



Cochrane Renal Group – New reviews, protocols and titles

Coordinating Editor

Jonathan Craig

Deputy Coordinating Editor

Angela Webster

Managing Editor

Ann Jones

Trial Search Coordinators

Gail Higgins
Ruth Mitchell

Regional Coordinator

Giovanni Strippoli

Copy Editor

Narelle Willis

Administration Officer

Leslee Edwards

Editors

Hashim Uddin Ahmed
Elaine Beller
Emmanuel Effa
Elisabeth Hodson
Vivekanand Jha
Petra Macaskill
David Mudge
Suetonia Palmer
Giovanni Strippoli
Marcello Tonelli

Advisory Board

Robert Atkins
Gavin Becker
Jonathan Craig
Magid Fahim
Celine Foote
Sally Green
Elisabeth Hodson
Elizabeth Koff
Matthew Roberts
Angela Webster
Michael Webster

New and updated reviews

In Issues 10-12, 2013 and 1-4, 2014 we published eight new reviews and three updated reviews with new findings:

New

- Alpha-blockers as medical expulsive therapy for ureteral stones
- Antibiotic prophylaxis for preventing post solid organ transplant tuberculosis
- Antibody induction therapy for lung transplant recipients
- Biocompatible dialysis fluids for peritoneal dialysis
- Darbepoetin for the anaemia of chronic kidney disease
- Dietary interventions for preventing complications in idiopathic hypercalciuria
- Lipid-lowering agents for nephrotic syndrome
- Percussion, diuresis, and inversion therapy for the passage of lower pole kidney stones following shock wave lithotripsy

Updated with new findings

- HMG CoA reductase inhibitors (statins) for kidney transplant recipients

- Non-corticosteroid immunosuppressive medications for steroid-sensitive nephrotic syndrome in children
- Treatment for peritoneal dialysis-associated peritonitis

New protocols

In Issues 10-12, 2013 and 1-4, 2014 we published 11 new protocols:

- Antihypertensive agents for children with chronic kidney disease
- Calcium channel blockers for people with chronic kidney disease requiring dialysis
- Interventions for chronic non-hypovolaemic hypotonic hyponatraemia

Inside this issue:

New reviews, protocols, titles	1
Renal Group news	2
Recent abstracts—new	5
Recent abstracts—updated, new findings	12
Upcoming workshops	8
Collaboration news	16
Conferences	14
Membership form	18

New protocols (Cont'd)

- Interventions for increasing solid organ donor registration
- Interventions for infected cysts in people with autosomal dominant polycystic kidney disease
- Interventions for treating urinary stones in children
- Interventions for undescended testes in children
- Ischaemic preconditioning for the reduction of renal ischaemia reperfusion injury
- Laparoendoscopic single-site donor nephrectomy (LESS-N) versus standard laparoscopic donor nephrectomy
- Tubeless versus standard percutaneous nephrolithotomy for treating kidney stones
- Urinary alkalinisation for uncomplicated urinary tract infection

New titles

Between October 2013 and April 2014 we registered eight new review titles:

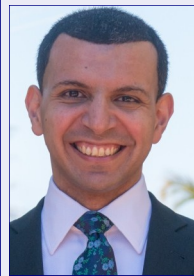
- Antibiotics for asymptomatic bacteriuria in kidney transplant recipients
- Effects of peri-operative nonsteroidal anti-inflammatory drugs on postoperative kidney function for adults with normal kidney function
- Fluid balance for preventing contract-induced nephropathy
- Interventions for prevention of acute kidney injury in patients undergoing cardiac interventions
- Methods for fracture risk assessment in people with chronic kidney disease
- Protocol biopsies for kidney transplantation
- Sodium bicarbonate for preventing contract-induced nephropathy
- Treatments for osteoporosis in chronic kidney disease

Renal group news

New Advisory Board members

In March this year we welcomed two new members to the Cochrane Renal Group Advisory Board.

Dr Magid Fahim is a Staff Specialist Nephrologist at Princess Alexandra Hospital, Brisbane and a Senior Lecturer in Medicine at the University of Queensland. Magid's medical training was undertaken in both New Zealand and Australia, and he currently practises in all areas of clinical nephrology. His primary research interests are in developing



diagnostic and monitoring strategies which improve the accuracy and efficiency of clinical decisions, and patient level outcomes in chronic kidney disease. He is particularly interested in diagnostic test accuracy, biological variation and longitudinal study designs.

He is a recipient of a National Health and Medical Research Council of Australia (NHMRC) postgraduate research scholarship, a NHMRC project grant for his PhD research, and has been awarded several academic and research awards at both the undergraduate and postgraduate stages of his training.

Dr Celine Foote is a nephrologist at Concord Repatriation General Hospital and a research fellow in the Renal Division in The George Institute. She is interested in the outcomes of elderly patients with end stage kidney disease (ESKD), particularly those managed with supportive (non-dialysis) care and is also interested in the role of palliative care in the treatment of ESKD patients.



She is a PhD candidate through the School of Public Health at the University of Sydney and will submit her thesis titled "Improving patient-centred outcomes of elderly patients with end stage kidney disease" in 2014.

Renal group news (Cont'd)

Risk factors for non-completion of Cochrane reviews

At last November's Australasian Cochrane Symposium in Melbourne, Angela Webster gave a presentation on the risk factors for non-completion of Cochrane reviews. A copy of the Abstract follows:

Title

Risk factors for non-completion of Cochrane reviews

Authors

Angela C Webster, Patrick J Kelly, Richard G McGee, Narelle S Willis, Ruth L Mitchell, Ann E Jones, Gail Y Higgins, Jonathan C Craig

Abstract

Objective: To determine factors associated with completion of Cochrane systematic reviews.

Setting: Cohort study of all systematic reviews registered with the Cochrane Renal Group, 1997-2012.

Exposure: contact author language of instruction (English or not), previous Cochrane review publication (any group), and continent of origin (Africa, Asia-Pacific, Europe, North America, South America), number on author team, year of title registration, funding, and number of studies in the review.

Main Outcome: time from title registration to review publication or withdrawal. We fitted competing risk proportional hazard models and calculated cumulative incidences, with publication as the event of interest, withdrawal as the competing risk, and active registrations censored.

Results: We identified 297 registered titles. Of these, 105 were published, 125 active and 67 withdrawn. Of withdrawals 25 (37%) occurred prior to protocol submission, 14 (21%) after protocol submission, 22 (33%) after protocol publication and 6 (9%) after review submission.

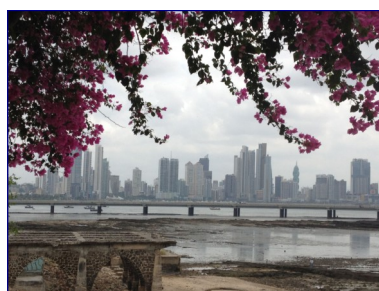
50% of registrations were still active at 5 years, a third published, and the remainder withdrawn. The univariate analysis indicated that English as language

of instruction, a previous Cochrane publication, year of registration and review funding increased chance of publication ($P < 0.05$).

After adjusting for all these combined effects, English and prior Cochrane publication increased chance, while registering in later years reduced chance of publication. Review funding was correlated with English language ($P = 0.04$) and author location ($P < 0.001$). For reviews which were published, mean time from registration to publication was 3.8 years. Larger reviews containing > 30 trials took somewhat longer than reviews with < 30 trials (4.3 versus 3.4 years; $P = 0.08$)

Conclusions and Relevance: Despite a Cochrane model providing author support and training and a commitment to publish, our analysis shows that the successful publication still depends on author and review factors. Average time to review completion is substantial. This has implications for the shifting evidence base, the Cochrane commitment to update reviews regularly and for resource planning by review groups.

Cochrane 2014 Mid-Year Meeting, Panama



Gail Higgins from the Renal Group, who is a member of the Trials Search Coordinators' Executive, recently attended the Cochrane 2014 Mid-Year meeting.

The Mid-Year Meeting was organised this year by Fundación Instituto Centroamericano de Salud Internacional (IHCAI) de San José (Costa Rica) and hosted by the Central American & Caribbean Spanish Branch of the Iberoamerican Cochrane Centre, and took place in Panama from 31 March to 1 April.

The Mid-Year meeting provides an opportunity for face-to-face meetings of the Collaboration's Steering Group, Centre Directors, Entity Executives and other

Renal group news (Cont'd)

groups responsible for helping to formulate and implement Cochrane policy.

In addition, on 2 and 3 April 2014 a Cochrane symposium was held for Cochrane authors based in Panama and Central America, on the topic of 'Patient centered health care system: the 21st century challenge'.



The Panama business meetings were productive and very successful. The strategic session, led by David Tovey, focussed on target 4.4. of the Strategy to 2020: Reviewing and adjusting

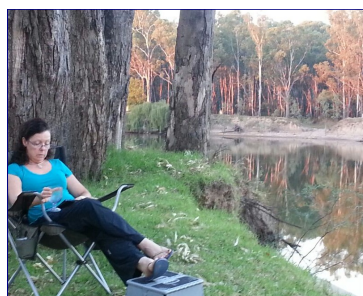
the structure and function of Cochrane Groups, specifically Cochrane Review Groups. The session generated very positive and open discussions. For a more in-depth report from the session, along with all background papers go to <http://www.editorial-unit.cochrane.org/structure-function-project>.

Renal Group's travelling copy editor

Narelle Willis, who recently retired as CRG's Managing Editor, has been enjoying her travels around Australia with her husband Mike. She has continued part time with the Renal Group as a copy editor and, as shown by these recent photos, is adapting well to working from her scenic 'outdoor office'.



Alpine National Park



Banks of the Murray River



ANZSN Infrastructure/Enabling Grant

The Renal Group were successful in their application for the 2014 Australian and New Zealand Society of Nephrology infrastructure/enabling grant. The broad purpose of this funding is to support the infrastructure of groups or bodies affiliated with the ANZSN in the pursuit of their research related activities.

Cochrane Commentaries—Nephrology

In 2013 in conjunction with the journal *Nephrology* we produced several short commentaries on new and updated reviews. This project has been co-ordinated and edited by Angela Webster. The commentaries published in 2013 were:

1. [Induction and maintenance treatment of proliferative lupus nephritis](#). *Nephrology* 2013 18: 71-2. Philip Masson
2. [Antiviral medications for preventing cytomegalovirus disease \(CMV\) in solid organ transplant recipients](#). *Nephrology* 2013; 18:237-8. Maleeka Ladhani
3. [Pre-emptive treatment for cytomegalovirus viraemia to prevent cytomegalovirus disease in solid organ transplant recipients](#). *Nephrology* 2013; 18: 235-6. Maleeka Ladhani
4. [High-flux versus low-flux haemodialysis membranes for end-stage kidney disease](#). *Nephrology* 2013; 18: 313-4. Suetonia Palmer and Giovanni Strippoli
5. [Cranberries for the prevention of urinary tract infections](#). *Nephrology* 2013 18: 388-9. Ruth Jepson
6. [Antiplatelet agents for chronic kidney disease](#). *Nephrology* 2013; 18: 474-6. Suetonia Palmer, Valeria Saglimbene and Giovanni FM Strippoli
7. [Antioxidants for chronic kidney disease](#). *Nephrology* 2013; 18: 576-8. Min Jun

Recent abstracts (*new*)

[Alpha-blockers as medical expulsive therapy for ureteral stones](#)

Thijs Campschoer, Yefang Zhu, Diederick Duijvesz, Diederick E Grobbee and M T W Tycho Lock

Background

Urinary stone disease is one of the most common reasons for patients visiting a urology practice, affecting about 5% to 10% of the population. Annual costs for stone disease have rapidly increased over the years and most patients with ureteral colic or other symptoms seek medical care. Stone size and location are important predictors of stone passage. In most cases medical expulsive therapy is an appropriate treatment modality and most studies have been performed with alpha-blockers. Alpha-blockers tend to decrease intra-ureteral pressure and increase fluid passage which might increase stone passage. Faster stone expulsion will decrease the rate of complications, the need for invasive interventions and eventually decrease healthcare costs. A study on the effect of alpha-blockers as medical expulsive therapy in ureteral stones is therefore warranted.

Objectives

This review aimed to answer the following question: does medical treatment with alpha-blockers compared to other pharmacotherapy or placebo impact on stone clearance rate, in adult patients presenting with symptoms of ureteral stones less than 10 mm confirmed by imaging? Other clinically relevant outcomes such as stone expulsion time, hospitalisation, pain scores, analgesic use and adverse effects have also been explored.

Search methods

We searched the Cochrane Renal Group's Specialised Register to 9 July 2012 through contact with the Trials Search Co-ordinator using search terms relevant to this review. Studies contained in the Specialised Register are identified through search strategies specifically designed for CENTRAL, MEDLINE and EMBASE, handsearching conference proceedings, and searching the International Clinical Trials Register (ICTRP) Search Portal and ClinicalTrials.gov.

Selection criteria

Randomised controlled trials (RCTs), comparing alpha-blockers with other pharmacotherapy or placebo on ureteral stone passage in adult patients were included.

Data collection and analysis

Two authors independently assessed study quality and extracted data. Summary estimates of effect were obtained using a random-effects model, and results were expressed as risk ratios (RR) and their 95% confidence intervals (CI) for

dichotomous outcomes, and mean difference (MD) and 95% CI for continuous outcomes. Reporting bias was investigated using funnel plots. Subgroup analysis was used to explore possible sources of heterogeneity. Sensitivity analysis was performed removing studies of poor methodological quality.

Main results

Thirty-two studies (5864 participants) were included. The stone-free rates were significantly higher in the alpha-blocker group (RR 1.48, 95% CI 1.33 to 1.64) when compared to standard therapy. Stone expulsion time was 2.91 days shorter with the use of alpha-blockers (MD -2.91, 95% CI -4.00 to -1.81). Use of alpha-blockers reduced the number of pain episodes (MD -0.48, 95% CI -0.94 to -0.01), the need for analgesic medication (diclofenac) (MD -38.17 mg, 95% CI -74.93 to -1.41) and hospitalisation (RR 0.35, 95% CI 0.13 to 0.97). Patients using alpha-blockers were more likely to experience adverse effects when compared to standard therapy (RR 2.74, 95% CI 1.38 to 5.45) or placebo (RR 2.73, 95% CI 1.50 to 4.96). Most adverse effects were mild of origin and did not lead to cessation of therapy, and several studies reported no adverse events in either the treatment or control group.

In 7/32 studies patients and doctors were both blinded. In the other studies blinding was not described in the methods or no blinding had taken place. Two studies described incomplete data and only one study showed a relatively high number of patients who withdrew from the study. These factors limited the methodological strength of the evidence found.

Authors' conclusions

The use of alpha-blockers in patients with ureteral stones results in a higher stone-free rate and a shorter time to stone expulsion. Alpha-blockers should therefore be offered as part of medical expulsive therapy as one of the primary treatment modalities.

[Antibiotic prophylaxis for preventing post solid organ transplant tuberculosis](#)

Bappa Adamu, Aliyu Abdu, Abdullahi A Abba, Musa M Borodo and Imad M Tleyjeh

Background

Organ transplant recipients are at increased risk of infection as a result of immunosuppression caused inadvertently by medical treatment. Tuberculosis (TB) is a challenging infection to manage among organ transplant recipients that can be transmitted from infected people or triggered from latent infection. Organ transplant recipients have been reported to be up to 300 times more likely to

Recent abstracts (*new*)

...Cont'd

develop TB than the general population. Consensus about the use of antibiotic prophylaxis to prevent post solid organ transplant TB has not been achieved.

Objectives

This review assessed the benefits and harms of antibiotic prophylaxis to prevent post solid organ transplant TB.

Search methods

We searched the Cochrane Renal Group's Specialised Register up to 30 April 2013 through contact with the Trials' Search Co-ordinator using search terms relevant to this review. Studies contained in the Specialised Register are identified through search strategies specifically designed for CENTRAL, MEDLINE and EMBASE and handsearching conference proceedings.

Selection criteria

All randomised controlled trials (RCTs) and quasi-RCTs that compared antibiotic prophylaxis with a placebo or no intervention for recipients of solid organ transplants were included.

Data collection and analysis

Two authors independently assessed studies for inclusion and extracted data. We derived risk ratios (RR) for dichotomous data and mean differences (MD) for continuous data with 95% confidence intervals (CI). Methodological risk of bias was assessed using the Cochrane risk of bias tool.

Main results

We identified three studies (10 reports) that involved 558 kidney transplant recipients which met our inclusion criteria. All studies were conducted in countries that have high prevalence of TB (India and Pakistan), and investigated isoniazid, an oral antibacterial drug. Control in all studies was no antibiotic prophylaxis. Prophylactic administration of isoniazid reduced the risk of developing

TB post-transplant (3 studies, RR 0.35 95% CI 0.14 to 0.89), and there was no significant effect on all-cause mortality (2 studies, RR 1.39, 95% CI 0.70 to 2.78). There was however substantial risk of liver damage (3 studies, RR 2.74, 95% CI 1.22 to 6.17).

Reporting of methodological quality parameters was incomplete in all three studies. Overall, risk of bias was assessed as suboptimal.

Authors' conclusions

Isoniazid prophylaxis for kidney transplant recipients reduced the risk of developing TB post-transplant. Kidney transplant recipients in settings that have high prevalence of TB should receive isoniazid during the first year following transplant. There is however, significant risk of liver damage, particularly among those who are hepatitis B or C positive. Further studies are needed among recipients of other solid organ transplants and in settings with low prevalence of TB to determine the benefits and harms of anti-TB prophylaxis in those populations.

[Antibody induction therapy for lung transplant recipients](#)

Luit Penninga, Christian H Møller, Elisabeth I Penninga, Martin Iversen, Christian Gluud and Daniel A Steinbrüchel

Background

Lung transplantation has become a valuable and well-accepted treatment option for most end-stage lung diseases. Lung transplant recipients are at risk of transplanted organ rejection, and life-long immunosuppression is necessary. Clear evidence is essential to identify an optimal, safe and effective immunosuppressive treatment strategy for lung transplant recipients. Consensus has not yet been achieved concerning use of immunosuppressive antibodies against T-cells for induction following lung transplantation.

22nd Cochrane Colloquium
Evidence-Informed Public Health: Opportunities and Challenges

Hyderabad International Convention Centre
Hyderabad, India
September 21- 25, 2014

SOUTH ASIAN COCHRANE NETWORK & CENTRE
A member of Cochrane's global network

Celebrate Cochrane's 21st Anniversary

Recent abstracts (*new*)

...Cont'd

Objectives

We aimed to assess the benefits and harms of immunosuppressive T-cell antibody induction with ATG, ALG, IL-2RA, alemtuzumab, or muromonab-CD3 for lung transplant recipients.

Search methods

We searched the Cochrane Renal Group's Specialised Register to 4 March 2013 through contact with the Trials Search Co-ordinator using search terms relevant to this review. Studies contained in the Specialised Register are identified through search strategies specifically designed for CENTRAL, MEDLINE and EMBASE.

Selection criteria

We included all randomised controlled trials (RCTs) that compared immunosuppressive monoclonal and polyclonal T-cell antibody induction for lung transplant recipients. An inclusion criterion was that all participants must have received the same maintenance immunosuppressive therapy within each study.

Data collection and analysis

Three authors extracted data. We derived risk ratios (RR) for dichotomous data and mean differences (MD) for continuous data with 95% confidence intervals (CI). Methodological risk of bias was assessed using the Cochrane risk of bias tool and trial sequential analyses were undertaken to assess the risk of random errors (play of chance).

Main results

Our review included six RCTs (representing a total of 278 adult lung transplant recipients) that assessed the use of T-cell antibody induction. Evaluation of the included studies found all to be at high risk of bias.

We conducted comparisons of polyclonal or monoclonal T-cell antibody induction versus no induction (3 studies, 140 participants); polyclonal T-cell antibody versus no induction (3 studies, 125 participants); interleukin-2 receptor antagonists (IL-2RA) versus no induction (1 study, 25 participants); polyclonal T-cell antibody versus muromonab-CD3 (1 study, 64 participants); and polyclonal T-cell antibody versus IL-2RA (3 studies, 100 participants).

Overall we found no significant differences among interventions in terms of mortality, acute rejection, adverse effects, infection, pneumonia, cytomegalovirus infection, bronchiolitis obliterans syndrome, post-transplantation lymphoproliferative disease, or cancer.

We found a significant outcome difference in one study that compared antithymocyte globulin versus muromonab-CD3 relating to adverse events (25/34 (74%) versus

12/30 (40%); RR 1.84, 95% CI 1.13 to 2.98). This suggested that antithymocyte globulin increased occurrence of adverse events. However, trial sequential analysis found that the required information size had not been reached, and the cumulative Z-curve did not cross the trial sequential alpha-spending monitoring boundaries. None of the studies reported quality of life or kidney injury. Trial sequential analyses indicated that none of the meta-analyses achieved required information sizes and the cumulative Z-curves did not cross the trial sequential alpha-spending monitoring boundaries, nor reached the area of futility.

Authors' conclusions

No clear benefits or harms associated with the use of T-cell antibody induction compared with no induction, or when different types of T-cell antibodies were compared were identified in this review. Few studies were identified that investigated use of antibodies against T-cells for induction after lung transplantation, and numbers of participants and outcomes were also limited. Assessment of the included studies found that all were at high risk of methodological bias.

Further RCTs are needed to perform robust assessment of the benefits and harms of T-cell antibody induction for lung transplant recipients. Future studies should be designed and conducted according to methodologies to reduce risks of systematic error (bias) and random error (play of chance).

[Biocompatible dialysis fluids for peritoneal dialysis](#)

Yeoungjee Cho, David W Johnson, Jonathan C Craig, Giovanni FM Strippoli, Sunil V Badve and Kathryn J Wiggins

Background

The longevity of peritoneal dialysis (PD) is limited by high rates of technique failure, some of which stem from peritoneal membrane injury. 'Biocompatible' PD solutions have been developed to reduce damage to the peritoneal membrane.

Objectives

This review aimed to look at the benefits and harms of biocompatible PD solutions in comparison to standard PD solutions in patients receiving PD.

Search methods

We searched the Cochrane Renal Group's Specialised Register (28 February 2013), through contact with the Trials Search Co-ordinator using search terms relevant to this review. Studies contained in the Specialised Register

Recent abstracts (*new*) ...Cont'd

are identified through search strategies specifically designed for CENTRAL, MEDLINE and EMBASE, and handsearching conference proceedings.

Selection criteria

All randomised controlled trials (RCTs) and quasi-RCTs in adults and children comparing the effects of biocompatible PD solutions (neutral pH, lactate-buffered, low glucose degradation product (GDP); neutral pH, bicarbonate (\pm lactate)-buffered, low GDP; glucose polymer (icodextrin)) in PD were included. Studies of amino acid-based PD solutions were excluded.

Data collection and analysis

Two authors extracted data on study quality and outcomes (including adverse effects). The authors contacted investigators to obtain missing information. Summary estimates of effect were obtained using a random-effects model, and results were expressed as risk ratios (RR) and their 95% confidence intervals (CI) for categorical variables, and mean difference (MD) or standardised mean difference (SMD) and 95% CI for continuous variables.

Main results

Thirty-six eligible studies (2719 patients) were identified: Neutral pH, lactate-buffered/bicarbonate (\pm lactate)-buffered, low GDP PD solution (24); icodextrin (12). Allocation methods and concealment were generally incompletely reported, and adequate in only ten studies (27.8%). Patients lost to follow-up ranged from 0% to 83.4%.

Neutral pH, low GDP versus conventional glucose PD solution

Based on generally sub-optimal quality evidence, the use of neutral pH, low GDP PD solutions was associated with larger urine volumes at the end of the studies, up to three years of therapy duration (7 studies, 520 patients: MD 126.39 mL/d, 95% CI 26.73 to 226.05). Improved preservation of residual renal function was evident in studies with greater than 12 month follow-up (6 studies, 360 patients: SMD 0.31, 95% CI 0.10 to 0.52). There was no significant effect on peritonitis, technique failure or adverse events with the use of neutral pH, low GDP PD solutions.

Glucose polymer (icodextrin) versus conventional glucose PD solution

There was a significant reduction in episodes of uncontrolled fluid overload (2 studies, 100 patients: RR 0.30, 95% CI 0.15 to 0.59) and improvement in peritoneal ultrafiltration (4 studies, 102 patients, MD 448.54 mL/d, 95% CI 289.28 to 607.80) without compromising residual renal function (4 studies, 114 patients: SMD 0.12, 95% CI -0.26 to 0.49) or urine output (3 studies, 69 patients: MD -

Upcoming workshops 2014

Australasian Cochrane Centre/
Cochrane Renal Group*

14-16 May	Introduction to writing a Cochrane review	Adelaide
14-16 May	Developing a Protocol for a Cochrane Systematic Review workshop	Malaysia
26-30 May	Review completion workshop	Melbourne
16-18 June	Introduction to writing a Cochrane review	Brisbane
2-4 Jul	Introduction to writing a Cochrane review	Sydney*
4-5 Aug	Introduction to systematic reviews of Interventions <i>(Note: this workshop is part of the Monash University Short Course program, and is open to non-Cochrane authors. Fees apply to all participants.)</i>	Melbourne
10-14 Nov	Review completion workshop	Melbourne
1-3 Dec	Developing a Protocol for a Cochrane Systematic Review workshop	Malaysia
10-12 Dec	Introduction to writing a Cochrane review	Sydney*

For further information on Australasian workshops please go to:

<http://acc.cochrane.org/2014-timetable-registration>

For Review workshops offered by other Cochrane Centres please go to:

www.cochrane.org/training

Recent abstracts (*new*)

...Cont'd

88.88 mL/d, 95% CI -356.88 to 179.12) with icodextrin use. A comparable incidence of adverse events with the icodextrin (four studies) was reported.

Authors' conclusions

Based on generally sub-optimal quality studies, use of neutral pH, low GDP PD solution led to greater urine output and higher residual renal function after use exceeded 12 months. Icodextrin prescription improved peritoneal ultrafiltration and mitigated uncontrolled fluid overload. There were no significant effects on peritonitis, technique survival, patient survival or harms identified with their use. Based on the best available evidence, the use of these 'biocompatible' PD solutions resulted in clinically relevant benefits without added risks of harm.

[Darbepoetin for the anaemia of chronic kidney disease](#)

Suetonia C Palmer, Valeria Saglimbene, Jonathan C Craig, Sankar D Navaneethan and Giovanni FM Strippoli

Background

Erythropoiesis-stimulating agents are used to treat anaemia in people with chronic kidney disease (CKD). Several agents are available including epoetin alfa or beta as well as agents with a longer duration of action, darbepoetin alfa and methoxy polyethylene glycol-epoetin beta.

Objectives

To assess the benefits and harms of darbepoetin alfa to treat anaemia in adults and children with CKD (stages 3 to 5, 5D, and kidney transplant recipients).

Search methods

We searched the Cochrane Renal Group's Specialised Register (to 13 January 2014) through contact with the Trials' Search Co-ordinator using search terms relevant to this review. Studies contained in the Specialised Register are identified through search strategies specifically designed for CENTRAL, MEDLINE and EMBASE.

Selection criteria

We included randomised controlled trials of any darbepoetin alfa treatment of at least three months duration in adults or children with CKD (any stage).

Data collection and analysis

Data were extracted by two independent investigators. Patient-centred outcomes (need for blood transfusion, iron therapy, progression of kidney disease, total and cardiovascular mortality, cardiovascular events, cancer,

hypertension, seizures, and health-related quality of life) and other outcomes (haemoglobin levels) were assessed using random effects meta-analysis. We calculated risk ratios for dichotomous outcomes and mean differences for continuous outcomes, both with 95% confidence intervals.

Main results

We identified 32 studies comprising 9414 participants; 21 studies in 8328 participants could be included in our meta-analyses. One study (4038 participants) compared darbepoetin alfa to placebo, 16 studies (2955 participants) compared darbepoetin alfa to epoetin alfa or beta, four studies (1198 participants) compared darbepoetin alfa to methoxy polyethylene glycol-epoetin beta, three studies (420 participants) compared more frequent with less frequent darbepoetin alfa administration and four studies (303 participants) compared intravenous with subcutaneous darbepoetin alfa administration.

In a single large study, darbepoetin alfa reduced the need for blood transfusion and iron therapy compared with placebo in adults with CKD stage 3 to 5, but had little or no effect on survival, increased risks of hypertension, and had uncertain effects on quality of life. Data comparing darbepoetin alfa with epoetin alfa or beta or methoxy polyethylene glycol-epoetin beta were sparse and inconclusive. Comparisons of differing dosing schedules and routes of administration were compared in small numbers of participants and studies. Evidence for treatment effects of darbepoetin alfa were particularly limited for children with CKD, adults with CKD stage 5D, and recipients of a kidney transplant.

Studies included in this review were generally at high or unclear risk of bias for all items (random sequence generation, allocation concealment, incomplete outcome data, blinding of participants and personnel, blinding of outcome assessment, selective outcome reporting, intention to treat analysis and other sources of bias). One large study comparing darbepoetin alfa with placebo was at low risk of bias for most items assessed.

Authors' conclusions

Data suggest that darbepoetin alfa effectively reduces need for blood transfusions in adults with CKD stage 3 to 5, but has little or no effect on mortality or quality of life. The effects of darbepoetin alfa in adults with CKD stage 5D and kidney transplant recipients and children with CKD remain uncertain as do the relative benefits and harms of darbepoetin alfa compared with other ESAs (epoetin alfa or beta and methoxy polyethylene glycol-epoetin beta).

Recent abstracts (*new*)

...Cont'd

[Dietary interventions for preventing complications in idiopathic hypercalciuria](#)

Joaquin Escribano, Albert Balaguer, Marta Roqué i Figuls, Albert Feliu and Natalia Ferre

Background

Idiopathic hypercalciuria is an inherited metabolic abnormality that is characterised by excessive amounts of calcium excreted in the urine by people whose calcium serum levels are normal. Morbidity associated with idiopathic hypercalciuria is chiefly related to kidney stone disease and bone demineralisation leading to osteopenia and osteoporosis. Idiopathic hypercalciuria contributes to kidney stone disease at all life stages; people with the condition are prone to developing oxalate and calcium phosphate kidney stones. In some cases, crystallised calcium can be deposited in the renal interstitium, causing increased calcium levels in the kidneys. In children, idiopathic hypercalciuria can cause a range of comorbidities including recurrent macroscopic or microscopic haematuria, frequency dysuria syndrome, urinary tract infections and abdominal and lumbar pain. Various dietary interventions have been described that aim to decrease urinary calcium levels or urinary crystallisation.

Objectives

Our objectives were to assess the efficacy, effectiveness and safety of dietary interventions for preventing complications in idiopathic hypercalciuria (urolithiasis and osteopenia) in adults and children, and to assess the benefits of dietary interventions in decreasing urological symptomatology in children with idiopathic hypercalciuria.

Search methods

We searched the Cochrane Renal Group's Specialised Register (23 April 2013) through contact with the Trials' Search Co-ordinator using search terms relevant to this review. Studies contained in the Specialised Register are identified through search strategies specifically designed for CENTRAL, MEDLINE and EMBASE.

Selection criteria

We included all randomised controlled trials (RCTs) and quasi-RCTs that investigated dietary interventions aimed at preventing complications of idiopathic hypercalciuria, compared with placebo, no intervention, or other dietary interventions regardless of route of administration, dose or amount.

Data collection and analysis

Studies were assessed for inclusion and data extracted using a standardised data extraction form. We calculated risk ratios (RR) for dichotomous outcomes and mean differences (MD) for continuous outcomes, both with 95% confidence intervals (CI).

Main results

We included five studies (379 adult participants) that investigated a range of interventions. Lack of similarity among interventions investigated meant that data could not be pooled. Overall, study methodology was not adequately reported in any of the included studies. There was a high risk of bias associated with blinding (although it seems unlikely that outcomes measures were unduly influenced by lack of intervention blinding), random sequence generation and allocation methodologies were unclear in most studies, but selective reporting bias was assessed as low.

One study (120 participants) compared a low calcium diet with a normal calcium, low protein, low salt diet for five years. There was a significant decrease in numbers of new stone recurrences in those treated with the normal calcium, low protein, low salt diet (RR 0.77, 95% CI 0.61 to 0.98). This diet also led to a significant decrease in oxaluria (MD 78.00 μ mol/d, 95% CI 26.48 to 129.52) and the calcium oxalate relative supersaturation index (MD 1.20 95% CI 0.21 to 2.19).

One study (210 participants) compared a low salt, normal calcium diet with a broad diet for three months. The low salt, normal calcium diet decreased urinary calcium (MD -45.00 mg/d, 95% CI -74.83 to -15.17) and oxalate excretion (MD -4.00 mg/d, 95% CI -6.44 to -1.56).

A small study (17 participants) compared the effect of dietary fibre as part of a low calcium, low oxalate diet over three weeks, and found that although calciuria levels decreased, oxaluria increased.

Phyllanthus niruri plant substrate intake was investigated in a small subgroup with hypercalciuria (20 participants); there was no significant effect on calciuria levels occurred after three months of treatment.

A small cross-over study (12 participants) evaluating the changes in urinary supersaturation indices among patients who consumed calcium-fortified orange juice or milk for one month found no benefits for participants.

None of the studies reported any significant adverse effects associated with the interventions.

Authors' conclusions

Long-term adherence (five years) to diets that feature normal levels of calcium, low protein and low salt may reduce numbers of stone recurrences, decrease oxaluria and calcium oxalate relative supersaturation indexes in people with idiopathic hypercalciuria who experience recurrent kidney stones. Adherence to a low salt, normal calcium level diet for some months can reduce calciuria and oxaluria. However, the other dietary interventions examined did not demonstrate evidence of significant beneficial effects.

Recent abstracts (*new*)

...Cont'd

No studies were found investigating the effect of dietary recommendations on other clinical complications or asymptomatic idiopathic hypercalciuria.

[Lipid-lowering agents for nephrotic syndrome](#)

Xiangyu Kong, Hao Yuan, Junming Fan, Zi Li, Taixiang Wu and Lanhui Jiang

Background

Nephrotic syndrome is the collective name given to a group of symptoms that include proteinuria, lipiduria, hypoalbuminaemia, oedema, hypercholesterolaemia, elevated triglycerides, and hyperlipidaemia. Hyperlipidaemia is thought to aggravate glomerulosclerosis (hardening of blood vessels in the kidneys) and enhance progression of glomerular disease. Studies have established that reduction in total cholesterol and low density lipoprotein (LDL) cholesterol is associated with reduction in risk of cardiovascular diseases. In 2011, the European Society of Cardiology and European Atherosclerosis Society guidelines for the management of dyslipidaemia recommended use of statins as first-line agents in the management of nephrotic dyslipidaemia. However, the effectiveness and safety of statins for people with nephrotic syndrome remains uncertain. Furthermore, the efficacy of second-line lipid-lowering drugs, such as ezetimibe and nicotinic acid, has not been proven in patients with nephrotic syndrome who are unable to tolerate statin therapy.

Objectives

This review aimed to evaluate the benefits and harms of lipid-lowering agents in adults and children with nephrotic syndrome.

Search methods

We searched the Cochrane Renal Group's Specialised Register (to 18 March 2013) through contact with the Trials Search Co-ordinator using search terms relevant to this review.

Selection criteria

All randomised controlled trials (RCTs) and quasi-RCTs (RCTs in which allocation to treatment was obtained by alternation, use of alternate medical records, date of birth or other predictable methods) looking at participants with nephrotic syndrome that compared any lipid-lowering agent to placebo, no treatment or other lipid-lowering agents, given for not less than four weeks, were included.

Data collection and analysis

Two authors independently assessed study eligibility and risk of bias, and extracted data. Statistical analyses were performed using a random effects model. Dichotomous results were expressed as risk ratios (RR) with 95% confidence intervals (CI). For continuous measures mean difference (MD) was used, or the standardised mean difference (SMD) where different scales had been used.

Main results

We included five RCTs enrolling a total of 203 participants. Of these, four studies compared statins with no treatment or placebo, and one compared fibrates with placebo. We found no published studies comparing second-line agents such as ezetimibe, bile acid sequestrants, and nicotinic acid with placebo or no treatment. Our assessment of the risk of bias found that one study was judged overall to be at low risk of bias and the remaining four were judged to be at high risk of bias.

Most outcomes were supported by single study data. One study reported significantly increased high density lipoprotein (HDL) cholesterol among participants in the statin arm compared with the no treatment group (MD 5.40 mg/dL, 95% CI 2.31 to 8.49). Another study reported higher serum albumin in the statin group compared to those who received no treatment (MD 0.60 g/dL, 95% CI 0.14 to 1.06). No serious adverse events, such as rhabdomyolysis, were reported, however some minor events occurred. One study reported no significant difference in the number of participants with elevated liver enzymes (RR 3.00, 95% CI 0.13 to 69.52); three studies reported liver enzymes remained within the normal range (no data provided). Four studies reported creatinine phosphokinase (CPK). One study indicated that CPK values fluctuated in both the simvastatin and placebo groups (no data provided); the remaining three studies reported CPK either stayed within the normal range (one study) or there was no significant difference between the lipid lowering agents and placebo.

Authors' conclusions

None of the included studies reported patient-centred outcomes including all-cause mortality, cardiovascular mortality, or non-fatal myocardial infarction; only single studies reported cholesterol (HDL, LDL and total cholesterol), triglycerides, serum creatinine, blood urea nitrogen, liver enzymes, and protein (serum, urine). High quality RCTs need to be conducted to assess the safety and efficacy of lipid-lowering drugs for people with nephrotic syndrome.



Follow us on Twitter @CochraneRenal

Recent abstracts (*new*)

...Cont'd

[Percussion, diuresis, and inversion therapy for the passage of lower pole kidney stones following shock wave lithotripsy](#)

Liang Ren Liu, Qi Jun Li, Qiang Wei, Zhen Hua Liu and Yong Xu

Background

Lower pole kidney stones typically have poor rates of spontaneous clearance from the body. Some studies have suggested that diuresis, percussion and inversion therapy could be beneficial for people with lower pole kidney stones following shock wave lithotripsy. There is however controversy about the relative benefits, harms, and efficacy of these interventions for the management of lower pole kidney stones.

Objectives

To identify the benefits and harms of percussion, diuresis, and inversion therapy to facilitate the passage of lower pole kidney stones following shock wave lithotripsy.

Search methods

We searched the Cochrane Renal Group's specialised register up to 27 November 2013 through contact with the Trials' Search Co-ordinator using search terms relevant to this review.

Selection criteria

All randomised controlled trials (RCTs) and quasi-RCTs looking at the benefits and harms of percussion, diuresis, and inversion therapy for aiding passage of lower pole kidney stones following shock wave lithotripsy were sought for assessment. The first phases of randomised cross-over studies were also eligible for inclusion.

Data collection and analysis

Two authors independently assessed study quality and extracted data. Results were expressed as relative risk (RR) for dichotomous outcomes and mean difference (MD) or standardised mean difference (SMD) for continuous data with 95% confidence intervals (CI).

Main results

We identified two small studies (177 participants) for inclusion and analysis. One study (69 participants) compared percussion, diuresis and inversion therapy following shock wave lithotripsy versus observation-only after shock wave lithotripsy. This study reported significantly higher stone-free rates in the intervention group (RR 0.62, 95% CI 0.47 to 0.82) and a significant reduction in stone burden (MD -3.30, 95% CI -3.58 to -3.03) compared to the observation-only group. They

reported no significant differences in complication rates (RR 3.00, 95% CI 0.12 to 76.24).

The second study (108 participants) compared percussion, diuresis, and inversion therapy plus shock wave lithotripsy with shock wave lithotripsy therapy alone. This study reported significantly higher stone-free rates in the intervention group (RR 0.36, 95% CI 0.17 to 0.80) and a significant reduction in stone burden (MD -0.30, 95% CI -0.04 to -0.56) compared to the control group. They reported no significant differences in complication rates (RR 2.54, 95% CI 0.10 to 63.72).

For both studies selection bias was unclear; there was high risk of bias for performance bias; and detection, attrition and reporting bias were low.

Authors' conclusions

Limited evidence from two small studies indicated that percussion, diuresis, and inversion therapy may be safe and effective therapies to assist clearance of lower pole kidney stone fragments following shock wave lithotripsy. Methodological quality in both studies was assessed as moderate. Further well-designed and adequately powered studies are required to inform clinical practice.

Recent abstracts (*updated with new findings*)

[HMG CoA reductase inhibitors \(statins\) for kidney transplant recipients](#)

Suetonia C Palmer, Sankar D Navaneethan, Jonathan C Craig, Vlado Perkovic, David W Johnson, Sagar U Nigwekar, Jorgen Hegbrant and Giovanni FM Strippoli

Background

People with chronic kidney disease (CKD) have higher risks of cardiovascular disease compared to the general population. Specifically, cardiovascular deaths account most deaths in kidney transplant recipients. Statins are a potentially beneficial intervention for kidney transplant patients given their established benefits in patients at risk of cardiovascular disease in the general population. This is an update of a review first published in 2009.

Objectives

We aimed to evaluate the benefits (reductions in all-cause and cardiovascular mortality, major cardiovascular events, myocardial infarction and stroke, and progression of CKD to requiring dialysis) and harms (muscle or liver dysfunction, withdrawal, cancer) of statins compared to placebo, no treatment, standard care, or another statin in adults with CKD who have a functioning kidney transplant.

Recent abstracts *(updated with new findings)*

...Cont'd

Search methods

We searched the Cochrane Renal Group's Specialised Register to 29 February 2012 through contact with the Trials Search Co-ordinator using search terms relevant to this review.

Selection criteria

We included randomised controlled trials (RCTs) and quasi-RCTs that compared the effects of statins with placebo, no treatment, standard care, or statins on mortality, cardiovascular events, kidney function and toxicity in kidney transplant recipients.

Data collection and analysis

Two authors independently extracted data and assessed risk of bias. Treatment effects were expressed as mean difference (MD) for continuous outcomes (lipids, glomerular filtration rate (GFR), proteinuria) and relative risk (RR) for dichotomous outcomes (major cardiovascular events, mortality, fatal or non-fatal myocardial infarction, fatal or non-fatal stroke, elevated muscle or liver enzymes, withdrawal due to adverse events, cancer, end-stage kidney disease (ESKD), acute allograft rejection) together with 95% confidence intervals (CI).

Main results

We identified 22 studies (3465 participants); 17 studies (3282 participants) compared statin with placebo or no treatment, and five studies (183 participants) compared two different statin regimens.

From data generally derived from a single high-quality study, it was found that statins may reduce major cardiovascular events (1 study, 2102 participants: RR 0.84, CI 0.66 to 1.06), cardiovascular mortality (4 studies, 2322 participants: RR 0.68, CI 0.45 to 1.01), and fatal or non-fatal myocardial infarction (1 study, 2102 participants: RR 0.70, CI 0.48 to 1.01); although effect estimates lack precision and include the possibility of no effect.

Statin had uncertain effects on all-cause mortality (6 studies, 2760 participants: RR 1.08, CI 0.63 to 1.83); fatal or non-fatal stroke (1 study, 2102 participants: RR 1.18, CI 0.85 to 1.63); creatine kinase elevation (3 studies, 2233 participants: RR 0.86, CI 0.39 to 1.89); liver enzyme elevation (4 studies, 608 participants: RR 0.62, CI 0.33 to 1.19); withdrawal due to adverse events (9 studies, 2810 participants: RR 0.89, CI 0.74 to 1.06); and cancer (1 study, 2094 participants: RR 0.94, CI 0.82 to 1.07).

Statin significantly reduced serum total cholesterol (12 studies, 3070 participants: MD -42.43 mg/dL, CI -51.22 to -33.65); low-density lipoprotein cholesterol (11 studies, 3004 participants: MD -43.19 mg/dL, CI -52.59 to -33.78); serum triglycerides (11 studies, 3012 participants: MD -27.28 mg/dL, CI -34.29 to -20.27); and lowered high-

density lipoprotein cholesterol (11 studies, 3005 participants: MD -5.69 mg/dL, CI -10.35 to -1.03).

Statin had uncertain effects on kidney function: ESKD (6 studies, 2740 participants: RR 1.14, CI 0.94 to 1.37); proteinuria (2 studies, 136 participants: MD -0.04 g/24 h, CI -0.17 to 0.25); acute allograft rejection (4 studies, 582 participants: RR 0.88, CI 0.61 to 1.28); and GFR (1 study, 62 participants: MD -1.00 mL/min, CI -9.96 to 7.96).

Due to heterogeneity in comparisons, data directly comparing differing statin regimens could not be meta-analysed. Evidence for statins in people who have had a kidney transplant were sparse and lower quality due to imprecise effect estimates and provided limited systematic evaluation of treatment harm.

Authors' conclusions

Statin may reduce cardiovascular events in kidney transplant recipients, although treatment effects are imprecise. Statin treatment has uncertain effects on overall mortality, stroke, kidney function, and toxicity outcomes in kidney transplant recipients. Additional studies would improve our confidence in the treatment benefits and harms of statins on cardiovascular events in this clinical setting.

[Non-corticosteroid immunosuppressive medications for steroid-sensitive nephrotic syndrome in children](#)

Nanthiya Pravitsitthikul, Narelle S Willis, Elisabeth M Hodson and Jonathan C Craig

Background

About 80% to 90% of children with steroid-sensitive nephrotic syndrome (SSNS) have relapses. Of these children, around half relapse frequently, and are at risk of adverse effects from corticosteroids. Non-corticosteroid immunosuppressive medications are used to prolong periods of remission in these children; however, these medications have significant potential adverse effects. Currently, there is no consensus about the most appropriate second line agent in children who are steroid sensitive, but who continue to relapse. This is the third update of a review first published in 2001 and updated in 2005 and 2008.

Objectives

To evaluate the benefits and harms of non-corticosteroid immunosuppressive medications in relapsing SSNS in children.

Search methods

For this update we searched the Cochrane Renal Group's Specialised Register to June 2013.

Recent abstracts *(updated with new findings)*

...Cont'd

Selection criteria

Randomised controlled trials (RCTs) or quasi-RCTs were included if they compared non-corticosteroid immunosuppressive medications with placebo, prednisone or no treatment, different non-corticosteroid immunosuppressive medications and different doses, durations or routes of administration of the same non-corticosteroid immunosuppressive medication.

Data collection and analysis

Two authors independently assessed the risk of bias of the included studies and extracted data. Statistical analyses were performed using a random-effects model and results expressed as risk ratio (RR) or mean difference (MD) with 95% confidence intervals (CI).

Main results

We identified 32 studies (1443 children) of which one study is still ongoing. In the 31 studies with data, risk of bias assessment indicated that 11 (37%) and 16 (53%) studies were at low risk of bias for sequence generation and allocation concealment respectively. Six (29%) studies were at low risk of performance and detection bias. Twenty seven (87%) and 19 (60%) studies were at low risk of incomplete and selective reporting respectively. Alkylating agents (cyclophosphamide and chlorambucil) significantly reduced the risk of relapse at six to 12 months (RR 0.43, 95% CI 0.31 to 0.60) and 12 to 24 months (RR 0.20, 95% CI 0.09 to 0.46) compared with prednisone alone. There was no significant difference in relapse risk at two years between chlorambucil and cyclophosphamide (RR 1.31, 95% CI 0.80 to 2.13). There was no significant difference at one year between intravenous and oral cyclophosphamide (RR 0.99, 95% CI 0.76 to 1.29). Cyclosporin was as effective as cyclophosphamide (RR 1.07, 95% CI 0.48 to 2.35) and chlorambucil (RR 0.82, 95% CI 0.44 to 1.53) at the end of therapy while levamisole (RR 0.47, 95% CI 0.24 to 0.89) was more effective than steroids alone. However the effects of cyclosporin and levamisole were not sustained once treatment was stopped. In one small study cyclosporin significantly reduced the relapse rate compared with mycophenolate mofetil (MD 0.75, 95% CI 0.01 to 1.49). Limited data from a cross-over study suggested that cyclosporin was more effective than mycophenolate mofetil in maintaining remission. In steroid - and cyclosporin-dependent disease, rituximab significantly reduced the risk of relapse at three months compared with conventional therapy. Mizoribine and azathioprine were no more effective than placebo or prednisone alone in maintaining remission.



Conferences



May 14—17, 2014

The 14th Asian Pacific Congress of Nephrology (APCN), Tokyo, Japan
www.mtoyouto.jp/apcn2014

May 16—21, 2014

American Urological Association 2014, Orlando, FL, USA
www.aua2014.org

May 31—June 3, 2014

51st ERA-EDTA Congress, Amsterdam
www.era-edta2014.org

July 26—31, 2014

World Transplant Congress, San Francisco, USA
www.wtc2014.org

Sept 3—7, 2014

32nd World Congress Meeting on Endourology, Taipei, Taiwan
www.2014wce.com

September 7—10, 2014

15th Congress of the International Society of Peritoneal Dialysis, Madrid, Spain
www.ispdmadrid2014.com

Sept 22—25, 2014

22nd Cochrane Colloquium
 Hyderabad, India
<http://colloquium.cochrane.org/>

Oct 24—28, 2014

The 32nd World Congress of Internal Medicine (WCIM 2014), Seoul, Korea
www.wcim2014.org

Nov 11—16, 2014

ASN Kidney Week 2014, Philadelphia, PA, USA
www.asn-online.org/education/kidneyweek/

Recent abstracts (*updated with new findings*)

...Cont'd

Authors' conclusions

Eight-week courses of cyclophosphamide or chlorambucil and prolonged courses of cyclosporin and levamisole reduce the risk of relapse in children with relapsing SSNS compared with corticosteroids alone. Limited data indicate that mycophenolate mofetil and rituximab are valuable additional medications for relapsing SSNS. However clinically important differences in efficacy are possible and further comparative studies are still needed.

[Treatment for peritoneal dialysis-associated peritonitis](#)

Angela E Ballinger, Suetonia C Palmer, Kathryn J Wiggins, Jonathan C Craig, David W Johnson, Nicholas B Cross, Giovanni FM Strippoli

Background

Peritonitis is a common complication of peritoneal dialysis (PD) that is associated with significant morbidity including death, hospitalisation, and need to change from PD to haemodialysis. Treatment is aimed to reduce morbidity and recurrence. This is an update of a review first published in 2008.

Objectives

To evaluate the benefits and harms of treatments for PD-associated peritonitis.

Search methods

For this review update we searched the Cochrane Renal Group's Specialised Register to March 2014 through contact with the Trials Search Co-ordinator using search terms relevant to this review. Studies contained in the Specialised Register are identified through search strategies specifically designed for CENTRAL, MEDLINE and EMBASE, and handsearching conference proceedings.

Selection criteria

We included randomised controlled trials (RCTs) and quasi-RCTs assessing the treatment of peritonitis in PD patients (adults and children). We included any study that evaluated: administration of an antibiotic by different routes (e.g. oral, intraperitoneal (IP), intravenous (IV)); dose of an antibiotic agent; different schedules of administration of antimicrobial agents; comparisons of different regimens of antimicrobial agents; any other intervention including fibrinolytic agents, peritoneal lavage and early catheter removal.

Data collection and analysis

Multiple authors independently extracted data on study risk of bias and outcomes. Statistical analyses were

performed using the random effects model. We expressed summarised treatment estimates as a risk ratio (RR) with 95% confidence intervals (CI) for dichotomous outcomes and mean difference (MD) with 95% CI for continuous outcomes.

Main results

We identified 42 eligible studies in 2433 participants: antimicrobial agents (36 studies); urokinase (4 studies), peritoneal lavage (1 study), and IP immunoglobulin (1 study). We did not identify any optimal antibiotic agent or combination of agents. IP glycopeptides (vancomycin or teicoplanin) had uncertain effects on primary treatment response, relapse rates, and need for catheter removal compared to first generation cephalosporins, although glycopeptide regimens were more likely to achieve a complete cure (3 studies, 370 episodes: RR 1.66, 95% CI 1.01 to 2.72). For relapsing or persistent peritonitis, simultaneous catheter removal and replacement was better than urokinase at reducing treatment failure rates (RR 2.35, 95% CI 1.13 to 4.91) although evidence was limited to a single small study. Continuous and intermittent IP antibiotic dosing schedules had similar treatment failure and relapse rates. IP antibiotics were superior to IV antibiotics in reducing treatment failure in one small study (RR 3.52, 95% CI 1.26 to 9.81). Longer duration treatment (21 days of IV vancomycin and IP gentamicin) had uncertain effects on risk of treatment relapse compared with 10 days treatment (1 study, 49 patients: RR 1.56, 95% CI 0.60 to 3.95) although may have increased ototoxicity.

In general, review conclusions were based on a small number of studies with few events in which risk of bias was generally high; interventions were heterogeneous, and outcome definitions were often inconsistent. There were no RCTs evaluating optimal timing of catheter removal and data for automated PD were absent.

Authors' conclusions

Many of the studies evaluating treatment of PD-related peritonitis are small, out-dated, of poor quality, and had inconsistent definitions and dosing regimens. IP administration of antibiotics was superior to IV administration for treating PD-associated peritonitis and glycopeptides appear optimal for complete cure of peritonitis, although evidence for this finding was assessed as low quality. PD catheter removal may be the best treatment for relapsing or persistent peritonitis.

Evidence was insufficient to identify the optimal agent, route or duration of antibiotics to treat peritonitis. No specific antibiotic appears to have superior efficacy for preventing treatment failure or relapse of peritonitis, but evidence is limited to few trials. The role of routine peritoneal lavage or urokinase is uncertain.

Cochrane Collaboration news

Online Learning Modules for Cochrane Authors

Calling all current and aspiring Cochrane authors! Are you already working on a Cochrane Systematic Review? Have you used the Online Learning Modules? If yes, we'd love to have your feedback!

Are you planning to work on a systematic review, and you don't have access to training?

Would you like to have free access to the full suite of Cochrane online learning resources designed to support authors throughout the Cochrane Review preparation process?

For a limited time, Cochrane is offering free access to its Online Learning Modules for current and aspiring Cochrane authors. In exchange for free access to 12+ hours of tailored training resources, authors will be asked to provide feedback on their experience of using the materials.

For more information: <http://training.cochrane.org/authors/intervention-reviews/olms>

Europe votes for clinical trial transparency

On 2 April members of the European Parliament (MEPs) voted overwhelmingly in favour of a new law that will require all drug clinical trials in Europe to be registered and their results reported in a public database. This is a significant win for the AllTrials campaign, for which Cochrane is a principal supporter and organiser.

This new law comes into effect in 2016 and as Ben Goldacre, co-founder of the AllTrials campaign, said:

"[The new law] does not address the far bigger problem, that we still don't have full reporting for all trials on the medicines we are using right now, today, medicines which we will continue to use for the foreseeable future.

"We need all trials – on all uses of all currently prescribed treatments – to be made available, and urgently. There is no excuse for industry inflicting ongoing harm on patients, and on their own reputation, by continuing to campaign against this position."

David Tovey, Editor in Chief of *The Cochrane Library*, also commented on the vote on behalf of Cochrane:

"For Europe to sign up to a register and commit to

reporting results [is] a great step forward. Yet there are currently many medicines in use where all trial data hasn't been made available and without it we risk using ineffective and potentially harmful treatments and medications on the very people we want to help."

For more information on the campaign, visit the [AllTrials website](#). For more information on Cochrane's involvement, read more [here](#).

Call for nominations: Bill Silverman Prize 2014: Deadline 22 July 2014

William (Bill) Silverman (1924-2004) was one of the founders of American neonatal medicine. He was honoured repeatedly as one of the pioneers in his specialty; however, he often evoked somewhat mixed responses amongst his colleagues because he was in the habit of raising troubling questions about the scientific basis and ethics of his and their practices. Like many of the people who have helped to establish Cochrane, Bill Silverman could be regarded as a 'troublemaker'. As he reiterated frequently, however, criticism is a form of troublemaking that can help to drive progress. Furthermore, criticism should not be limited to examining the work of others, but should also include self-criticism.

The Bill Silverman Prize is offered annually, and explicitly acknowledges the value of criticism of Cochrane, with a view to helping to improve its work, and thus achieve its aim of helping people make well-informed decisions about health care by providing the best possible evidence on the effects of healthcare interventions. Please note that this Prize is not for the preparation of a Cochrane Review; rather, it is for a piece of published or presented research which demonstrates critical thinking, either in evaluating any aspect of the preparation, maintenance or dissemination of Cochrane Reviews or about the work of Cochrane more generally. It should be of high quality, have been accompanied by constructive suggestions on how the relevant aspects of Cochrane's work could be improved; and have had, or is likely to have, a positive impact on the scientific quality, relevance and use of Cochrane Reviews.

Authors of a piece of research published or presented in the twelve-month period 1 April 2013 to 31 March 2014 are eligible to apply for the Bill Silverman Prize.

The deadline for receipt of nominations is 22 July 2014. Nominations can be made by anyone, including the authors of the publication or presentation being nominated. Nominations should be emailed to Claire Allen (callen@cochrane.org), please, with 'Bill Silverman Prize' in the subject heading, accompanied by the publication or presentation, and a brief explanation as to how it meets the criteria for the Prize.



The Cochrane Collaboration
preparing, maintaining and promoting the accessibility of systematic reviews of the effects of health care interventions

Cochrane Renal Group
Centre for Kidney Research
The Children's Hospital at Westmead
Locked Bag 4001
Westmead NSW 2145
AUSTRALIA
Phone: +61 2 9845 1478, +61 2 9845 1461
Fax: +61 2 9845 1491
E-mail: crg@chw.edu.au
Web: www.cochrane-renal.org

Managing Editor
Ann Jones email: ann.jones@health.nsw.gov.au

Trial Search Coordinators
Ruth Mitchell email: ruth.mitchell@health.nsw.gov.au
Gail Higgins email: gail.higgins@health.nsw.gov.au

Administration Officer
Leslee Edwards email: leslee.edwards@health.nsw.gov.au

Endorsed by...



Supported by...



Do we have your correct details?

Please return if:

- Your contact details have changed
- You would like to be included on our mailing list (alternatively complete the online membership form at www.cochrane-renal.org/membership.php)
- You would like to be removed from the mailing list



The Cochrane
Renal Group

Name:(First name)(Family name/Surname)

Title/position:

Interests:

- referee Clinical area of interest:
- consumer referee
- author handsearching provide trial data other

Department:.....

Organisation:.....

Street/PO Box:.....

City:.....State:.....Zipcode:.....

Country:

Phone:

Fax:

email:

Fax: +61 2 9845 1491

or post: The Cochrane Renal Group
 Centre for Kidney Research
 The Children's Hospital at Westmead
 Locked Bag 4001
 Westmead, NSW 2145
 AUSTRALIA