimally clinically important difference of 54. m increase in 6MWD after intervention. Conclusions: RT of lung cancer significantly impairs patients' exercise capacity. CRT significantly improves and restores functional exercise capacity, whereas WBVT does not fully substitute for CRT.

Title: Managing the safety of inhaled corticosteroids in COPD and the risk of pneumonia

Citation: Expert Opinion on Drug Safety, August 2015, vol./is. 14/8(1237-1247), 1474-0338;1744-764X (01 Aug 2015)

Author(s): Liapikou A., Toumbis M., Torres A.

Abstract: Introduction: Inhaled corticosteroids (ICS) are known to increase the risk of pneumonia in patients with chronic obstructive pulmonary disease. To estimate the association between ICS and pneumonia among users of ICS relative to non-ICS users and to examine whether this risk is dose related, class related and what's its association with the pneumonia-mortality or overall mortality. Areas covered: Through a comprehensive literature search of MEDLINE, EMBASE, Cochrane Library, and ClinicalTrials.gov from inception to February 2015, we identified randomized controlled trials of ICS therapy lasting at least 6 months. We conducted meta-analyses to generate summary estimates comparing ICS with non-ICS treatment on the risk of pneumonia. Expert opinion: ICS alone or in combination with long-acting beta-agonists are associated with an increased risk of pneumonia but have no effect on pneumonia related mortality. It is important to identify those patients to benefit the most from ICS, as those with frequent exacerbations, a severe airway obstruction, a positive bronchodilator test or a sputum eosinophilia despite treatment.

Title: Evidence for the efficacy and safety of anti-interleukin-5 treatment in the management of refractory eosinophilic asthma

Citation: Therapeutic Advances in Respiratory Disease, August 2015, vol./is. 9/4(135-145), 1753-4658;1753-4666 (16 Aug 2015)

Author(s): Hilvering B., Xue L., Pavord I.D.

Abstract: Two recent phase III trials in patients with severe eosinophilic asthma have shown that anti-interleukin 5 (IL-5) therapy with mepolizumab reduces the frequency of asthma attacks, improves symptoms and allows patients to reduce oral glucocorticoid use without loss of control of asthma. An earlier large 616 patient Dose Ranging Efficacy And safety with Mepolizumab in severe asthma (DREAM) study had shown that the only variables associated with treatment efficacy were a prior history of asthma attacks and the peripheral blood eosinophil count. The link between blood eosinophil counts and treatment efficacy is biologically obvious given that IL-5 has a pivotal role in eosinophil production, proliferation and chemotaxis. It is also clinically relevant as the blood eosinophil count is routinely measured and thus readily available in patients with asthma. Recognition of the link between airway or blood eosinophilia and treatment response was also important in the clinical testing of the alternative IL-5 blocker, such as reslizumab, which is currently being evaluated in a phase III randomized controlled trial (RCT) after having shown to improve lung function, improve symptom score and reduce sputum eosinophilia in a smaller phase IIb study. In addition, benralizumab, an IL-5alpha receptor blocker, has shown good effects in a phase IIb RCT with patients with severe asthma that had sputum eosinophilia and more recently in a phase IIa trial with patients with eosinophilic chronic obstructive pulmonary disease. Therefore anti-IL-5 treatment seems generally effective in eosinophilic asthma, either assessed by blood or airway eosinophilia. This factor together with the impressive clinical efficacy and good safety profile make
anti-IL-5 (mepolizumab, reslizumab) and benralizumab (anti-IL-5 receptor alpha) very promising drugs for the treatment of patients with severe eosinophilic asthma, a subgroup that is in desperate need of better treatments.

Title: Cost-utility analysis of daily versus intermittent inhaled corticosteroids in mild-persistent asthma

Citation: Pediatric Pulmonology, August 2015, vol./is. 50/8(735-746), 8755-6863;1099-0496 (01 Aug 2015)

Author(s): Rodriguez-Martinez C.E., Nino G., Castro-Rodriguez J.A.

Abstract: Introduction Despite the many benefits that have been demonstrated by the continuous administration of inhaled corticosteroids (ICS) in persistent asthma, a new strategy for mild-asthma is emerging, consisting of using intermittent or as-needed ICS treatment in conjunction with short-acting beta2 agonists in response to symptoms. However, no previous studies have reported an economic evaluation comparing these two therapeutic strategies. Methods A Markov-type model was developed in order to estimate costs and health outcomes of a simulated cohort of pediatric patients with persistent asthma treated over a 12-month period. Effectiveness parameters were obtained from a systematic review of the literature. Cost data were obtained from official databases provided by the Colombian Ministry of Health. The main outcome was the variable “quality-adjusted life-years” (QALYs). Results For the base-case analysis, the model showed that compared to intermittent ICS, daily therapy with ICS had lower costs (US$437.02 vs. 585.03 and US$704.62 vs. 749.81 average cost per patient over 12 months for school children and preschoolers, respectively), and the greatest gain in QALYs (0.9629 vs. 0.9392 QALYs and 0.9238 vs. 0.9130 QALYS for school children and preschoolers, respectively), resulting in daily therapy being considered dominant. Conclusions The present analysis shows that compared to intermittent therapy, daily therapy with ICS for treating pediatric patients with recurrent wheezing and mild persistent asthma is a dominant strategy (more cost effective), because it showed a greater gain in QALYs with lower total treatment costs. Pediatr Pulmonol. 2015; 50:735-746.

Title: Cost Effectiveness of Preventive Treatment for Tuberculosis in Special High-Risk Populations

Citation: PharmacoEconomics, August 2015, vol./is. 33/8(783-809), 1170-7690;1179-2027 (01 Aug 2015)

Author(s): Diel R., Lampenius N., Nienhaus A.

Abstract: Objective: In view of the goal of eliminating tuberculosis (TB) by 2050, economic evaluations of interventions against the development of TB are increasingly requested. Little research has been published on the incremental cost effectiveness of preventative therapy (PT) in groups at high risk for progression from latent TB infection (LTBI) with Mycobacterium TB (MTB) to active disease. A systematic review of studies with a primary focus on model-driving inputs and methodological differences was conducted. Methods: A search of MEDLINE, the Cochrane Library and EMBASE to July 2014 was undertaken, and reference lists of eligible articles and relevant reviews were examined. Results: A total of 876 citations were retrieved, with a total of 24 studies being eligible for inclusion, addressing six high-risk groups other than contact persons. Results varied considerably between studies and countries, and also over time. Although the selected studies generally demonstrated cost effectiveness for PT in HIV-infected subjects and healthcare workers (HCWs), the outcome of these analyses can be questioned in light of recent epidemiologic data. For immigrants from high TB-burden countries, patients with end-stage renal disease, and the immunosuppressed, now defined as further vulnerable groups, no consistent recommendation can be taken from the literature with respect to cost effectiveness of screening and treating LTBI. When the concept of a fixed willingness-to-pay (WTP) threshold as a prerequisite for final categorization was used, the sums ranged between 'no specification' and US$100,000 per quality-adjusted life-year. Conclusions: To date, incremental cost-effectiveness analyses on PT in groups at high risk for TB progression, other than contacts, are surprisingly scarce. The variation found between studies likely reflects variations in the major epidemiologic factors, particularly in the estimates on the accuracy of the tuberculin skin test (TST) and interferon-gamma release assays (IGRA) as screening methods used before considering PT. Further research, including explicit evaluation of local epidemiological conditions, test accuracy, and methodology of WTP thresholds, is needed.

Title: Efficacy of erdosteine 900 versus 600 mg/day in reducing oxidative stress in patients with COPD exacerbations: Results of a double blind, placebo-controlled trial
Citation: Pulmonary Pharmacology and Therapeutics, August 2015, vol./is. 33/(47-51), 1094-5539;1522-9629 (01 Aug 2015)

Author(s): Dal Negro R.W., Visconti M., Turco P.

Abstract: Background: Acute exacerbations of chronic obstructive pulmonary disease (AECOPD) are associated with increased airway and systemic inflammation. There is evidence that erdosteine accelerates recovery from AECOPD by reducing airway inflammation. Aim: To investigate the dose-dependent antioxidant/anti-inflammatory activity of erdosteine in COPD patients. Methods: In this single-centre, double blind, double dummy study, patients with mild-to-moderate COPD (GOLD stage II-III), were randomised to receive either placebo or two dosages of oral erdosteine (300mg tid or 300mg bid+1 capsule of indistinguishable placebo) for 28 days in addition to their standard treatment. Primary variables were plasma reactive oxygen species (ROS) and 8-isoprostane levels, while secondary variable was lung function (FEV1; FEV1/FVC; FEV1 short-term reversibility), all assessed in baseline; every two weeks during the study, and one week after the end of the study. Results: Baseline demographic characteristics, plasma ROS and 8-isoprostane levels and lung function were not significantly different in the 24 eligible patients (14 males, aged 38-75 years). At 2 weeks, there was a dose-dependent decrease in ROS in the erdosteine groups. By week 4 there were significant differences in ROS levels compared to baseline between patients receiving 900mg/day (p<0.003) and those receiving 600mg/day (p<0.04). This effect continued in the follow-up week (p<0.021). Erdosteine also lowered 8-isoprostane plasma levels after 4 weeks (p<0.01), and this effect lasted over the post-treatment week. Moreover, % FEV1 reversibility after salbutamol 400mcg obtained after a 4-week treatment of erdosteine 900mg/day was significantly higher than that obtained after 600mg/day (p<0.01). Erdosteine was well tolerated and no treatment-related adverse event was reported. Conclusions: Results confirm the antioxidant dose- and time-dependent activity of erdosteine, and support the utility of including erdosteine in the therapeutic strategy for the prevention and treatment of oxidative stress-induced inflammation, which frequently leads to AECOPD occurrence.

Title: Interferon gamma release assays for diagnosis of pleural tuberculosis: A systematic review and meta-analysis

Citation: Journal of Clinical Microbiology, August 2015, vol./is. 53/8(2451-2459), 0095-1137;1098-660X (01 Aug 2015)

Author(s): Aggarwal A.N., Agarwal R., Gupta D., Dhooria S., Behera D.

Abstract: The role of interferon gamma release assays (IGRAs), although established for identifying latent tuberculosis, is still evolving in the diagnosis of active extrapulmonary tuberculosis. We systematically evaluated the diagnostic performance of blood-and pleural fluid-based IGRAs in tuberculous pleural effusion (TPE). We searched the PubMed and Embase databases for studies evaluating the use of commercially available IGRAs on blood and/or pleural fluid samples for diagnosing TPE. The quality of the studies included was assessed through the QUADAS-2 tool. The pooled estimates of sensitivity and specificity with 95% confidence intervals (95% CI) were generated using a bivariate random-effects model and examined using forest plots and hierarchical summary receiver operating characteristic (HSROC) curves. Indeterminate IGRA results were included for sensitivity calculations. Heterogeneity was explored through subgroup analysis and meta-regression based on prespecified covariates. We identified 19 studies assessing the T.SPT.TB and/or QuantiFERON assays. There were 20 and 14 evaluations, respectively, of whole-blood and pleural fluid assays, involving 1,085 and 727 subjects, respectively. There was only one good-quality study, and five studies used nonstandard assay thresholds. The pooled sensitivity and specificity for the blood assays were 0.77 (95% CI, 0.71 to 0.83) and 0.71 (95% CI, 0.65 to 0.76), respectively. The pooled sensitivity and specificity for the pleural fluid assays were 0.72 (95% CI, 0.55 to 0.84) and 0.78 (95% CI, 0.65 to 0.87), respectively. There was considerable heterogeneity; however, multivariate meta-regression did not identify any covariate with significant influence. There was no publication bias for blood assays. We conclude that commercial IGRAs, performed either on whole-blood or pleural fluid samples, have poor diagnostic accuracy in patients suspected to have TPE.

Title: Epithelial sodium and chloride channels and asthma

Citation: Chinese Medical Journal, August 2015, vol./is. 128/16(2242-2249), 0366-6999 (11 Aug 2015)
Author(s): Wang W., Ji H.-L.

Abstract: Objective: To focus on the asthmatic pathogenesis and clinical manifestations related to epithelial sodium channel (ENaC)/chlorine ion channel. Data Sources: The data analyzed in this review were the English articles from 1980 to 2015 from journal databases, primarily PubMed and Google Scholar. The terms used in the literature search were: (1) ENaCs; cystic fibrosis (CF) transmembrane conductance regulator (CFTR); asthma/asthmatic.(2) ENaC/sodium salt; CF; asthma/asthmatic,(3) CFTR/chlorine ion channels; asthma/asthmatic.(4) ENaC/sodium channel/scnn1a/scnn1b/scnn1g/scnn1d/amiloride-sensitive/amiloride-inhibitable sodium channels/sodium salt; asthma/asthmatic, lung/pulmonary/respiratory/tracheal/alveolar, and (5) CFTR; CF; asthma/asthmatic (ti). Study Selection: These studies included randomized controlled trials or studies covering asthma pathogenesis and clinical manifestations related to ENaC/chlorine ion channels within the last 25 years (from 1990 to 2015). The data involving chronic obstructive pulmonary disease and CF obtained from individual studies were also reviewed by the authors. Results: Airway surface liquid dehydration can cause airway inflammation and obstruction. ENaC and CFTR are closely related to the airway mucociliary clearance. Ion transporters may play a critical role in pathogenesis of asthmatic exacerbations. Conclusions: Ion channels have been the center of many studies aiming to understand asthmatic pathophysiological mechanisms or to identify therapeutic targets for better control of the disease.

Title: Indacaterol vs tiotropium in COPD patients classified as GOLD A and B

Citation: Respiratory Medicine, August 2015, vol./is. 109/8(1031-1039), 0954-6111;1532-3064 (01 Aug 2015)

Author(s): Mahler D.A., Kerstjens H.A.M., Donohue J.F., Buhl R., Lawrence D., Altman P.

Abstract: Introduction According to current GOLD strategy, patients with COPD classified as groups A and B may be treated with inhaled bronchodilators, either long-acting beta<inf>2</inf>-agonist (LABA) or long-acting muscarinic antagonist (LAMA). However, there is little guidance on which class of agent is preferred and a lack of prospective data to differentiate the two. Methods In this study, we performed post-hoc analyses of pooled data from two prospective, controlled clinical trials comparing the LABA indacaterol and LAMA tiotropium in 1422 patients with moderate airflow limitation and no history of exacerbations in the previous year. This population fits the definitions of GOLD A and B groups and could be further stratified by symptom severity using Baseline Dyspnea Index (i.e. modeling GOLD A or B) and inhaled corticosteroid (ICS) use at baseline. Outcomes measured after 12 weeks of treatment were lung function (forced expiratory volume in 1 s; FEV<inf>1</inf>), health status (St George's Respiratory Questionnaire; SGRQ), symptoms (Transition Dyspnea Index; TDI) and rescue medication use. Results In ‘GOLD A’ patients not receiving ICS, differences favored indacaterol versus tiotropium (trough FEV<inf>1</inf> 0.05 L; rescue medication use -0.41 puffs/day; TDI total score 0.94 points; SGRQ total score -3.13 units, all p < 0.01). In ‘GOLD B, no ICS’ patients, compared with tiotropium, indacaterol treatment increased trough FEV<inf>1</inf> (0.055 L, p < 0.05) and permitted a larger reduction in rescue medication use (-0.81 puffs/day, p = 0.004). In all patients, and in patients not using ICS, differences favored indacaterol for all variables. Conclusions Our findings suggest that patients in GOLD groups A and B may experience greater benefits with indacaterol than with tiotropium.

Title: Prognosis of new-onset asthma diagnosed at adult age

Citation: Respiratory Medicine, August 2015, vol./is. 109/8(944-954), 0954-6111;1532-3064 (01 Aug 2015)

Author(s): Tuomisto L.E., Ilmarinen P., Kankaanranta H.

Abstract: Background Asthma is a common chronic disease, which can affect patients at any age. Recently, cluster analyses have suggested that patients with asthma can be divided into different phenotypes and that the age at the onset of the disease is a critical defining factor. The prognosis of allergic childhood-onset asthma is relatively well known, whereas the prognosis of adult-onset asthma remains unclear. Methods We undertook a systematic review to identify studies that evaluated the long-term prognosis of new-onset asthma diagnosed at adult age. Criteria used (set 1) were: 1. adult-onset asthma, 2. physician diagnosed asthma (including objective lung-functions) < 1 year before the first visit, 3. follow-up time of at least 5 years, 4. objective lung function measurements used at follow-up and 5. not a comparative trial. Another set of studies (set 2) with less strict criteria were gathered. Results The main result of this systematic review is that the amount of evidence on the prognosis of new-onset asthma diagnosed at adult age is very limited. Only one study (n = 250) fulfilled the
criteria (set 1) and it suggests that the five-year prognosis of new-onset asthma diagnosed at adult age may not be favorable, the proportion of patients being in remission was less than 5%. Furthermore, six additional follow-up studies (n = 964) were identified including mainly patients with adult-onset asthma (set 2). These studies had variable endpoints and the results could not be combined. Conclusion Further follow-up studies that recruit patients with new-onset adult asthma are needed to understand the prognostic factors in adult-onset asthma.

Title: Smoking predisposes to rotator cuff pathology and shoulder dysfunction: A systematic review

Citation: Arthroscopy - Journal of Arthroscopic and Related Surgery, August 2015, vol./is. 31/8(1598-1605), 0749-8063;1526-3231 (01 Aug 2015)

Author(s): Bishop J.Y., Santiago-Torres J.E., Rimmke N., Flanigan D.C.

Abstract: Purpose To investigate the association of smoking with rotator cuff (RTC) disease and shoulder dysfunction, defined as poor scores on shoulder rating scales. Methods A systematic review was performed using a search strategy based on "shoulder AND [smoke OR smoking OR nicotine OR tobacco]." English-language clinical or basic science studies testing the association of smoking and shoulder dysfunction on shoulder rating scales or disease of the soft tissue of the shoulder were included. Level V evidence studies and articles reporting only on surgery outcomes, subjective symptoms, adhesive capsulitis, or presence of fracture or oncologic mass were excluded. Results Thirteen studies were included, comprising a total of 16,172 patients, of whom 6,081 were smokers. All 4 clinical studies addressing the association between smoking and patient-reported shoulder symptoms and dysfunction in terms of poor scores on shoulder rating scales (i.e., Simple Shoulder Test; University of California, Los Angeles shoulder scale; and self-reported surveys) confirmed this correlation with 6,678 patients, of whom 1,723 were smokers. Two of four studies documenting provider-reported RTC disease comprised 8,461 patients, of whom 4,082 were smokers, and found a time- and dose-dependent relation of smoking with RTC tears and a correlation of smoking with impingement syndrome. Smoking was also reported in 4 other articles to be associated with the prevalence of larger RTC tears or tears with pronounced degenerative changes in 1,033 patients, of whom 276 were smokers, and may accelerate RTC degeneration, which could result in tears at a younger age. In addition, 1 basic science study showed that nicotine increased stiffness of the supraspinatus tendon in a rat model. Conclusions Smoking is associated with RTC tears, shoulder dysfunction, and shoulder symptoms. Smoking may also accelerate RTC degeneration and increase the prevalence of larger RTC tears. These correlations suggest that smoking may increase the risk of symptomatic RTC disease, which could consequently increase the need for surgical interventions. Level of Evidence Level IV, systematic review of Level II through IV studies.

Title: Treatment outcomes for HIV and MDR-TB co-infected adults and children: Systematic review and meta-analysis

Citation: International Journal of Tuberculosis and Lung Disease, August 2015, vol./is. 19/8(969-978), 1027-3719 (01 Aug 2015)

Author(s): Isaakidis P., Casas E.C., Das M., Tseretopoulou X., Ntzani E.E., Ford N.

Abstract: BACKGROUND: The incidence of multidrug-resistant tuberculosis (MDR-TB) is increasing in high human immunodeficiency virus (HIV) prevalence settings, with high associated mortality. Treatment outcomes in HIV-infected adults and children are poorly documented. OBJECTIVE: To systematically assess treatment outcomes among HIV-MDR-TB co-infected patients. METHODS: We searched two databases and the proceedings of an annual international conference up to November 2014 for studies reporting on major clinical outcomes among HIV-MDR-TB-co-infected adults and children, and pooled the results using random-effects meta-analysis. RESULT S: Of 4812 abstracts and articles screened, 30 studies providing data on 2578 adults and 147 children were included. Overall pooled treatment success was 56.9% (95% confidence interval [CI] 46.2-67.6), 49.9% (95%CI 38.5-61.2) among adults and 83.4% (95%CI 74.7-92) among children. Mortality was 38% in adults (95%CI 28-48.1) and 11.4% (95%CI 5.8-17.1) in children. Loss to follow-up was higher among adults (16.1%, 95%CI 9-23.2) than among children (3.9%, 95%CI 0.9-6.9). Adverse events were experienced by the majority of patients; however, this was inconsistently documented. The use of fluoroquinolones, aminoglycosides and Group IV drugs appeared to be associated with treatment success. CONCLUS ION: The proportion of HIV-MDR-TB-coinfected patients achieving treatment success was similar to success rates
reported among MDR-TB patients in general, regardless of HIV status; however, mortality was higher, particularly among adults, highlighting the need for early diagnosis and more effective treatment regimens.

**Title:** Whole body vibration training in patients with COPD: A systematic review

**Citation:** Chronic Respiratory Disease, August 2015, vol./is. 12(3), 1479-9723;1479-9731 (28 Aug 2015)

**Author(s):** Gloekl R., Heinzelmann I., Kenn K.

**Abstract:** In recent years, several studies have shown that whole body vibration training (WBVT) may be a beneficial training mode in a variety of chronic diseases and conditions such as osteoporosis, fibromyalgia, multiple sclerosis, or chronic low back pain. However, a systematic review on the effects of WBVT in patients with chronic obstructive pulmonary disease (COPD) has not been performed yet. An extensive literature search was performed using various electronic databases (PubMed, Embase, LILACS, and PEDro). They were searched from inception until September 20, 2014, using key words like COPD and whole body vibration training. A total of 91 studies could be identified and were screened for relevance by two independent reviewers. Six studies were included in a qualitative analysis. Trials studied either the effects of WBVT versus an inactive control group, versus sham WBVT, during an acute COPD exacerbation or as a modality on top of conventional endurance and strength training. All randomized trials reported a significantly superior benefit on exercise capacity (6-minute walking distance) in favor of the WBVT group. Although there are only few studies available, there is some preliminary evidence that WBVT may be an effective exercise modality to improve functional exercise capacity in patients with COPD.

**Full Text:** Available from ProQuest in Chronic Respiratory Disease

**Title:** Salbutamol or aminophylline for acute severe asthma: How to choose which one, when and why?

**Citation:** Archives of Disease in Childhood: Education and Practice Edition, August 2015, vol./is. 100(4), 1743-0585;1743-0593 (01 Aug 2015)

**Author(s):** Neame M., Aragon O., Fernandes R.M., Sinha I.

**Abstract:** Acute, severe exacerbations of asthma present a challenge due to the significant morbidity associated with this presentation. For exacerbations that are refractory to initial treatments with inhaled and oral therapies, there is still doubt about which intravenous therapies are most likely to be helpful. beta-2 agonists and aminophylline have differing mechanisms of action that also affect their adverse effects profiles and these are considered. A review of the available randomised control trials suggests that a bolus of intravenous salbutamol may reduce symptoms and hasten recovery. Aminophylline infusions may improve lung function, and in some studies have been shown to improve symptoms, but the evidence is not clear cut. Decisions about which treatment to use should include risk management considerations such as ease of prescription, preparation and administration factors and availability of high-dependency beds.

**Full Text:** Available from Highwire Press in Education and Practice

**Title:** Effectiveness and safety of traditional Chinese medicine on stable chronic obstructive pulmonary disease: A systematic review and meta-analysis

**Citation:** Complementary Therapies in Medicine, August 2015, vol./is. 23(4), 0965-2299;1873-6963 (01 Aug 2015)

**Author(s):** Haifeng W., Hailong Z., Jiansheng L., Xueqing Y., Suyun L., Bin L., Yang X., Yunping B.

**Abstract:** Objective: This study was intended to evaluate the efficacy and safety of Traditional Chinese Medicine (TCM) on stable chronic obstructive pulmonary disease (COPD). Method: A systematic review was conducted of clinical trials that compared TCM plus conventional medicine treatment versus conventional
Randomized controlled trials (RCTs) of clinical therapeutic studies on COPD by TCM were included. Searches were applied to the following electronic databases: The PubMed, the Cochrane Library, CNKI, CBM and VIP. No blinding and language restriction was used. All trials included were analyzed according to the criteria of the Cochrane Handbook. Review Manager 5.2 software was used for data analysis. Result: 37 randomized clinical trials enrolling 3212 patients were included. Follow-up duration ranged from 4 weeks to 1.5 years. Compared to conventional medicine treatment alone, TCM plus conventional medicine treatment showed improvement in forced expiratory volume in one second (FEV₁) (MD 0.12 L; 95% CI 0.08 to 0.16), and less exacerbation (OR 0.86; 95% CI 1.13 to 0.60). TCM treatment also led to a statistically improvement in SGRQ score compared to placebo (MD -4.36; 95% CI -7.12 to -1.59). There was statistically significant difference in six-minute walk distance (MD 36.66 meters, 95% CI 24.57 to 48.74) found with TCM compared to placebo. Conclusion: Among patients with stable COPD, TCM plus conventional medical treatment therapy might be associated with reduction risk of exacerbation, improvement of lung function, better quality of life and higher exercise capacity. The results were limited by the methodological flaws of the studies. High quality studies are needed to provide clear evidence for the future use of TCM.

**Title:** Outcomes of Chinese herb medicine for the treatment of multidrug-resistant tuberculosis: A systematic review and meta-analysis

**Citation:** Complementary Therapies in Medicine, August 2015, vol./is. 23/4(544-554), 0965-2299;1873-6963 (01 Aug 2015)

**Author(s):** Jiang R.-H., Xu H.-B., Fu J.

**Abstract:** Several studies have suggested that Chinese herb medicine (CHM) in combination with chemotherapy has efficacy in the treatment of multidrug-resistant tuberculosis (MDR-TB). The purpose of this meta-analysis was to assess the efficacy of CHM as a concomitant therapy for MDR-TB. Six databases were searched up to October 2014. Controlled trials comparing CHM combined with chemotherapy (treatment group) with chemotherapy alone (control group) for the treatment of MDR-TB were analyzed. Twenty studies, comprising 1823 patients across China, were included in this review. The meta-analysis showed CHM combined with chemotherapy was associated with a superiority in treatment success (odds ratio [OR], 1.33; 95% confidence interval [CI]: 1.15-1.54; P < 0.001), and radiological improvement (OR, 1.32; 95% CI: 1.14-1.52; P < 0.001). Patients who received CHM combined with chemotherapy were associated with a similar likely to relapse (OR, 0.88; 95% CI: 0.62-1.25, P = 0.478). CHM combination with chemotherapy appeared to be associated with a low incidence of adverse effects for MDT-TB treatment. According to the pooled results and the poor quality of the included trials, it might be uncertainty that there was a superiority of CHM combined with chemotherapy for treating MDR-TB. More rigorous controlled trials are required to substantiate or refute these early findings.

**Title:** Lung volume reduction surgery and improvement of endothelial function and blood pressure in patients with chronic obstructive pulmonary disease a randomized controlled trial

**Citation:** American Journal of Respiratory and Critical Care Medicine, August 2015, vol./is. 192/3(307-314), 1073-449X;1535-4970 (01 Aug 2015)

**Author(s):** Clarenbach C.F., Sievi N.A., Brock M., Schneiter D., Weder W., Kohler M.

**Abstract:** Rationale: Cardiovascular disease is a major cause of morbidity and mortality in patients with chronic obstructive pulmonary disease (COPD). Preliminary studies have shown that both airflow obstruction and systemic inflammation may contribute to endothelial dysfunction in COPD. Lung volume reduction surgery (LVRS) is a treatment option in selected patients with COPD with emphysema that improves breathing mechanics and lung function. Objectives: To determine the effect of LVRS on endothelial function and systemic inflammation. Methods: We conducted a randomized controlled trial in 30 patients scheduled for LVRS. In the intervention group, immediate LVRS was performed after baseline evaluation followed by reassessment 3 months later. In the control group, reassessment followed 3 months after baseline evaluation, and thereafter LVRS was performed. Measurements and Main Results: The primary outcome measures were the treatment effect on endothelial function and systemic inflammation. In the LVRS group 14 patients completed the trial and 13 in the control group. LVRS led to a relative reduction in mean (SD) residual volume/total lung capacity
of 12% (12%) and an increase in FEV1 of 29% (27%). Flow-mediated dilatation of the brachial artery increased in the intervention group as compared with the control group (12.9%; 95% confidence interval, 12.1 to 13.6%; P<0.001), whereas there was no significant change in systemic inflammation. A significant treatment effect on mean blood pressure was observed (29.0 mm Hg; 95% confidence interval, 21.7 to 20.5; P=0.039).

Conclusions: Endothelial function and blood pressure are improved 3 months after LVRS in patients with severe COPD and emphysema. LVRS may therefore have beneficial effects on cardiovascular outcomes.

Full Text:
Available from ProQuest in American Journal of Respiratory and Critical Care Medicine

Title: Evaluation of macrolides for possible use against multidrug-resistant Mycobacterium tuberculosis

Citation: European Respiratory Journal, August 2015, vol./is. 46/2(444-455), 0903-1936;1399-3003 (01 Aug 2015)


Abstract: Multidrug-resistant tuberculosis (MDR-TB) is a major global health problem. The loss of susceptibility to an increasing number of drugs behoves us to consider the evaluation of non-traditional anti-tuberculosis drugs. Clarithromycin, a macrolide antibiotic, is defined as a group 5 anti-tuberculosis drug by the World Health Organization; however, its role or efficacy in the treatment of MDR-TB is unclear. A systematic review of the literature was conducted to summarise the evidence for the activity of macrolides against MDR-TB, by evaluating in vitro, in vivo and clinical studies. PubMed and Embase were searched for English language articles up to May 2014. Even though high minimum inhibitory concentration values are usually found, suggesting low activity against Mycobacterium tuberculosis, the potential benefits of macrolides are their accumulation in the relevant compartments and cells in the lungs, their immunomodulatory effects and their synergistic activity with other anti-TB drugs. A future perspective may be use of more potent macrolide analogues to enhance the activity of the treatment regimen.

Title: A systematic review of socioeconomic position in relation to asthma and allergic diseases

Citation: European Respiratory Journal, August 2015, vol./is. 46/2(364-374), 0903-1936;1399-3003 (01 Aug 2015)

Author(s): Uphoff E., Cabieses B., Pinart M., Valdes M., Maria Anto J., Wright J.

Abstract: The role of socioeconomic position (SEP) in the development of asthma and allergies is unclear, with some pointing to the risks of low SEP and other research pointing in the direction of higher SEP being associated with higher prevalence rates. The aim of this systematic review is to clarify associations between SEP and the prevalence of asthma and allergies. Out of 4407 records identified, 183 were included in the analysis. Low SEP was associated with a higher prevalence of asthma in 63% of the studies. Research on allergies, however, showed a positive association between higher SEP and illness in 66% of studies. Pooled estimates for the odds ratio of disease for the highest compared with the lowest SEP confirmed these results for asthma (unadjusted OR 1.38, 95% CI 1.37-1.39), allergies in general (OR 0.67, 95% CI 0.62-0.72), atopic dermatitis (unadjusted OR 0.72, 95% CI 0.61-0.83) and allergic rhinoconjunctivitis (unadjusted OR 0.52, 95% CI 0.46-0.59). Sensitivity analyses with a subsample of high-quality studies led to the same conclusion. Evidence from this systematic review suggests that asthma is associated with lower SEP, whereas the prevalence of allergies is associated with higher SEP.

Title: Distractive auditory stimuli in the form of music in individuals with COPD: A systematic review

Citation: Chest, August 2015, vol./is. 148/2(417-429), 0012-3692;1931-3543 (01 Aug 2015)

Author(s): Lee A.L., Desveaux L., Goldstein R.S., Brooks D.

Abstract: BACKGROUND: Music has been used as a distractive auditory stimulus (DAS) in patients with COPD, but its effects are unclear. This systematic review aimed to establish the effect of DAS on exercise
capacity, symptoms, and health-related quality of life (HRQOL) under three conditions: (1) during exercise training, (2) during exercise testing, and (3) for symptom management at rest. METHODS: Randomized controlled or crossover trials as well as cohort studies of DAS during exercise training, during formal exercise testing, and for symptom management among individuals with COPD were identified from a search of seven databases. Two reviewers independently assessed study quality. Weighted mean differences (WMDs) with 95% CIs were calculated using a random-effects model. RESULTS: Thirteen studies (12 of which were randomized controlled or crossover trials) in 415 participants were included. DAS increased exercise capacity when applied over at least 2 months of exercise training (WMD, 98 m; 95% CI, 47-150 m). HRQOL improved only after a training duration of 3 months. Less dyspnea was noted with DAS during exercise training, but this was not consistently observed in short-term exercise testing or as a symptom management strategy at rest. CONCLUSIONS: DAS appears to reduce symptoms of dyspnea and fatigue when used during exercise training, with benefits observed in exercise capacity and HRQOL. When applied during exercise testing, the effects on exercise capacity and symptoms and as a strategy for symptom management at rest are inconsistent.

Title: A systematic review of the efficacy and safety of a fixed-dose combination of umeclidinium and vilanterol for the treatment of COPD

Citation: Chest, August 2015, vol./is. 148/2(397-407), 0012-3692;1931-3543 (01 Aug 2015)

Author(s): Rodrigo G.J., Neffen H.

Language: English

Abstract: BACKGROUND: COPD guidelines recommend the combined use of inhaled long-acting b2-agonists (LABAs) and long-acting muscarinic antagonists (LAMAs) if symptoms are not improved by a single agent. This systematic review tested the hypothesis that the bronchodilator effect of the LABA/LAMA combination, umeclidinium (UMEC)/vilanterol (VIL), would translate into better outcomes without incurring increased adverse events (AEs). METHODS: This was a systematic review of randomized, placebo-controlled or crossover trials (. 4 weeks) involving UMEC/VIL compared with its monocomponents, tiotropium, or fluticasone/salmeterol. Primary outcomes were trough FEV1, serious adverse events (SAEs), and serious cardiovascular events (SCVEs). RESULTS: Eleven trials from 10 studies (9,609 patients) showed that UMEV/VIL provided superior improvements in lung function compared with UMEC, VIL, tiotropium, and fluticasone propionate/salmeterol (mean trough FEV1, 60, 110, 90, and 90 mL, respectively; P < .0001). Also, UMEC/VIL had a greater likelihood of demonstrating a minimal clinically important difference on the Transition Dyspnea Index compared with UMEC and VIL (number needed to treat for benefit [NNTB] 5 14 and 10, respectively). UMEC/VIL therapy significantly reduced the risk of COPD exacerbations compared with UMEC and VIL (NNTB 5 42 and 41, respectively). On the contrary, we noted no significant differences between UMEC/VIL and tiotropium with respect to dyspnea, health status, or risk of COPD exacerbation. Regarding safety issues, the incidence of AEs, SAEs, SCVEs, and mortality on treatment was similar across treatments, suggesting reduced safety concerns with the use of the UMEC/VIL combination. CONCLUSIONS: Once-daily inhaled UMEC/VIL showed superior efficacy compared with its monocomponents, tiotropium, and fluticasone/comboi in patients with moderate to severe COPD.

Title: Pressure-controlled vs volume-controlled ventilation in acute respiratory failure: A physiology-based narrative and systematic review

Citation: Chest, August 2015, vol./is. 148/2(340-355), 0012-3692;1931-3543 (01 Aug 2015)

Author(s): Rittayamai N., Katsios C.M., Beloncle F., Friedrich J.O., Mancebo J., Brochard L.

Abstract: BACKGROUND: Mechanical ventilation is a cornerstone in the management of acute respiratory failure. Both volume-targeted and pressure-targeted ventilations are used, the latter modes being increasingly used. We provide a narrative review of the physiologic principles of these two types of breath delivery, performed a literature search, and analyzed published comparisons between modes. METHODS: We performed a systematic review and meta-analysis to determine whether pressure control-continuous mandatory ventilation (PC-CMV) or pressure control-inverse ratio ventilation (PC-IRV) has demonstrated advantages over volume control-continuous mandatory ventilation (VC-CMV). The Cochrane tool for risk of bias was used for methodologic quality. We also introduced physiologic criteria as quality indicators for selecting the studies.
Outcomes included compliance, gas exchange, hemodynamics, work of breathing, and clinical outcomes. Analyses were completed with RevMan5 using random effects models. RESULTS: Thirty-four studies met inclusion criteria, many being at high risk of bias. Comparisons of PC-CMV/PC-IRV and VC-CMV did not show any difference for compliance or gas exchange, even when looking at PC-IRV. Calculating the oxygenation index suggested a poorer effect for PC-IRV. There was no difference between modes in terms of hemodynamics, work of breathing, or clinical outcomes. CONCLUSIONS: The two modes have different working principles but clinical available data do not suggest any difference in the outcomes. We included all identified trials, enhancing generalizability, and attempted to include only sufficient quality physiologic studies. However, included trials were small and varied considerably in quality. These data should help to open the choice of ventilation of patients with acute respiratory failure.

**Title:** Risk of cardiovascular comorbidity in patients with chronic obstructive pulmonary disease: A systematic review and meta-analysis

**Citation:** The Lancet Respiratory Medicine, August 2015, vol./is. 3/8(631-639), 2213-2600;2213-2619 (01 Aug 2015)

**Author(s):** Chen W., Thomas J., Sadatsafavi M., FitzGerald J.M.

**Abstract:** Background: Chronic obstructive pulmonary disease (COPD) is a systemic inflammatory disorder associated with increased comorbid prevalence of cardiovascular diseases. We aimed to quantify the magnitudes of association between overall and specific types of cardiovascular disease, major cardiovascular risk factors, and COPD. Methods: We searched Cochrane, Medline, and Embase databases for studies published between Jan 1, 1980, and April 30, 2015, on the prevalence of cardiovascular disease and its risk factors in patients with COPD versus matched controls or random samples from the general public. We assessed associations with random-effects meta-analyses. We studied heterogeneity and biases with random-effects meta-regressions, jackknife sensitivity analyses, assessment of funnel plots, and Egger tests. Findings: We identified 18 176 unique references and included 29 datasets in the meta-analyses. Compared with the non-COPD population, patients with COPD were more likely to be diagnosed with cardiovascular disease (odds ratio [OR] 246; 95% CI 202-300; p<00001), including a two to five times higher risk of ischaemic heart disease, cardiac arrhythmia, heart failure, diseases of the pulmonary circulation, and diseases of the arteries. Additionally, patients with COPD reported hypertension more often (OR 133, 95% CI 113-156; p=00007), diabetes (136, 121-153; p<00001), and ever smoking (425, 323-560; p<00001). The associations between COPD and these cardiovascular disease types and cardiovascular disease risk factors were consistent and valid across studies. Enrolment period, age, quality of data, and COPD diagnosis partly explained the heterogeneity. Interpretation: The coexistence of COPD, cardiovascular disease, and major risk factors for cardiovascular disease highlights the crucial need for the development of strategies to screen for and reduce cardiovascular risks associated with COPD. Funding: Canadian Institutes of Health Research.

**Title:** The experience of patients living with human-immunodeficiency virus/tuberculosis co-infection: A systematic review of qualitative evidence protocol

**Citation:** JBI Database of Systematic Reviews and Implementation Reports, August 2015, vol./is. 13/7(72-82), 2202-4433 (26 Aug 2015)

**Author(s):** Protti S., Evans C., Nalubega S.

**Abstract:** Review Question / Objective The aim of this review is to synthesize the best available evidence on the illness and treatment experiences of adult patients living with human-immunodeficiency virus/tuberculosis co-infection in all contexts. Specific objectives are: 1. To identify how patients respond to and cope with living with human-immunodeficiency virus/tuberculosis co-infection. 2. To explore human-immunodeficiency virus/tuberculosis co-infected patients' experiences of treatment burden and treatment adherence. 3. To explore human-immunodeficiency virus/tuberculosis co-infected patients' experiences of healthcare services and health providers. Inclusion Criteria Types of participants This review will include papers that report the experiences of adults (above 18 years) with an human-immunodeficiency virus/tuberculosis co-infection diagnosis (at any stage of their illness or treatment). Phenomena of interest The illness and treatment experiences of people living with human-immunodeficiency virus/tuberculosis co-infection. Context The review will include studies from any geographical, cultural, community or healthcare context.
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