



Cochrane Renal Group Newsletter

October 2009

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New reviews, protocols

New and updated reviews

In Issues 3 & 4, 2009 we published eight new reviews and one 'conclusions changed' review:

New

- Aldosterone antagonists for preventing the progression of chronic kidney disease
- Antihypertensive treatment for kidney transplant recipients
- Atrial natriuretic peptide for preventing and treating acute kidney injury
- Extracorporeal shock wave lithotripsy (ESWL) versus percutaneous nephrolithotomy (PCNL) or retrograde intrarenal surgery (RIRS) for kidney stones
- Interventions for HIV-associated nephropathy
- Interventions for preventing and treating kidney disease in Henoch-Schönlein Purpura (HSP)
- Vitamin D compounds for people with chronic kidney disease not requiring dialysis
- Vitamin D compounds for people with chronic kidney disease requiring dialysis

Conclusions changed

- HMG CoA reductase inhibitors (statins) for dialysis patients

New protocols

In Issues 3 & 4, 2009 we published eight new protocols:

New

- Antioxidants for chronic kidney disease
- Calcium dialysate concentration for peritoneal dialysis
- FTY720 immunosuppression for kidney transplant recipients
- Interventions for lowering plasma homocysteine levels in kidney transplant recipients
- Oral adsorbents for preventing or delaying the progression of chronic kidney disease
- Parenteral versus oral iron therapy for adults and children with chronic kidney disease

- Rheum officinale (a Chinese medicinal herb) for chronic kidney disease
- Sodium ferulate for preventing the progression of diabetic kidney disease

New titles

- Alpha-blockers as medical-expulsive therapy for ureteral stones
- Antibiotic prophylaxis for preventing post solid organ transplant tuberculosis
- Antibiotic prophylaxis for transurethral endo-urological procedures
- Antibiotics for preventing recurrent urinary tract infection in men
- Antiplatelet agents for (people with) chronic kidney disease (not requiring dialysis)
- HMG CoA reductase inhibitors (statins) for preventing acute kidney injury after surgical procedures requiring cardiac bypass
- Intervention for pelvi-ureteric junction (PUJ) obstruction in children
- Interventions for nephropathic cystinosis
- Interventions for preventing intradialytic hypotension in haemodialysis patients
- Interventions for pruritis in chronic kidney disease
- Loop diuretics for patients receiving blood transfusions
- Pidotimod for preventing recurrent urinary tract infection
- Sodium bicarbonate supplements for acute kidney injury
- Tripterygium wilfordii (a Chinese medicinal herb) for nephrotic syndrome
- Upper limb exercise for haemodialysis fistulae surgery

Potential titles

Our potential titles list is constantly being updated. If you would like a copy please email us at crg@chw.edu.au.

If you have a proposal for a review that is not on the list, please check our list of current reviews to make sure you are not proposing a review that has been completed or is currently being written: (www.cochrane.org/reviews/en/topics/89.html)

Renal group news



National Kidney Foundation (USA) International Distinguished Medal for 2010.

Jonathan Craig has been selected to receive the National Kidney Foundation (USA) International Distinguished

Medal for 2010.

This award was established to honour the achievement of individuals who have made significant contributions to the field of kidney disease, and to those who extend the goals of the NKF.

This honour will be acknowledged during the NKF 2010 Spring Clinical Meetings (SCM10) which will be held from 13-17 April 2010 at the Walt Disney Swan and Dolphin Resort, Orlando, FL, USA.



New Editor

In June 2009, Hashim Uddin Ahmed joined the Cochrane Renal Group Editorial Board.

Hashim is Medical Research Council Clinical Research Fellow and Specialist Registrar in Urology, Division of Surgical and Interventional Sciences, University College of London.

Hashim qualified from Oxford Medical School where he received the Osler Prize in Medicine. After pre-registration house jobs in Birmingham's University Hospitals (Liver Transplant Unit) and Manchester's Royal Infirmary (Renal and General Surgery) he was an anatomy prosector at Oxford, teaching anatomy to preclinical medical students. He carried out senior house jobs in surgery on the Royal Free Hospital rotation and then carried out research with Mark Emberton at University College London with the award of a Pelican Cancer Foundation Research Fellowship. His current research interests are in Health Technology Evaluation including high intensity focused ultrasound, cryosurgery and photodynamic therapy. He is currently running a number of phase II trials evaluating the role of focal therapy in prostate cancer in which only the cancer areas are treated. He is also Co-Principal Investigator on a multicentre diagnostic study evaluating

the role of ultrasound based technology and multi-parametric MRI in diagnosing prostate cancer.

Cochrane Collaboration Steering Group

In mid 2009 elections were held for representatives on the Cochrane Collaboration Steering Group.



Gail Higgins was elected to represent Trials Search Co-ordinators and will join the Steering Group for three years. The election results were made official at the 2009 Singapore Colloquium.

Visitors to the Cochrane Renal Group (CRG)

Lorna Henderson, Specialist Registrar in Nephrology at the Royal Infirmary of Edinburgh, is spending 12 months in Australia and will be working on the Cochrane review "Treatment for lupus nephritis".

Richard McGee is also visiting CRG for a number of months working on Cochrane related projects. Richard is currently completing his Masters of Clinical Epidemiology at the University of Sydney and previously studied Medicine at University College Cork in Ireland.



Narelle Willis, Gail Higgins, Jon Deeks, Ruth Mitchell, Karen New at the Cochrane Colloquium, Singapore 2009

Cochrane Collaboration news

RevMan - Mac users

If authors are Mac users, and they update their operation system to the latest version Mac OS 10.6 (Snow Leopard) that was released on 28 August, they will discover that they can no longer check reviews in and out from Archie. The problem is that software essential to RevMan is no longer available in the new OS version.

In order to fix this problem, affected users will have to download and install a patch available from the RevMan download page at: <http://ims.cochrane.org/revman/download>

2008 Impact Factors

The 2008 impact factors have now been published by Thomson ISI.

The Cochrane Database of Systematic Reviews has an IMPACT FACTOR OF 5.182 and is ranked 12th out of 107 in the ISI category Medicine, General & Internal. The 2007 IF was 4.654 and the ranking was 14th out of 100.

Free trial access to the Health Economic Evaluations Database for Cochrane authors

At the Cochrane Colloquium in Singapore this month, Wiley-Blackwell and the Campbell & Cochrane Economics Methods Group (CCEMG) will launch a pilot initiative to provide free trial access to the Health Economic Evaluations Database (HEED). The free trial is available to authorised authors of Cochrane reviews and also to Trial Search Coordinators, via the CCEMG website (<http://www.c-cemg.org>).

The initiative aims to promote use of HEED in searches conducted for Cochrane intervention reviews that aim to incorporate economic evidence, alongside use of the NHS Economic Evaluation Database (NHS EED) and other specialist health economics literature databases. Registered users will also be offered free access to additional services, including specialist training and peer review.

Please go to the CCEMG website (<http://www.c-cemg.org>) for more information and an online application form. Guidance on incorporating economic evidence into Cochrane reviews is published in Part 3, Chapter 15 of the

Cochrane Handbook for Systematic Reviews of Interventions (<http://www.cochrane-handbook.org>).

New title for Review Group Co-ordinators

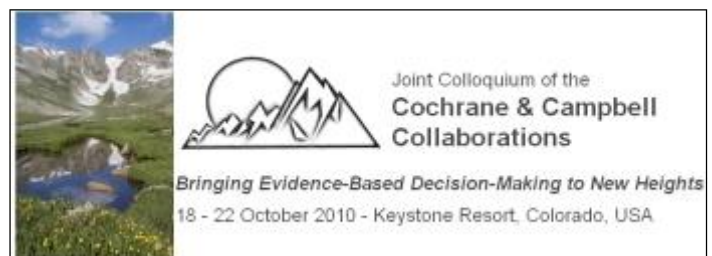
In order to give organisations outside the Collaboration a better understanding of the role of a Cochrane Review Group Co-ordinator (RGC), the Collaboration's Steering Group, following approval by Co-ordinating Editors, agreed at their mid-year meeting (24 to 26 April) to the request from RGCs to change their title to 'Managing Editor' with immediate effect. All Collaboration documents and websites will be updated as soon as possible to reflect this decision.

New website resource launched on evidence-based TB diagnosis

The Cochrane Library now includes diagnostic test accuracy reviews and evidence-based diagnosis is getting more attention, among clinicians as well as policy makers and guideline developers. New tests and technologies are constantly entering the market and aggressively promoted. But decisions about their use must be evidence-based.

Recently, the Stop TB Partnership's New Diagnostics Working Group (NDWG) launched a new website resource called Evidence-based Tuberculosis Diagnosis, available at: <http://www.tbevidence.org>.

The aim of this website is to provide the most comprehensive single source of evidence syntheses, policies, guidelines and research agendas on TB diagnosis. It provides access to systematic reviews on TB diagnostics, all the relevant policies, guidelines and research agendas on TB diagnosis, and several reports, monographs and training modules and slide presentations on TB diagnostics. The website also provides detailed guidance on how to conduct and report diagnostic research on TB, guidance on how to perform systematic reviews of diagnostics, tools on guideline development (including GRADE), and documents on improvement of laboratory quality and practice. The website has no registration, restrictions or fee requirements: so anyone can view and download the information.





Conferences - 2009/2010



October 29 - November 1, 2009 World Hypertension Congress, Beijing, China.

www.worldhypertension2009.com

November 1-4, 2009 6th Guidelines International Network (G-I-N) Conference 2009, Lisbon, Portugal.

www.g-i-n.net

January 20, 2010 12th International Conference on Dialysis, Louisiana, USA. E-mail: IAdelsberger@rriny.com

February 4-6, 2010 9th International Conference on New Trends in Immunosuppression and Immunotherapy, Geneva, Switzerland

www2.kenes.com/immuno/pages/home.aspx

February 20-25, 2010 Urological Society of Australia and New Zealand 63rd Annual Scientific Meeting, incl ANZUNS' 15th Annual Meeting, Perth, Western Australia.

www.usanz.org.au/2010-usanz-annual-scientific-meeting-asm-wa

February 25-28, 2010 World Congress on Controversies in Urology (CURy) 3rd World Congress, Athens, Greece

www.comtecmed.com/cury

February 25-28, 2010 The International Conference on Early Disease Detection and Prevention (EDDP), Munich, Germany

www.paragon-conventions.net/eddp2010

March 7-9, 2010 30 Annual Dialysis Conference, Seattle, Washington

<http://som.missouri.edu/dialysis/>

March 20 - 25, 2010 World Congress of Internal Medicine 2010 in Conjunction with RACP Physicians Week, Melbourne, Australia. www.wcim2010.com.au

May 1 - 5, 2010 American Transplant Congress 2010, San Diego CA USA

www.atcmeeting.org/

May 25, 2010 XV International Congress on Nutrition and Metabolism in Renal Disease, Lausanne, Switzerland

<http://www.isrnm-lausanne2010.org/>

June 8-11, 2010 19th International Vicenza Course on Critical Care Nephrology, Vicenza, Italy

www.vicenzanephrocourses.com/programma_2010.htm

June 23-25, 2010 TSANZ Annual Scientific Meeting, Canberra, ACT

<http://www.tsanz.com.au/>

June 25-28, 2010 XLVII ERA-EDTA Congress, Munich, Germany.

www.eraedta2010.org

August 15 - 19, 2010 XXIII International Congress of The Transplantation Society, Vancouver, British Columbia, Canada.

www.transplantation2010.org

August 29 - September 2, 2010 15th Congress of International Pediatric Nephrology Association (IPNA) 2010

www.ipna2010.org

September 26 - 30, 2010 The 23rd Scientific Meeting of the International Society of Hypertension, Vancouver, Canada

www.vancouverhypertension2010.com

September 13 -15, 2010 ANZSN Annual Scientific Meeting -The 46th Annual Scientific Meeting will be held in Perth, Western Australia.

www.anzsn2010.com.au

October 18-22, 2010 Joint Colloquium of the Cochrane and Campbell Collaborations, Keystone, Colorado, USA.

November 16 - 21, 2010 ASN Renal Week 2010 - Colorado Convention Center, Denver, CO, USA

www.asn-online.org

Recent abstracts

Aldosterone antagonists for preventing the progression of chronic kidney disease. Sankar D Navaneethan, Sagar U Nigwekar, Ashwini R Sehgal, Giovanni FM Strippoli

Background

Treatment with angiotensin converting enzyme inhibitors (ACEi) and angiotensin receptor blockers (ARB) is increasingly used to reduce proteinuria and retard the progression of chronic kidney disease (CKD). But some patients do not attain complete resolution of proteinuria and might have higher aldosterone levels within few months of treatment. The addition of aldosterone antagonists may be beneficial to these patients for reduction of progression of renal damage.

Objectives

We evaluated the benefits and harms of adding aldosterone antagonists in patients with CKD currently treated with ACEi and/or ARB.

Search strategy

We searched MEDLINE, EMBASE, CENTRAL, and hand-searched reference lists of textbooks, articles and scientific proceedings for relevant articles.

Selection criteria

Randomised controlled trials (RCTs) and quasi-RCTs comparing aldosterone antagonists in addition to ACEi and/or ARB versus ACEi and/or ARB alone were included.

Data collection and analysis

Two authors independently assessed study quality and extracted data. Statistical analyses were performed using a random effects model and heterogeneity was tested formally using the Cochran Q and I² statistic. Results were expressed as mean difference (MD) for continuous outcomes and risk ratio (RR) for dichotomous outcomes with 95% confidence intervals (CI).

Main results

Ten studies (845 patients) were included. Compared to ACEi and/or ARB plus placebo, non-selective aldosterone antagonists along with ACEi and/or ARB significantly reduced 24 hour proteinuria (7 studies, 372 patients; MD -0.80 g, 95% CI -1.23 to -0.38). There was a significant reduction in both systolic and diastolic blood pressure at the end of treatment with the addition of non-selective aldosterone antagonists to ACEi and/or ARB. This did not translate into an improvement in glomerular filtration rate (5 studies, 306 patients; MD -0.70 mL/min/1.73 m², 95% CI -4.73 to 3.34). There was a significant increase in the risk of hyperkalaemia with the addition of non-selective aldosterone antagonists to ACEi and/or ARB (8 studies, 436 patients; RR 3.06, 95% CI 1.26 to 7.41). In two studies, the addition of selective aldosterone antagonists to ACEi

resulted in an additional reduction in 24 hour proteinuria but without any impact on BP and renal function. Data on cardiovascular outcomes, long-term renal outcomes and mortality were not available.

Authors' conclusions

Aldosterone antagonists contribute to reduction of proteinuria in patients with CKD who are already on ACEi and ARB but increase the risk of hyperkalaemia. Available studies are small and have short follow-up. Long-term effects on renal outcomes, mortality and safety are unknown.

Antihypertensive treatment for kidney transplant recipients. Nicholas B Cross, Angela C Webster, Philip Masson, Philip J O'Connell, Jonathan C Craig

Background

In some nontransplant populations, effects of different antihypertensive drug classes vary. Relative effects in kidney transplant recipients are uncertain.

Objectives

To assess comparative effects of different classes of antihypertensive agents in kidney transplant recipients.

Search strategy

MEDLINE, EMBASE, the Cochrane Central Register of Controlled Trials, conference proceedings and reference lists of identified studies were searched.

Selection criteria

Randomised controlled trials of any antihypertensive agent applied to kidney transplant recipients for at least two weeks were included.

Data collection and analysis

Data was extracted by two investigators independently. Study quality, transplant outcomes and other patient centred outcomes were assessed using random effects meta-analysis. Risk ratios (RR) for dichotomous outcomes and mean difference (MD) for continuous outcomes, both with 95% confidence intervals (CI) were calculated. Stratified analyses and meta-regression were used to investigate heterogeneity.

Main results

We identified 60 studies, enrolling 3802 recipients. Twenty-nine studies (2262 participants) compared calcium channel blockers (CCB) to placebo/no treatment, 10 studies (445 participants) compared angiotensin converting enzyme inhibitors (ACEi) to placebo/no treatment and seven studies (405 participants) compared CCB to ACEi. CCB compared to placebo/no treatment (plus additional agents in either arm as required) reduced graft loss (RR 0.75, 95% CI 0.57 to

Recent abstracts (Cont'd)

0.99) and improved glomerular filtration rate (GFR), (MD, 4.45 mL/min, 95% CI 2.22 to 6.68). Data on ACEi versus placebo/no treatment were inconclusive for GFR (MD -8.07 mL/min, 95% CI -18.57 to 2.43), and variable for graft loss, precluding meta-analysis. In direct comparison with CCB, ACEi decreased GFR (MD -11.48 mL/min, 95% CI -5.75 to -7.21), proteinuria (MD -0.28 g/24 h, 95% CI -0.47 to -0.10), haemoglobin (MD -12.96 g/L, 95% CI -5.72 to -10.21) and increased hyperkalaemia (RR 3.74, 95% CI 1.89 to 7.43). Graft loss data were inconclusive (RR 7.37, 95% CI 0.39 to 140.35). Other drug comparisons were compared in small numbers of participants and studies.

Authors' conclusions

These data suggest that CCB may be preferred as first line agents for hypertensive kidney transplant recipients. ACEi have some detrimental effects in kidney transplant recipients. More high quality studies reporting patient centred outcomes are required.

Atrial natriuretic peptide for preventing and treating acute kidney injury. Sagar U Nigwekar, Sankar D Navaneethan, Chirag R Parikh, John K Hix

Background

Acute kidney injury (AKI) is common in hospitalised patients and is associated with significant morbidity and mortality. Despite recent advances, outcomes have not substantially changed in the last four decades. Atrial natriuretic peptide (ANP) has shown promise in animal studies, however randomised controlled trials (RCTs) have shown inconsistent clinical benefits.

Objectives

To assess the benefits and harms of ANP for preventing and treating AKI.

Search strategy

We searched CENTRAL, MEDLINE and EMBASE and reference lists of retrieved articles.

Selection criteria

RCTs that investigated all forms of ANP versus any other treatment in adult hospitalised patients with or "at risk" of AKI.

Data collection and analysis

Results were expressed as risk ratios (RR) with 95% confidence intervals (CI) or mean difference (MD). Outcomes were analysed separately for low and high dose ANP for preventing or treating AKI.

Main results

Nineteen studies (11 prevention, 8 treatment; 1,861 par-

ticipants) were included. There was no difference in mortality between ANP and control in either the low or high dose prevention studies. Low (but not high) dose ANP was associated with a reduced need for RRT in the prevention studies (RR 0.32, 95% CI 0.14 to 0.71). Length of hospital and ICU stay were significantly shorter in the low dose ANP group. For established AKI, there was no difference in mortality with either low or high dose ANP. Low (but not high) dose ANP was associated with a reduction in the need for RRT (RR 0.54, 95% CI 0.30 to 0.98). High dose ANP was associated with more adverse events (hypotension, arrhythmias). After major surgery there was a significant reduction in RRT requirement with ANP in the prevention studies (RR 0.56, 95% CI 0.32 to 0.99), but not in the treatment studies. There was no difference in mortality between ANP and control in either the prevention or treatment studies. There was a reduced need for RRT with low dose ANP in patients undergoing cardiovascular surgery (RR 0.35, 95% CI 0.18 to 0.70). ANP was not associated with outcome improvement in either radiocontrast nephropathy or oliguric AKI.

Authors' conclusions

ANP may be associated with improved outcomes when used in low doses for preventing AKI and in managing postsurgery AKI and should be further explored in these two settings. There were no significant adverse events in the prevention studies, however in the high dose ANP treatment studies there were significant increases hypotension and arrhythmias.

Upcoming workshops 2009

Australasian Cochrane Centre/
Cochrane Renal Group

3 Dec	Sydney	Developing a Protocol for a Systematic Review Workshop Closing Date: 19 November
4 Dec	Sydney	Introduction to Analysis Workshop Closing Date: 19 November

For further information on Australasian workshops please go to:
www.cochrane.org.au/training/timetable.php

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

Recent abstracts (Cont'd)

Extracorporeal shock wave lithotripsy (ESWL) versus percutaneous nephrolithotomy (PCNL) or retrograde intrarenal surgery (RIRS) for kidney stones. Attasit Srisubat, Somkiat Potisat, Bannakij Lojanapiwat, Vasun Setthawong, Malinee Laopaiboon

Background

Stones in the urinary tract are a common medical problem in the general population. At present, the great expansion in minimally invasive techniques has led to the decrease in open surgery. Extracorporeal shock wave lithotripsy (ESWL) has been introduced as an alternative approach which disintegrates stones in the kidney and upper urinary tract through the use of shock waves. Nevertheless, as there are limitations with the success rate in ESWL, other minimally invasive modalities for kidney stones such as percutaneous nephrolithotomy (PCNL) and retrograde intrarenal surgery (RIRS) are also widely applied.

Objectives

To evaluate the effectiveness and complications of ESWL compared with PCNL or RIRS for managing kidney stones.

Search strategy

We searched the Cochrane Central Register of Controlled Trials (CENTRAL in The Cochrane Library), MEDLINE, EMBASE and reference lists of articles without language restriction.

Selection criteria

Randomised controlled trials (RCTs) assessing the use of ESWL compared to PCNL or RIRS for kidney stone management.

Data collection and analysis

Two authors independently assessed all the studies for inclusion. Statistical analyses were performed using the random effects model and the results expressed as risk ratio (RR) for dichotomous outcomes or mean difference (MD) for continuous data with 95% confidence intervals (CI).

Main results

Three studies (214 patients) were included, however results could not be pooled. Two RCTs compared ESWL to PCNL. The success rate at three months for lower pole kidney stones was statistically higher for PCNL (RR 0.39, 95% CI 0.27 to 0.56). Re-treatment (RR 1.81, 95% CI 0.66 to 4.99) and using auxiliary procedures (RR 9.06, 95% CI 1.20 to 68.64) after PCNL were less compared to ESWL. The efficiency quotient (EQ) in PCNL was higher than ESWL. Hospital stay (MD -3.30 days, 95% CI -5.45 to -1.15), duration of treatment (MD -36.00 minutes, 95% CI -54.10 to -17.90) and complications were less for ESWL. One RCT compared ESWL versus RIRS for lower pole kidney stones.

The success rate was not significantly different at the end of the third month (RR 0.91, 95% CI 0.64 to 1.30).

Authors' conclusions

Results from three small studies, with low methodological quality, indicated ESWL is less effective for lower pole kidney stones than PCNL but not significantly different from RIRS. Hospital stay and duration of treatment was less with ESWL. More RCTs are required to investigate the effectiveness and complications of ESWL for kidney stones compared to PCNL or RIRS.

Interventions for HIV-associated nephropathy. Ismail Yahaya, Abdulrahman Olalekan Uthman, Muhammed Mubashir B Uthman

Background

Human immunodeficiency virus associated nephropathy (HIVAN) is the most common cause of end stage kidney disease (ESKD) in Human immunodeficiency virus-1 (HIV-1) serotype patients and it mostly affects patients of African descent. It rapidly progresses to ESKD if untreated. The goal of treatment is directed toward reducing HIV-1 replication and/or slowing the progression of chronic kidney disease. The following pharmacological agents have been used for the treatment of HIVAN: antiretrovirals, angiotensin-converting enzyme inhibitors (ACEi), steroids and recently cyclosporin. Despite this, the effect of each intervention is yet to be evaluated.

Objectives

To evaluate the benefits and harms of adjunctive therapies in the management of HIVAN and its effects on symptom severity and all-cause mortality.

Search strategy

We searched The Cochrane Central Register of Controlled Trials (CENTRAL), the Cochrane Renal Group's specialised register, MEDLINE, EMBASE, AIDSearch, reference lists of articles and conference proceedings without language restrictions. We searched the international clinical trials registry platform search portal and also contacted individual researchers, research organisations and pharmaceutical companies that manufacture the drugs used for interventions.

Selection criteria

Randomised controlled trials (RCTs) and quasi-RCTs of any therapy used in the treatment of HIVAN.

Data collection and analysis

We independently screened the search outputs for relevant studies and to retrieve full articles when necessary. We applied the inclusion criteria to identify four relevant ongoing

Recent abstracts (Cont'd)

studies, one is ongoing while the remaining two have completed recruitment and are yet to be published. The fourth study was suspended for an unknown reason.

Main results

No completed RCTs or quasi-RCTs were identified to be included in the study.

Authors' conclusions

There is no RCT-based evidence upon which to base guidelines for the treatment of HIVAN. However, steroids and ACEI appear to improve the kidney function of patients in the observational studies that were identified. This review highlights the need for good quality RCTs to address the effects of interventions for treating this group.

Interventions for preventing and treating kidney disease in Henoch-Schönlein Purpura (HSP). Wattana Char-tapisak, Sauwalak Opastirakul, Elisabeth M Hodson, Narelle S Willis, Jonathan C Craig

Background

To determine the benefits and harms of therapies used to prevent or treat kidney disease in Henoch-Schönlein Purpura (HSP).

Objectives

To evaluate the benefits and harms of different agents (used singularly or in combination) compared with placebo or no treatment or another agent for the prevention or treatment of kidney disease in patients with HSP.

Search strategy

Randomised controlled trials (RCTs) and quasi-RCTs were identified from the Cochrane Renal Group's specialised register, the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE and EMBASE using optimally sensitive search strategies combined with search terms for HSP.

Selection criteria

RCTs comparing any intervention used to prevent or treat kidney disease in HSP compared with placebo, no treatment or other agents were included.

Data collection and analysis

Three authors independently assessed trial quality and extracted data from each study. Statistical analyses were performed using the random effects model and the results were expressed as risk ratio (RR) for dichotomous outcomes and mean difference (MD) for continuous outcomes with 95% confidence intervals (CI).

Main results

Ten studies (1230 children) were identified. There was no significant difference in the risk of persistent kidney disease at six months (3 studies, 379 children: RR 0.51, 95% CI 0.24 to 1.11) and 12 months (3 studies, 498 children: RR 1.02, 95% CI 0.40 to 2.62) in children given prednisone for 14 to 28 days at presentation of HSP compared with placebo or supportive treatment. In children with severe kidney disease, there was no significant difference in the risk of persistent kidney disease with cyclophosphamide compared with supportive treatment (1 study, 56 children: RR 1.07, 95% CI 0.65 to 1.78) and with cyclosporin compared with methylprednisolone (1 study, 19 children: RR 0.39, 95% CI 0.14 to 1.06).

Authors' conclusions

Data from RCTs for any intervention used to improve kidney outcomes in children with HSP are very sparse except for short-term prednisone. There was no evidence of benefit of prednisone in preventing serious long-term kidney disease in HSP.

Vitamin D compounds for people with chronic kidney disease not requiring dialysis. Suetonia C Palmer, David O McGregor, Jonathan C Craig, Grahame Elder, Petra Mascaskill, Giovanni FM Strippoli

Background

Vitamin D compounds are used to suppress elevated serum parathyroid hormone (PTH) in people with chronic kidney disease (CKD).

Objectives

To assess the efficacy of vitamin D therapy on biochemical, bone, cardiovascular, and mortality outcomes in people with CKD and not requiring dialysis.

Search strategy

We searched The Cochrane Renal Group's specialised register, Cochrane's Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, and reference lists of retrieved articles.

Selection criteria

Randomised controlled trials (RCTs) comparing different forms, schedules, or routes of administration of vitamin D compounds for people with CKD not requiring dialysis were included. Vitamin D compounds were defined as established (calcitriol, alfacalcidol, 24,25(OH)₂vitamin D₃) or newer (doxercalciferol, maxacalcitol, paricalcitol, falecalcitriol) vitamin D compounds.

Data collection and analysis

Data were extracted by two authors. Statistical analyses were performed using the random effects model. Results

Recent abstracts (Cont'd)

were summarized as risk ratio (RR) for dichotomous outcomes or mean differences (MD) for continuous outcomes with 95% confidence intervals (CI).

Main results

Sixteen studies (894 patients) were included. No formulation, route, or schedule of vitamin D compound was found to alter the mortality risk or need for dialysis. Vitamin D compounds significantly lowered serum PTH (4 studies, 153 patients: MD -49.34 pg/mL, 95% CI -85.70 to -12.97 (-5.6 pmol/L, 95% CI -9.77 to -1.48)) and were more likely to reduce serum PTH > 30% from baseline value (264 patients: RR 7.87, 95% CI 4.87 to 12.73). Vitamin D treatment was associated with increased end of treatment serum phosphorus (3 studies, 140 patients: MD 0.37 mg/dL, 95% CI 0.09, 0.66 (0.12 mmol/L, 95% CI 0.03, 0.21)) and serum calcium (5 studies, 184 patients: MD 0.20 mg/dL, 95% CI 0.17 to 0.23 (0.05 mmol/L, 95% CI 0.04 to 0.06)). Few data were available comparing intermittent with daily vitamin D administration, or other schedules of dosing.

Authors' conclusions

There are not sufficient data to determine the effect of vitamin D compounds on mortality and cardiovascular outcomes in people with CKD not requiring dialysis. While vitamin D compounds reduce serum PTH (49.3 pg/mL (5.6 pmol/L)) compared with placebo, the relative clinical benefits of PTH lowering versus treatment-related increases in serum phosphorus and calcium remain to be understood.

Vitamin D compounds for people with chronic kidney disease requiring dialysis. Suetonia C Palmer, David O McGregor, Jonathan C Craig, Grahame Elder, Petra Mascaskill, Giovanni FM Strippoli

Background

Clinical guidelines recommend vitamin D compounds to suppress serum parathyroid hormone (PTH) in chronic kidney disease (CKD), however treatment may be associated with increased serum phosphorus and calcium, which are associated with increased mortality in observational studies. Observational data also indicate vitamin D therapy may be independently associated with reduced mortality in CKD.

Objectives

We assessed the effects of vitamin D compounds on clinical, biochemical, and bone outcomes in people with CKD and receiving dialysis.

Search strategy

We searched The Cochrane Renal Group's specialised register, Cochrane's Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, and reference lists of retrieved articles.

Selection criteria

Randomised controlled trials (RCTs) in subjects with CKD and requiring dialysis that assessed treatment with vitamin D compounds.

Data collection and analysis

Data was extracted by two authors. Results are summarised as risk ratios (RR) for dichotomous outcomes or mean differences (MD) for continuous outcomes, with 95% confidence intervals (CI).

Main results

Sixty studies (2773 patients) were included. No formulation, route, or schedule of administration was associated with altered risks of death, bone pain, or parathyroidectomy. Marked heterogeneity in reporting of outcomes resulted in few data available for formal meta-analysis. Compared with placebo, vitamin D compounds lowered serum PTH at the expense of increasing serum phosphorus. Trends toward increased hypercalcaemia and serum calcium did not reach statistical significance but may be clinically relevant. Newer vitamin D compounds (paricalcitol, maxacalcitol, doxercalciferol) lowered PTH compared with placebo, with increased risks of hypercalcaemia, although inadequate data were available for serum phosphorus. Intravenous vitamin D may lower PTH compared with oral treatment, and be associated with lower serum phosphorus and calcium levels, although limitations in the available studies precludes a conclusive statement of treatment efficacy. Few studies were available for intermittent versus daily and intraperitoneal versus oral administration or directly comparative studies of newer versus established vitamin D compounds.

Authors' conclusions

We confirm that vitamin D compounds suppress PTH in people with CKD and requiring dialysis although treatment is associated with clinical elevations in serum phosphorus and calcium. All studies were inadequately powered to assess the effect of vitamin D on clinical outcomes and until such studies are conducted the relative importance of changes in serum PTH, phosphorus and calcium resulting from vitamin D therapy remain unknown. Observational data showing vitamin D compounds may be associated with improved survival in CKD need to be confirmed or refuted in specifically designed RCTs.

Recent abstracts (Cont'd)

HMG CoA reductase inhibitors (statins) for dialysis patients. Sankar D Navaneethan, Sagar U Nigwekar, Vlado Perkovic, David W Johnson, Jonathan C Craig, Giovanni FM Strippoli

Background

Cardiovascular disease accounts for more than half the number of deaths among dialysis patients. The role of HMG CoA reductase inhibitors (statins) in the treatment of dyslipidaemia in dialysis patients is unclear and their safety has not been established.

Objectives

To assess the benefits and harms of statins in peritoneal dialysis (PD) and haemodialysis patients (HD).

Search strategy

We searched MEDLINE, EMBASE, the Cochrane Central Register of Controlled trials (CENTRAL, in The Cochrane Library), the Cochrane Renal Group's specialised register and handsearched reference lists of textbooks, articles and scientific proceedings.

Selection criteria

Randomised controlled trials (RCTs) and quasi-RCTs comparing statins with placebo, no treatment or other hypolipidaemic agents in dialysis patients.

Data collection and analysis

Two authors independently assessed study quality and extracted data. Statistical analyses were performed using the random effects model after testing for heterogeneity. The results were expressed as mean difference (MD) for continuous outcomes and risk ratios (RR) for dichotomous outcomes with 95% confidence intervals (CI).

Main results

Fourteen studies (2086 patients) compared statins versus placebo or other lipid lowering agents. Compared to placebo, statins did not decrease all-cause mortality (10 studies, 1884 patients; RR 0.95, 95% CI 0.86 to 1.06) or cardiovascular mortality (9 studies, 1839 patients; RR 0.96, 95% CI 0.65 to 1.40). There was a lower incidence of nonfatal cardiovascular events with statins compared to placebo in haemodialysis patients (1 study, 1255 patients; RR 0.86, 95% CI 0.74 to 0.99). Compared with placebo, statin use was associated with a significantly lower end of treatment average total cholesterol (14 studies, 1823 patients; MD -42.61 mg/dL, 95% CI -53.38 to -31.84), LDL cholesterol (13 studies, 1801 patients; MD -43.06 mg/dL, 95% CI -53.78 to -32.35) and triglycerides (14 studies, 1823 patients; MD -24.01 mg/dL, 95% CI -47.29 to -0.72). There was similar occurrence of rhabdomyolysis and elevated liver function tests with statins in

comparison to placebo.

Authors' conclusions

Statins decreased cholesterol levels in dialysis patients similar to that of the general population. With the exception of one study, studies were of short duration and therefore the efficacy of statins in decreasing the mortality rate is still unclear. Statins appear to be safe in this high-risk population. Ongoing studies should provide more insight about the efficacy of statins in reducing mortality rates in dialysis patients.

Diagnostic test register

At the end of 2008, the Cochrane Renal Group successfully submitted a proposal to the Cochrane Collaboration Steering Group for a further three years of funding for the development of the register.

Our objectives for the next three years include:

- transferring the Register to a relational database
- continuing to screen Medline records for inclusion in the Register, and to source records from Cochrane and non-Cochrane reviews of diagnostic test accuracy
- handsearching journals likely to have a high proportion of DTA studies
- developing coding for test names and target conditions to enable accurate retrieval of studies from the register
- continuing to develop training materials for trials search coordinators in searching for DTA studies and screening search results.
- providing support in search strategy development for the authors and trials search coordinators of DTA reviews submitting a proposal to the National Library of Medicine for introducing a diagnostic test accuracy study Medline publication type e.g. diagnostic accuracy.pt.

At the 17th Cochrane Colloquium in Singapore (11 – 14 October, 2009) Ruth Mitchell ran a workshop for TSCs on Developing search strategies for Cochrane systematic reviews of diagnostic test accuracy, attended by 14 TSCs and other information specialists.

A more detailed description of the Register can be found in Chapter 7 Section 7.3.1.3 of the Cochrane Handbook for Reviews of Diagnostic Test Accuracy at <http://srdta.cochrane.org/en/authors.html>

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