



COCHRANE RENAL GROUP

A REVIEW GROUP OF THE COCHRANE COLLABORATION

Newsletter - October 2013

Coordinating Editor

Jonathan Craig

Deputy Coordinating Editor

Angela Webster

Managing Editor

Narelle Willis

Assistant Managing Editor

Ann Jones

Trial Search Coordinators

Gail Higgins
Ruth Mitchell

Regional Coordinator

Giovanni Strippoli

Administration Officer

Leslee Edwards

Editors

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

Advisory Board

Robert Atkins
Gavin Becker
Steve Chadban
Jonathan Craig
Sally Green
Elisabeth Hodson
Elizabeth Koff
Chen Au Peh
Matthew Roberts
Angela Webster
Michael Webster
Narelle Willis

Cochrane Renal Group – New reviews, protocols and titles

New and updated reviews

In Issues 4-9, 2013 we published three new reviews and three updated reviews with new findings:

New

- Interventions for erythropoietin-resistant anaemia in dialysis patients
- Tacrolimus versus cyclosporin as primary immunosuppression for lung transplant recipients
- Tripterygium wilfordii Hook F (a traditional Chinese medicine) for primary nephrotic syndrome

Updated with new findings

- Chinese herbal medicine Huangqi type formulations for nephrotic syndrome
- HMG CoA reductase inhibitors (statins) for dialysis patients
- Hydroxyethyl starch (HES) versus other fluid therapies: effects on kidney function

New protocols

In Issues 4-9, 2013 we published 17 new protocols:

- Advance care planning for haemodialysis patients
- Amphotericin B deoxycholate versus liposomal amphotericin B: effects on kidney function
- Antimicrobial lock solutions for preventing catheter-related infections in haemodialysis
- Belatacept for kidney transplant recipients
- Dimercaptosuccinic acid scan versus ultrasound in screening for vesicoureteral reflux among children with urinary tract infections
- Direct renin inhibitors for preventing the progression of diabetic kidney disease

Inside this issue:

[New reviews, protocols, titles](#)

[Renal Group news](#)

[Recent abstracts—new](#)

[Recent abstracts—updated, new findings](#)

[Upcoming workshops](#)

[Collaboration news](#)

[Conferences](#)

[Membership form](#)

New protocols (Cont'd)

- Erythropoiesis stimulating agents for anaemia in adults with chronic kidney disease: a network meta-analysis
- HMG CoA reductase inhibitors (statins) for preventing acute kidney injury after surgical procedures requiring cardiac bypass
- Intensity of continuous renal replacement therapy for acute kidney injury
- Interventions for chronic kidney disease-associated restless legs syndrome
- Magnesium-based interventions for people with chronic kidney disease
- Normal saline versus lower-chloride solutions for kidney transplantation
- Pre-emptive correction for haemodialysis arteriovenous access stenosis
- Probiotics for preventing urinary tract infection in people with neuropathic bladder
- Surgery versus non-surgical management for unilateral ureteric-pelvic junction obstruction in children
- Timing of continuous renal replacement therapy initiation for acute kidney injury
- Urinary alkalinisation for uncomplicated urinary tract infection

New titles

- Acetylcysteine for preventing contrast-induced nephropathy
- Anticoagulation medications for preventing thrombosis in solid organ transplant recipients
- Diuretics for people with chronic kidney disease
- Medical and dietary interventions for treating urinary stones in children
- New oral anticoagulants versus warfarin for atrial fibrillation patients with chronic kidney disease
- Peritoneal dialysis for acute kidney injury

Renal group news



L-R: Allison Tong (CRG author), Jacqui Ramke (Eyes and Vision Group author), Suetonia Palmer (CRG editor and author), Jonathan Craig (CRG coordinating editor)

21st Cochrane Colloquium

Quebec City, QC, Canada

19-23 September 2013

Better Knowledge for Better Health - *Un meilleur savoir pour une meilleure santé*

The 21st Colloquium has been a celebration and look back at the first 20 years of Collaboration history.

The Colloquium - which involved over 1200 participants from almost 50 countries - included six plenary sessions, 60 workshops, 110 oral and over 200 poster presentations.

Exuberance is not a concept closely associated with research-based meetings, but thanks to an energetic flash mob (the Iberoamerican Centre team), and some extraordinary gymnasts and dancers at the dinner, there were many opportunities to be inspired and informed during sessions.

Sir Iain Chalmers and others involved in the establishment of the Collaboration in Oxford over 20 years ago recalled some of the highlights and opportunities for engineering creative solutions to develop review methodology and ultimately, *The Cochrane Library*. This presentation, and many others, are available from Cochrane's YouTube channel (www.youtube.com/user/CochraneCollab).

Renal group news (Cont'd)

Narelle Willis to retire as Managing Editor

In November this year, Narelle Willis will be retiring as Managing Editor (ME) of the Cochrane Renal Group (CRG).

Narelle joined the Renal Group in May 2000, when the editorial base relocated from Lyon in France to the Centre for Kidney Research at The Children's Hospital at Westmead in Sydney Australia.

In those days we had four published reviews and 15 protocols which fitted neatly on one side of a whiteboard. We now have 113 reviews and 98 protocols and the whiteboard has long been consigned to history, replaced by Archie workflows.

As well as being an invaluable member of the Renal Group, Narelle has contributed to the work of the Cochrane Collaboration in many ways over the years. She served on the Cochrane Collaboration Steering Group (as Review Group ME representative), the Publishing Policy Group, the Quality Advisory Group, the Review Group MEs Executive Group (as co-convenor), the Workflows Working Group, and also as a Review Group ME regional mentor.

Narelle won't be leaving us completely - she will work from the road on her travels, as a copy editor for the Renal Group.

We thank Narelle for her hard work and dedication and wish her all the very best for her adventures in retirement.

Ann Jones, who is Assistant Managing Editor of the Renal Group, will be taking over the reins from Narelle.



Jonathan Craig completes term as Co-Chair of the Cochrane Collaboration

We anticipate seeing more of Jonathan around CRG HQ in the future. Jonathan has just completed his second term as the Collaboration's Co-Chair - a role that has required energy, commitment, entrepreneurial flair, diplomacy and a high tolerance for air travel in equal measures.

In his parting presentation as Co-Chair, Jonathan reminded Colloquium participants that the world is made up of opportunities, not challenges. We look forward to exploring many more opportunities with him at CRG Central.



The new Co-Chair is Lisa Bero who is Co-Director, San Francisco Branch United States Cochrane Center.

Impact factor 2012

The revised 2012 Journal Citation Report (JCR) has been released by Thomson ISI and the Impact Factor for the Cochrane Database of Systematic Reviews ([CDSR](#)) is **5.785**. CDSR is ranked 11th of 151 journals in the "Medicine, General and Internal" category, placing it in the top 5% of all titles listed in the ISI Journal Citation Report.

Of the 11 Cochrane Journal Clubs produced in 2012, the most popular was 'Cranberries for preventing urinary tract infections' published by the Cochrane Renal Group.

The Renal Group's impact factor for 2012 was 3.880, meaning that each review was cited on average 3.88 times.

Renal group news (Cont'd)

Prestigious Rutherford Fellowships for Otago researchers

Tuesday, 1 October 2013

Two leading early to mid-career researchers at the University of Otago have just gained highly sought-after fellowships to help them develop their research careers in New Zealand.

Rutherford Discovery Fellowships valued at \$800,000 over five years have been awarded to Otago's **Dr Suetonia Palmer** (Medicine, Christchurch) for research entitled: "Improving evidence for decision-makers in chronic kidney disease" and to Dr Angela Wanhalla (History) for research entitled: "Marriage: The Politics of Private Life in New Zealand."

The Fellowships, of which ten are awarded annually, are designed to develop and foster future leaders in the New Zealand science and innovation sector. They are funded by the Ministry of Business, Innovation and Employment and administered by the Royal Society of New Zealand.

The Rutherford Discovery Fellowships are open to researchers within three to eight years of having completed their PhD. The scheme was established in 2010 and now supports 40 fellows. Their research covers a vast range of topics from language studies to Antarctic research to the search for extra-solar planets. By 2014, there are expected to be 50 fellows under the scheme.

Summary of research:

Dr Suetonia Palmer

Improving evidence for decision-makers in chronic kidney disease

Chronic kidney disease is common, affecting about 500,000 New Zealanders. Chronic kidney disease is important because it increases our chances of heart disease and death and may lead to needing treatment with dialysis or a kidney transplant. Dialysis therapy is

a heavy and costly burden for patients and their families and the health system. However, finding reliable evidence to improve patient outcomes is hindered by the lack of rigorous summaries of evidence for many clinical questions that patients, doctors and policy-makers need answers to.

The first focus for this research will be to understand whether using surrogate markers of health, common to research in this field, is useful when deciding whether treatments work.

The second research focus explores important potential causes of poor quality of life for people with chronic kidney disease which can be tested in future trials to improve patient health and wellbeing.

The third research focus will be to provide a comprehensive framework of understanding about existing treatments known to protect kidney function, so that clinicians, patients and funders can know which, of many, treatments is best with the fewest side-effects.

Finally, the research will focus on how patients and healthcare providers experience chronic kidney disease care in Canterbury so that they can work together to find new and sustainable ways to improve healthcare for their own region.

The research programme as a whole aims to provide rigorous overviews of existing research and participant-led enquiry to provide better and more useable information for clinicians, consumers and policy-makers in the field of chronic kidney disease.



Suetonia Palmer
(Editor and author, Cochrane Renal Group)

Recent abstracts (*new*)

[Interventions for erythropoietin-resistant anaemia in dialysis patients](#)

Sunil V Badve, Elaine M Beller, Alan Cass, Daniel P Francis, Carmel Hawley, Iain C Macdougall, Vlado Perkovic, David W Johnson

Background

People living with end-stage kidney disease (ESKD) often develop anaemia. Erythropoiesis-stimulating agents (ESAs) are often given to people living with ESKD to maintain haemoglobin at a level to minimise need for transfusion. However, about 5% to 10% of patients with ESKD exhibit resistance to ESAs, and observational studies have shown that patients requiring high doses of ESA are at increased risk of mortality.

Objectives

This review aimed to study the effects of interventions for the treatment of ESA-resistant anaemia in people with ESKD.

Search methods

We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE and EMBASE for randomised controlled trials (RCT) that involved participants with ESKD on dialysis or who were pre-dialysis patients with chronic kidney disease (stage 5). Date of last search: April 2013.

Selection criteria

ESA resistance was defined as failure to achieve or maintain haemoglobin/haematocrit levels within the desired target range despite appropriate ESA doses (erythropoietin ≥ 450 U/kg/wk intravenously or ≥ 300 U/kg/wk subcutaneously; darbepoetin ≥ 1.5 $\mu\text{g}/\text{kg}/\text{wk}$) in people who were not nutritionally deficient, or who had haematological or bleeding disorders. Extended inclusion criteria for ESA hyporesponsive state were: erythropoietin dose ≥ 300 U/kg/wk and ≥ 150 U/kg/wk for intravenous administration; or ≥ 200 U/kg/wk and ≥ 100 U/kg/wk for subcutaneous administration; or darbepoetin dose ≥ 1.0 $\mu\text{g}/\text{kg}/\text{wk}$.

Data collection and analysis

Two authors independently assessed study quality 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

Titles and abstracts of 521 records were screened, of which we reviewed 99 from the full text. Only two studies matched our inclusion criteria. One study compared intravenous vitamin C versus no study medication for six months in 42 ESKD patients on haemodialysis who required intravenous

erythropoietin (dose ≥ 450 U/kg/wk). The other included study compared high-flux dialyser versus low-flux dialyser for six months in 48 haemodialysis patients who required subcutaneous erythropoietin (dose ≥ 200 U/kg/wk). Because interventions differed, data could not be combined for quantitative meta-analysis.

Authors' conclusions

There was inadequate evidence identified to inform recommendation of any intervention to ameliorate ESA hyporesponsiveness. Adequately powered RCTs are required to establish the safety and efficacy of interventions to improve responsiveness to ESA therapy.

[Tacrolimus versus cyclosporin as primary immunosuppression for lung transplant recipients](#)

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

Background

Lung transplantation is a well-accepted treatment for people with most end-stage lung diseases. Although both tacrolimus and cyclosporin are used as primary immunosuppressive agents in lung transplant recipients, it is unclear which of these drugs is better in reducing rejection and death without causing adverse effects.

Objectives

To assess the benefits and harms of tacrolimus versus cyclosporin for primary immunosuppression in lung transplant recipients.

Search methods

We searched the Cochrane Renal Group's Specialised Register to 10 April 2013 through contact with the Trials Search Co-ordinator using search terms relevant to this review. We also searched Science Citation Index Expanded and the Transplant Library to 20 April 2013.

Selection criteria

We included all randomised controlled trials (RCT) that compared any dose and duration of administration of tacrolimus versus cyclosporin as primary immunosuppressive treatment in lung transplant recipients. Our selection criteria required that all included patients received the same additional immunosuppressive therapy within each study.

Data collection and analysis

Three authors extracted data. For dichotomous data we used risk ratio (RR) and used mean difference (MD) for continuous data, each with 95% confidence intervals (CI). Methodological components of the included studies were used to assess risk of systematic errors (bias). Trial sequential analysis was used to assess risk of random errors (play of chance).

Recent abstracts (new)

...Cont'd

Main results

We included three studies that enrolled a total of 413 adult patients that compared tacrolimus with microemulsion or oral solution cyclosporin. All studies were found to be at high risk of bias. Tacrolimus seemed to be significantly superior to cyclosporin regarding the incidence of bronchiolitis obliterans syndrome (RR 0.46, 95% CI 0.29 to 0.74), lymphocytic bronchitis score (MD -0.60, 95% CI -1.04 to -0.16), treatment withdrawal (RR 0.27, 95% CI 0.16 to 0.46), and arterial hypertension (RR 0.67, 95% CI 0.50 to 0.89). However, the finding for arterial hypertension was not confirmed when analysed using a random-effects model (RR 0.54, 95% CI 0.17 to 1.73). Furthermore, trial sequential analysis found that none of the meta-analyses reached the required information sizes and cumulative Z-curves did not cross trial sequential monitoring boundaries. Diabetes mellitus occurred more frequently among people in the tacrolimus group compared with the cyclosporin group when the fixed-effect model was applied (RR 4.24, 95% CI 1.58 to 11.40), but no difference was found when the random-effects model was used for analysis (RR 4.43, 95% CI 0.75 to 26.05). Again, trial sequential analysis found that the required information threshold was not reached and cumulative Z-curve did not cross the trial sequential monitoring boundary. No significant difference between treatment groups was observed regarding mortality (RR 1.06, 95% CI 0.75 to 1.49), incidence of acute rejection (RR 0.89, 95% CI 0.77 to 1.03), numbers of infections/100 patient-days (MD -0.15, 95% CI -0.30 to 0.00), cancer (RR 0.21, 95% CI 0.04 to 1.16), kidney dysfunction (RR 1.41, 95% CI 0.93 to 2.14), kidney failure (RR 1.57, 95% CI 0.28 to 8.94), neurotoxicity (RR 7.06, 95% CI 0.37 to 135.19), and hyperlipidaemia (RR 0.60, 95% CI 0.30 to 1.20). Trial sequential analysis showed the required information thresholds were not reached for any of these outcome measures.

Authors' conclusions

Tacrolimus may be superior to cyclosporin regarding bronchiolitis obliterans syndrome, lymphocytic bronchitis, treatment withdrawal, and arterial hypertension, but may be inferior regarding development of diabetes. No difference in mortality and acute rejection was observed between patients treated with tacrolimus and cyclosporin. There were few studies comparing tacrolimus and cyclosporin after lung transplantation, and the numbers of patients and events in the included studies were limited. Furthermore, the included studies were deemed to be at high risk of bias. Hence, more RCTs are needed to assess the results of the present review. Such studies ought to be conducted with low risks of systematic errors (bias) and of random errors (play of chance).

[Tripterygium wilfordii Hook F \(a traditional Chinese medicine\) for primary nephrotic syndrome](#)

Yizhi Chen , Zhixiang Gong , Xiangmei Chen , Li Tang , Xuezhi Zhao , Qing Yuan and Guangyan Cai

Background

Tripterygium wilfordii Hook F (TwHF), a traditional Chinese herbal medicine used as an immunosuppressive agent, has been prescribed in China for patients with primary nephrotic syndrome (NS) for more than two decades. Although patients with primary NS in China have benefited from TwHF treatment, its properties have not yet been fully understood.

Objectives

To assess the benefits and harms of TwHF for patients with primary NS.

Search methods

We searched the Cochrane Renal Group's specialised



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

register (August 2012), Cochrane Register of Controlled Trials (CENTRAL, The Cochrane Library 2012, Issue 8), EMBASE (1966 to August 2012), and MEDLINE (1966 to August 2012). We also searched CBM (Chinese Biological Medical Database) (1978 to November 2010), CNKI (Chinese National Knowledge Infrastructure) (1979 to November 2010), VIP (ChongQing WeiPu Chinese Science and Technology Periodical Database) (1989 to November 2010), WanFang Database (1980 to November 2010), and reference lists of articles (6 November 2010).

Selection criteria

Only randomised controlled trials (RCTs) were included. Two standardised preparations of TwHF were investigated: ethanol-ethyl acetate extract and chloroform-methanol extract. All other TwHF preparations were excluded because of reported toxicities. Other traditional Chinese herbal medicines were also excluded. All included RCTs had a follow-up of at least three months.

Data collection and analysis

Data extraction and risk of bias assessment were undertaken independently by two authors. Where details of randomised sequence generation and allocation concealment were absent or inadequately reported, we contacted original study investigators for verification and details of the procedure. For dichotomous outcomes (remission and drug-related adverse events) we used risk ratio (RR) with 95% confidence intervals (95% CI) and mean difference (MD) for continuous outcomes (urinary protein excretion, serum albumin and serum creatinine).

Main results

Ten studies enrolling 630 participants were included. Overall, the quality of evidence was suboptimal due to the small number of included studies enrolling small numbers of participants; short follow-up in each study; only a few studies in each comparison category; and major concerns with methodological bias. Four studies (293 participants) contributed to the comparison of TwHF versus non-TwHF. TwHF significantly increased complete remission (RR 1.46, 95% CI 1.18 to 1.80) and complete or partial remission (RR 1.26, 95% CI 1.10 to 1.44) without escalating the adverse events profile at the last follow-up (12 to 16 months). Four studies (223 participants) compared TwHF with prednisone. There were no statistically significant differences between complete remission, partial remission, and complete or partial remission. Two studies (114 participants) contributed to the comparison of TwHF versus cyclophosphamide (CPA) at the last follow-up (3 to 12 months). There were no statistically significant differences between complete, partial, or complete or partial remission. One study (46 participants) reported TwHF was associated with a significantly lower serum creatinine

compared with CPA (MD -14.00 $\mu\text{mol/L}$, 95% CI -26.43 to -1.57). No serious adverse events of TwHF were observed. One study (37 participants) reported TwHF was associated with a significantly lower risk of psychosis when compared to prednisone (RR 0.11, 95% CI 0.01 to 0.75), and two studies showed a significantly lower risk of hair loss with TwHF when compared to CPA ((2 studies, 114 participants): RR 0.11, 95% CI 0.02 to 0.59).

Authors' conclusions

TwHF may have an add-on effect on remission in patients with primary NS. There was insufficient evidence to assess if TwHF was as effective as prednisone or CPA. More methodologically sound and sufficiently powered studies, with adequate follow-up would help to better inform management options for the use of TwHF for primary NS. TwHF should be further directly compared with other widely used immunosuppressive agents after the superiority over placebo or no treatment has been clearly established.

Recent abstracts (*updated with new findings*)

[Chinese herbal medicine Huangqi type formulations for nephrotic syndrome](#)

Mei Feng , Wei Yuan , Renzhong Zhang , Ping Fu and Taixiang Wu

Background

Patients with primary nephrotic syndrome mostly need immunosuppression to achieve remission, but many of them either relapse after immunosuppression therapy or resistant to it. On the other hand, immunosuppression therapy could increase the adverse effect. Huangqi and Huangqi type formulations have been used to treat nephrotic syndrome for years in China, however the effects and safety of these formulations have not been systematically reviewed. This is an update of a review first published in 2008.

Objectives

To assess the benefits and harms of Huangqi and Huangqi type formulations in treating nephrotic syndrome in any age group, either as sole agents or in addition to other drug therapies.

Search methods

We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, Chinese Biomedicine Database (CBM), CNKI, VIP and reference lists of articles. There was no language restriction. Date of search: April 2011.

Recent abstracts (*updated with new findings*)

...Cont'd

Selection criteria

All randomised controlled trials (RCTs) assessing the use of Huangqi or Huangqi type formulations in treating nephrotic syndrome in adults and children, either as sole agents or in addition to other drug therapies.

Data collection and analysis

Two authors independently assessed study quality and extracted data. For dichotomous outcomes results were expressed as relative risk (RR) and 95% confidence intervals (CI). Continuous outcomes were expressed as mean difference (MD) with 95% CI.

Main results

Nine studies were identified. One was judged to be at high risk of bias for random sequence, the rest were judged to be at low risk of bias. All studies had high risk of bias for allocation concealment and performance bias; unclear risk for detection bias and low risk for attrition bias. Two studies had unclear risk reporting bias and the rest had low risk. No other potential threats to validity were found. Compared to control interventions, Huangqi type formulations had a positive effect on plasma albumin (MD 6.41 g/dL, 95% CI 4.24 to 8.59), urine albumin excretion (-0.57 g/24 h, 95% CI -1.04 to -0.10), cholesterol (MD -1.70 mmol/L, 95% CI -2.60 to -1.13) and triglycerides (-0.33 mmol/L, 95% CI -0.63 to -0.03); and more patients showed improvement at three months (RR 0.41, 95% CI 0.20 to 0.84). There was no significant difference between Huangqi type formulations and control interventions for complete (RR 1.59, 95% CI 0.29 to 8.65) or partial remission (RR 1.22, 95% CI 0.57 to 2.58). While some formulations showed improvement in the number of patients achieving complete or partial remission, the number of studies (usually one per formulation), and the number patients (ranging from 38 to 78) were small. Relapse was reported at varying time points, ranging from three months to three years, and therefore these results were not pooled. Complications of nephrotic syndrome and adverse events were only reported by two studies; Only one study reported complications of nephrotic syndrome (infection) and another reported adverse reactions to treatment (Cushing's syndrome, steroid withdrawal syndrome, respiratory tract infection, and upper gastrointestinal haemorrhage). Both studies reported those treated with Huangqi type formulations had significantly less complications or adverse reactions.

Authors' conclusions

Huangqi and Huangqi type formulations may have some positive effects in treating nephrotic syndrome by increasing plasma albumin and reducing urine albumin excretion, blood cholesterol and triglycerides, and

Upcoming workshops 2013

Australasian Cochrane Centre/
Cochrane Renal Group*

23 Oct	Cochrane Live! Webinar Managing references for your review using EndNote Melbourne 12PM AEDT
11-15 Nov	Review completion workshop Melbourne
15 Nov	Cochrane Live! Webinar Assessing Risk of Bias Melbourne 12PM AEDT
4-6 December	Introduction to writing a Cochrane review Sydney*

For further information on Australasian workshops please go to:
<http://acc.cochrane.org/2013-timetable-registration>

For Review workshops offered by other Cochrane Centres please go to:
www.cochrane.org/training

decreasing the number who don't show improvement at three months. Some formulations showed an increase in the number of patients achieving complete or partial remission, however study and participant numbers were small.

HMG CoA reductase inhibitors (statins) for dialysis patients

Background

People with advanced kidney disease treated with dialysis experience mortality rates from cardiovascular disease that are substantially higher than for the general population. Studies that have assessed the benefits of statins (HMG CoA reductase inhibitors) report conflicting conclusions for people on dialysis and existing meta-analyses have not had sufficient power to determine whether the effects of statins vary with severity of kidney disease. Recently, additional data for the effects of statins in dialysis patients have become available.

This is an update of a review first published in 2004 and last updated in 2009.

Recent abstracts *(updated with new findings)*

...Cont'd

Objectives

To assess the benefits and harms of statin use in adults who require dialysis (haemodialysis or peritoneal dialysis).

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

Randomised controlled trials (RCTs) and quasi-RCTs that compared the effects of statins with placebo, no treatment, standard care or other statins on mortality, cardiovascular events and treatment-related toxicity in adults treated with dialysis were sought for inclusion.

Data collection and analysis

Two or more authors independently extracted data and assessed study risk of bias. Treatment effects were summarised using a random effects model and subgroup analyses were conducted to explore sources of heterogeneity. Treatment effects were expressed as mean difference (MD) for continuous outcomes and risk ratios (RR) for dichotomous outcomes together with 95% confidence intervals (CI).

Main results

The risk of bias was high in many of the included studies. Random sequence generation and allocation concealment was reported in three (12%) and four studies (16%), respectively. Participants and personnel were blinded in 13 studies (52%), and outcome assessors were blinded in five studies (20%). Complete outcome reporting occurred in nine studies (36%). Adverse events were only reported in nine studies (36%); 11 studies (44%) reported industry funding.

We included 25 studies (8289 participants) in this latest update; 23 studies (24 comparisons, 8166 participants) compared statins with placebo or no treatment, and two studies (123 participants) compared statins directly with one or more other statins. Statins had little or no effect on major cardiovascular events (4 studies, 7084 participants: RR 0.95, 95% CI 0.88 to 1.03), all-cause mortality (13 studies, 4705 participants: RR 0.96, 95% CI 0.90 to 1.02), cardiovascular mortality (13 studies, 4627 participants: RR 0.94, 95% CI 0.84 to 1.06) and myocardial infarction (3 studies, 4047 participants: RR 0.87, 95% CI 0.71 to 1.07); and uncertain effects on stroke (2 studies, 4018 participants: RR 1.29, 95% CI 0.96 to 1.72).



Conferences



November 5 – 10, 2013

ASN Kidney Week 2013, Atlanta, GA, USA

www.asn-online.org/education_and_meetings

February 12–15, 2014

10th Asian-Pacific Congress of Hypertension, Cebu City, Philippines

www.apch2014.org/

March 19–21, 2014

IX International Conference on Hypertension and the Kidney, Madrid, Spain

www.era-edta.org/images/ERA-EDTA_Programme_IX_Int-Conf_on-Hypertension-and-Kidney.pdf

May 14-17, 2014

The 14th Asian Pacific Congress of Nephrology (APCN), Tokyo, Japan

www.mtoyoy.jp/apcn2014

May 16-21, 2014

American Urological Association 2014, Orlando, FL, USA

www.aaa2014.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 – 4, 2014

32nd World Congress Meeting on Endourology, Taipei, Taiwan

www.endourology.org/meetings/meetings.php

Sept 21-25, 2014

22nd Cochrane Colloquium

Hyderabad, India

<http://colloquium.cochrane.org/2014-cochrane-colloquium-hyderabad-india>

Oct 24 to 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

Recent abstracts *(updated with new findings)*

...Cont'd

Risks of adverse events from statin therapy were uncertain; these included effects on elevated creatine kinase (5 studies, 3067 participants: RR 1.25, 95% CI 0.55 to 2.83) or liver function enzymes (4 studies, 3044 participants; RR 1.09, 95% CI 0.41 to 1.25), withdrawal due to adverse events (9 studies, 1832 participants: RR 1.04, 95% CI 0.87 to 1.25) or cancer (2 studies, 4012 participants: RR 0.90, 95% CI 0.72 to 1.11). Statins reduced total serum cholesterol (14 studies, 1803 participants; MD -44.86 mg/dL, 95% CI -55.19 to -34.53) and low-density lipoprotein cholesterol (12 studies, 1747 participants; MD -39.99 mg/dL, 95% CI -52.46 to -27.52) levels. Data comparing statin therapy directly with another statin were sparse.

Authors' conclusions

Statins have little or no beneficial effects on mortality or cardiovascular events and uncertain adverse effects in adults treated with dialysis despite clinically relevant reductions in serum cholesterol levels.

[Hydroxyethyl starch \(HES\) versus other fluid therapies: effects on kidney function](#)

Thomas C Mutter, Chelsea A Ruth and Allison B Dart

Background

Hydroxyethyl starches (HES) are synthetic colloids commonly used for fluid resuscitation to replace intravascular volume, yet they have been increasingly associated with adverse effects on kidney function. This is an update of a Cochrane review first published in 2010.

Objectives

To examine the effects of HES on kidney function compared to other fluid resuscitation therapies in different patient populations.

Search methods

We searched the Cochrane Renal Group's specialised register, the Cochrane Central Register of Controlled Trials (CENTRAL, in The Cochrane Library), MEDLINE, EMBASE, MetaRegister and reference lists of articles. The most recent search was completed on November 19, 2012.

Selection criteria

Randomised controlled trials (RCTs) and quasi-RCTs in which HES was compared to an alternate fluid therapy for the prevention or treatment of effective intravascular volume depletion. Primary outcomes were renal replacement therapy (RRT), author-defined kidney failure and acute kidney injury (AKI) as defined by the RIFLE criteria.

Data collection and analysis

Screening, selection, data extraction and quality assessments for each retrieved article were carried out by two authors using standardised forms. All outcomes were analysed using relative risk (RR) and 95% confidence intervals (95% CI). Authors were contacted when published data were incomplete. Preplanned sensitivity and subgroup analyses were performed after data were analysed with a random-effects model.

Main results

This review included 42 studies (11,399 patients) including 19 studies from the original review (2010), as well as 23 new studies. Fifteen studies were excluded from the original review (nine retracted from publication due to concerns about integrity of data and six lacking individual patient creatinine data for the calculation of RIFLE criteria). Overall, there was a significant increase in the need for RRT in the HES treated individuals compared to individuals treated with other fluid therapies (RR 1.31, 95% CI 1.16 to 1.49; 19 studies, 9857 patients) and the number with author-defined kidney failure (RR 1.59, 95% CI 1.26 to 2.00; 15 studies, 1361 patients). The RR of AKI based on RIFLE-F (failure) criteria also showed an increased risk of AKI in individuals treated with HES products (RR 1.14, 95% CI 1.01 to 1.30; 15 studies, 8402 participants). The risk of meeting urine output and creatinine based RIFLE-R (risk) criteria for AKI was in contrast in favour of HES therapies (RR 0.95, 95% CI 0.91 to 0.99; 20 studies, 8769 patients). However, when RIFLE-R urine output based outcomes were excluded as per study protocol, the direction of AKI risk again favoured the other fluid type, with a non-significant RR of AKI in HES treated patients (RR 1.05, 95% CI 0.97 to 1.14; 8445 patients). A more robust effect was seen for the RIFLE-I (injury) outcome, with a RR of AKI of 1.22 (95% CI 1.08 to 1.37; 8338 patients). No differences between subgroups for the RRT and RIFLE-F based outcomes were seen between sepsis versus non-sepsis patients, high molecular weight (MW) and degree of substitution (DS) versus low MW and DS (≥ 200 kDa and > 0.4 DS versus 130 kDa and 0.4 DS) HES solutions, or high versus low dose treatments (i.e. ≥ 2 L versus < 2 L). There were differences identified between sepsis versus non-sepsis subgroups for the RIFLE-R and RIFLE-I based outcomes only, which may reflect the differing renal response to fluid resuscitation in pre-renal versus sepsis-associated AKI. Overall, methodological quality of the studies was good.

Authors' conclusions

The current evidence suggests that all HES products increase the risk in AKI and RRT in all patient populations and a safe volume of any HES solution has yet to be determined. In most clinical situations it is likely that these risks outweigh any benefits, and alternate volume replacement therapies should be used in place of HES products.

Cochrane Collaboration news

Access Cochrane abstracts and Plain Language Summaries in Croatian, French, Portuguese and Spanish

Translations in French and Spanish have been available on The Cochrane Library and on Cochrane Summaries for a while, and more recently Croatian and Portuguese have been added. People who wish to search or browse in their own language can do so on Cochrane Summaries - check it out and help us spread the word! More languages are coming soon.

French - Français (<http://summaries.cochrane.org/fr>) provided by the French Cochrane Centre

Spanish - Español (<http://summaries.cochrane.org/es>) provided by the Iberoamerican Cochrane Centre

Croatian - Hrvatski (<http://summaries.cochrane.org/hr>) provided by the Croatian Cochrane Branch

Portuguese - Português (<http://summaries.cochrane.org/pt>) provided by the Brazilian Cochrane Centre

If you are interested in knowing more about translations or contributing yourself, please contact Juliane Ried at juliane.ried@cochrane.org.

Psst - Authors! Is your software helping you complete your review?

All reviews pass through our official software, RevMan and Archie, but they typically also involve other software tools - e.g. for working with studies, references and data.

We want to be able to better support authors in efficiently using these software tools together. We can do this in two ways:

- by continuing to improve the tools to make transfer of data as smooth as possible; and
- by sharing information about what other tools exist and how they can be used in the best way.

To support both processes, we are building a resource that lists the 'external' tools for the review process on our website at

<http://ims.cochrane.org/revman/other-resources>.

We encourage all author teams to take a look. Some of you will learn something new, and many of you can teach us something! We really want to hear your stories of software success or frustration in writing reviews, so we can share the great tips, and help solve the problems.

So, please visit the webpage and follow the links to the forum to share your questions or tips on what software to use for reviews.

Jacob Riis, Cochrane IMS Team

Symposium: what does the future hold for the systematic review?

Melbourne, 20-21 November 2013

Systematic reviews have become accepted in a way that Cochrane's founders could perhaps only have imagined 20 years ago, but they face unprecedented challenges. What does the future hold? This symposium will explore the possibilities for Cochrane Reviews of innovations in technology and data, developments in methods, and ask what the challenges are for Cochrane and Cochrane Reviews if systematic reviews are to remain an essential part of decision making.

The Symposium will appeal to anyone curious to find out what the latest challenges are in the world of systematic reviews and evidence synthesis, and what Cochrane is doing to address these. We have a mix of local and international speakers, including the visit to Australia by the new CEO of the Cochrane Collaboration. There are opportunities to present abstracts and posters, and to join us in marking the first 20 years of Cochrane.

Symposium website: <http://www.cochrane.org.au/symposium>.

Australasian Cochrane Centre





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 1485
Fax: +61 2 9845 1491
E-mail: crg@chw.edu.au
Web: www.cochrane-renal.org

Managing Editor
Narelle Willis email: narelle.willis@health.nsw.gov.au

Assistant 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