



Cochrane Eyes and Vision Group Newsletter

Number 7

February 2001

TIME TO CHANGE GEAR

At a recent Glaucoma Surgery course at Moorfields, I had the opportunity to enquire from a representative group of fully trained young ophthalmologists whether or not we were having any success in disseminating the Cochrane concept. To my horror, only two out of twenty admitted to having heard of the Cochrane Collaboration. With all the efforts put in at the editorial base and my frequent proselytising around the world – I had certainly hoped for better than that.

More recently still, a colleague commented that it was disappointing that there is not more of relevance to eyes on the Cochrane Library – only four reviews he muttered. Clearly it is some while since he visited the Library; there are eleven completed reviews in the current issue, quite apart from the huge amount of additional material which we have detailed in our newsletter of November 1999.

Our output is in fact comparable with many other review groups, but it is frustrating that though we continue to expand as far as reviews in process is concerned, it is still a great struggle to get reviews to the finishing line.

A major spin off from the conduct of a systematic review is the wealth of education which is an inevitable accompaniment. Quite apart from discovering exactly what we know and don't know about a given intervention, we learn a great deal about the design, conduct and analysis of randomised controlled trials. Looking at our eleven completed reviews, some clear patterns emerge. High quality well reported trials are a rarity in the eye world. The great majority of the evidence on which we base our practice is far from adequate. A great deal more hard work is required by the Cochrane Eyes and Vision Group members to convince their colleagues that standards of clinical research have to improve if our speciality is not to be

left out in the cold as far as evidence based practice is concerned. In the 1970's Archie Cochrane awarded the wooden spoon for the most archaic and least evidence based practice to Obstetrics and Gynaecology. It was Iain Chalmers and other's determination to reverse this that led to the establishment of the Cochrane Collaboration. I wonder who would get the wooden spoon now – could it ophthalmology?

Richard Wormald, Co-ordinating Editor

CHANGES AT THE EDITORIAL BASE

There have been several changes at the Cochrane Eyes and Vision Group editorial base since our last newsletter.

Our Administrative Officer, Anupa Shah began work as our full time Trials Search Co-ordinator in January 2000. Anupa is busy coding our register of trials which now contains 4882 records.

Shona Burman-Roy, our Assistant Review Group Co-ordinator, has moved on to other evidence based medicine projects within this department. We are very grateful to Shona for her contribution to the Group, especially during the six months last year when she was Acting Review Group Co-ordinator.

In January we welcomed Sarah Mazar to the editorial base. Sarah is our Assistant Co-ordinator.



Stephen Swift, our Computer Technician, left in April 2000. Swift's excellent work is being continued by his replacement Seth Lynch.

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TRANSLATORS - WE NEED YOU!

Do you often find that you have spare time on your hands? Do you find that pampering yourself or watching a good movie just doesn't appeal? If the answers to these questions are yes than I may have the answer for you? Translating! The group is always on the look out for people willing to give up their time to help translate non-English articles for reviews. We welcome people versed in any non-English language. Although this is a voluntary service, acknowledgement is given on the relevant review and in the group module on the Cochrane Library. If you are interested or really haven't got anything better to do, than contact Anupa at anupa.shah@ucl.ac.uk

RevMan 4.1

RevMan is the Cochrane Collaboration's program for preparing and maintaining Cochrane reviews.

RevMan allows you to enter protocols, as well as complete reviews, including text, characteristics of studies, comparison table, and study data. It can perform meta-analysis of the data entered, and present the results graphically using MetaView.

The current version is 4.1, which includes version 4.1 of the analysis component, MetaView. All reviewers should now be using this version of the software, and this can be downloaded from the Cochrane Website at www.cochrane.org

This file is 7Mb so will take quite a while to download on slower modems. If you are not able to download RevMan please let us know and we will send you a CD-ROM.

WEBSITE

The Eyes and Vision Group website is now up and running, though still under development to improve it. Please take a look and let us know how we can make it more useful <http://www.archie.ucl.ac.uk>

The Cochrane Website is another to add to your bookmarks.

<http://www.cochrane.org>

DATES FOR YOUR DIARY

UK contributors meeting
27 - 27th March 2001

Australasian contributors meeting
14 - 15th June 2000

These meetings are for anyone involved or interested in the Cochrane Collaboration. There are plenary sessions as well as small workshops and meetings. Please contact us for more details.

RANDOMISED TRIAL OF METHODS TO RETRIEVE MISSING DATA

Lack of suitable data from published reports is an almost universal problem for Cochrane reviewers. Many of us are familiar with obstacles such as unclear methods of allocation concealment, poor information about dropouts and missing standard deviations, among others. Equally problematic is the decision we have to take about whether time and money are well invested in pursuing the missing information. We surveyed Cochrane Review Groups to find out what advice they give to their reviewers. The typical advice was to write a simple letter of request and we wonder if this can be improved upon.

To answer this question we have developed a randomised trial. **'First Contact'** will compare a simple letter with an intensive approach based on methods that appear to work based on evidence from randomised trials within population surveys. Details of the protocol are available on our website (see below). We encourage any Cochrane reviewer uncertain about the best way to make first contact with an investigator to join the trial. Randomisation will take place at the UK Cochrane Centre, and current results from a Bayesian analysis of the accumulating results will be available on-line to inform reviewers both within and outside First Contact.

For more details keep an eye on:
<http://www.mrc-bsu.cam.ac.uk/firstcontact> or
contact: firstcontact@mrc-bsu.cam.ac.uk

Julian Higgins (on behalf of the First Contact Steering Group)

THE COLLOQUIUM 2000

Cape Town is an amazing city, physically stunning and full of energy and vibrancy arising from the newly established democracy. This was the first time the Colloquium had been held in a developing country. It was an exciting mixture: part scientific conference around systematic review methodology and part an enormous team meeting for people who, however loosely, are all working towards the same objectives. Workshops and presentations ranged from dense discussions of heterogeneity to examples of reviews being used to change practice and policy.

Jimmy Volmink and his team did a fantastic job organising such a large and complex event. One highlight of the conference was the speech at the Colloquium banquet by Daniel Ncayiyana, editor of the South African Medical Journal. He was both funny and hard-hitting, with a wonderfully sardonic reference to President Mbeki's apparent difficulty in understanding the link between HIV and AIDS.

Another highlight for me was a presentation from Paul Garner about increasing the involvement of people from developing countries in the Cochrane Collaboration. In working with people from developing countries and undertaking reviews of direct relevance to the health problems faced by many of the world's poorest people, the Infectious Diseases Group has set a wonderful example for other Cochrane Groups to follow. The Cochrane Eyes and Vision Group reviews of Ivermectin for river blindness led by Henry Ejere (and presented at the Cape Town Colloquium) and of antibiotics for trachoma led by Denise Mabey are great steps for Group. Blindness prevention is without doubt one of the major health issues facing the world in the 21st century. With your hard work and support the Cochrane Eyes and Vision Group can ensure that attempts to prevent blindness are based on the best available evidence.

Liam Smeeth, Editor



The Eyes and Vision Group at the Colloquium Banquet.

From left to right:

Thomas Sycha, Austria (Reviewer)

Richard Wormald, UK
(Co-ordinating Editor)

Kay Dickersin, USA (Editor)

Anupa Shah, UK
(Trials Search Co-ordinator)

Henry Ejere, UK (Reviewer)

Liam Smeeth, UK (Editor)

Kate Henshaw, UK
(Review Group Co-ordinator)

Come to the 2001 Colloquium in Lyon and get your mugshot in our newsletter!

9th International Cochrane Colloquium – Lyon, France

9th – 13th October 2001

The theme of the Lyon Colloquium is **'The evidence dissemination process: how to make it more efficient'**. For more information contact us or visit the website (available in French and English) at:

<http://spc-10.univ-lyon1.fr/citccf/colloque2001/index.htm>

Please send us contributions and comments for this newsletter.
We will produce a newsletter twice each year.

TITLES, PROTOCOLS & REVIEWS

The following titles, protocols and reviews are currently registered to the group. If you have any ideas for reviews, please let us know by completing a Title Registration Form (see page 11).

You can view the most up to date list of our registered titles, and view the abstracts of our published reviews, on our website at <http://www.archie.ac.uk>. Or you can browse the registered titles for all Cochrane review groups at <http://www.cochrane.no/titles/>

Items shown as 'in editorial process' are currently undergoing internal and external peer review and should be published on forthcoming issues of the Cochrane Library.

Reviews		
Title	Reviewer	Status
Antibiotics for acute bacterial conjunctivitis	Aziz Sheikh	Published
Antioxidants for age-related macular degeneration	Jennifer Evans	Published
Antioxidants for preventing age-related macular degeneration	Jennifer Evans	Published
Ginkgo Biloba for age-related macular degeneration	Jennifer Evans	Published
Photodynamic therapy for age-related macular degeneration	Richard Wormald	Published
Post-operative 5-Fluorouracil for glaucoma surgery	Richard Wormald	Published
Screening the elderly for visual impairment in the community	Liam Smeeth	Published
Surgery for non-arteritic ischaemic optic neuropathy	Kay Dickersin	Published
Interventions for herpes simplex virus epithelial keratitis	Kirk Wilhelmus	Published
Intra-operative Mitomycin C for glaucoma surgery	Mark Wilkins	Published
Ivermectin for onchocercal eye disease (river blindness)	Henry Ejere	Published
Antibiotics for trachoma	Denise Mabey	In editorial process
Interventions for recurrent corneal erosions	Nigel Barker	In editorial process
Surgery for bilateral paediatric cataract	Vernon Long	In editorial process
Surgery for involutional lower lid entropion	Kostas Boboridis	In editorial process
Surgical interventions for age-related cataract	Torkel Snellingen	In editorial process

Protocols		
Title	Reviewer	Status
Corticosteroids for optic neuritis	Roy Beck	Published
Interventions for central retinal artery occlusion	Dilani Siriwardena	Published
Interventions for normal tension glaucoma	Thomas Sycha	Published
Interventions for preventing ophthalmia neonatorum	Vimal Kapoor	Published
Interventions for toxoplasma retinochoroiditis	Ruth Gilbert	Published
Multifocal lenses for pseudophakic presbyopic correction	Martin Leyland	Published
Surgical interventions for retinal detachment	Juliet Thompson	Published

Protocols continued		
Title	Reviewer	Status
Endonasal vs external dacryocystorhinostomy for nasolacrimal duct obstruction	Vinidh Paleri	In editorial process
Interventions for idiopathic intracranial hypertension	Christian Lueck	In editorial process
Interventions for thyroid eye disease	Mike Wearne	In editorial process
Iridectomy and iridotomy for narrow angles and primary open angle glaucoma	Winnie Nolan	In editorial process
Laser photocoagulation therapy for diabetic retinopathy	Lucia Iochides	In editorial process
Medical interventions for primary open-angle glaucoma	Clemens Vass	In editorial process
Oral antivirals for preventing herpes simplex keratitis in people with corneal grafts	Graham Lee	In editorial process
Pharmacological therapy for preventing and slowing the progression of diabetic retinopathy	Leopold Schmetterer	In editorial process
Reading aids for people with low vision	Ruthy Acosta	In editorial process

Titles		
Title	Reviewer	Status
Beta-irradiation for glaucoma surgery	James Kirwan	Registered
Bleb needling for glaucoma	Andrew Waboso	Registered
Corticosteroids for thyroid eye disease	Silvia Wengrowicz	Registered
Haemodilution for retinal vein occlusion	Rodrigo Meirelles	Registered
Interventions for asymptomatic retinal breaks and lattice degeneration for preventing retinal detachment	Charles Wilkinson	Registered
Interventions for cystoid macular oedema in uveitis	Gwenyth Freeman	Registered
Interventions for hyphema	Luca Rossetti	Registered
Interventions for infantile esotropia	Jugnoo Rahi	Registered
Interventions for ocular sarcoidosis	Nelson Sabrosa	Registered
Interventions for ophthalmia neonatorum	Aziz Sheikh	Registered
Interventions for pigmentary glaucoma	Miltos Balidis	Registered
Interventions for preventing after-cataract	Oliver Findl	Registered
Interventions for preventing cystoid macular edema	Adriaan van Sorge	Registered
Interventions for preventing herpes simplex keratitis	Nigel Barker	Registered
Interventions for primary angle closure glaucoma	Paul Foster	Registered
Interventions for slowing progression of myopia in children	Edwin Chan Shin-Yen	Registered
Intra-operative 5-Fluorouracil for glaucoma surgery	Andrea Indar	Registered
Medical versus surgical interventions for primary open-angle glaucoma	Tony Wells	Registered
Pars plana vitrectomy for diabetic macular oedema	Jinesh Patel	Registered
Surgical interventions for congenital glaucoma	Dhanesvari Thomas	Registered

The Cochrane Library also contains items of relevance to eyes and vision that have been prepared by other Cochrane Groups or non-Cochrane Groups. For further information about subscribing to the Cochrane Library please visit: <http://www.update-software.com/cochrane/cochrane-frame.html> or From the UK, Europe and Asia contact: Update Software Ltd, Summertown Pavilion, Middle Way, Oxford, OX2 7LG, United Kingdom, Tel: +44 1865 513902, Fax: +44 1865 516918, E-mail: info@update.co.uk; From the Americas, Australasia and Pacific Rim contact: Update Software Inc, 1070 South Santa Fe Avenue, Suite 21, Vista, CA 92084, USA, Tel: +1 760 631-5844, Fax: + 1 760 631-5848E

Cochrane Workshops 2001

If you would like further information or an application form for any of these workshops please contact us. Cochrane workshops are free, but reviewers must pay for accommodation and travel. Fees apply for other workshops.

Australasian Cochrane Centre

Date	Location	Type of workshop
22 Mar 2001	Brisbane	Protocol workshop
23 Mar 2001	Brisbane	Revman workshop
5 Apr 2001	Melbourne	Protocol workshop
6 Apr 2001	Melbourne	Revman workshop
10 May 2001	Sydney	Protocol workshop
11 May 2001	Sydney	Revman workshop
31 May 2001	Adelaide	Protocol workshop
1 June 2001	Adelaide	Revman workshop
13-14 June 2001	Melbourne	Advanced Reviewers Workshop – Finishing School (1.5 days)
3 Sept 2001	Darwin	Protocol workshop
4 Sept 2001	Darwin	Revman workshop

Canadian Cochrane Centre

Date	Location	Type of workshop
22 March 2001	Winnipeg	Developing a Protocol for a Cochrane Systematic Review
23 March 2001	Winnipeg	Completing a Cochrane Systematic Review

Dutch Cochrane Centre, The Netherlands

Date	Location	Type of workshop
15 Feb 2001	Amsterdam	Developing a Systematic Review
17 May 2001	Amsterdam	Developing a Systematic Review
27 Sept 2001	Amsterdam	Developing a Systematic Review
29 Nov 2001	Amsterdam	Developing a Systematic Review

German Cochrane Centre

Date	Location	Type of workshop
1-3 Mar 2001	Freiburg	Systematische Übersichtsarbeiten (Introductory)

Nordic Cochrane Centre

Date	Location	Type of workshop
On demand	Oslo & Copenhagen	Individual sessions on writing Protocols/Reviews and using RevMan
12 Mar 2001	Copenhagen	Handsearching workshop
13 Mar 2001	Copenhagen	Protocol workshop
14 Mar 2001	Copenhagen	RevMan workshop
June 2001 (date not final)	Copenhagen	Kursus i evidensbaseret klinik
3 Sept 2001	Copenhagen	Handsearching workshop
4 Sept 2001	Copenhagen	Protocol workshop
5 Sept 2001	Copenhagen	RevMan workshop

UK Cochrane Centre

Date	Location	Type of workshop
5 Feb 2001	Oxford	'Developing a protocol for a review'
6 Feb 2001	Oxford	'Getting a review into RevMan'
2 Apr 2001	Oxford	'Developing a protocol for a review'
3 Apr 2001	Oxford	'Getting a review into RevMan'
27 Apr 2001	York	'Developing a protocol for a review'
3 May 2001	York	'Getting a review into RevMan'
24 May 2001	London	'Developing a protocol for a review'
25 May 2001	London	'Getting a review into RevMan'
14 June 2001	Aberdeen	'Developing a protocol for a review'
15 June 2001	Aberdeen	'Getting a review into RevMan'
12 July 2001	Oxford	'Developing a protocol for a review'
13 July 2001	Oxford	'Getting a review into RevMan'
20 Sept 2001	Oxford	'Developing a protocol for a review'
21 Sept 2001	Oxford	'Getting a review into RevMan'
25 Oct 2001	Oxford	'Developing a protocol for a review'
26 Oct 2001	Oxford	'Getting a review into RevMan'
5 Nov 2001	Liverpool	'Developing a protocol for a review'
12 Nov 2001	Edinburgh	'Developing a protocol for a review'
13 Nov 2001	Edinburgh	'Getting a review into RevMan'
3 Dec 2001	Liverpool	'Getting a review into RevMan'
13 Dec 2001	London	'Developing a protocol for a review'
14 Dec 2001	London	'Getting a review into RevMan'

**Please send us contributions and comments for this newsletter.
We will produce a newsletter twice each year.**

Other Evidence-Based Health workshops

Department of Social Medicine, University of Bristol

Date	Location	Type of workshop
18–22 June 2001	Bristol, UK	Design and analysis of randomised trials. Course covers: trial recruitment; sample size; randomisation; multiple outcomes; repeated measures; factorial designs; interim and subgroup analyses; economic evaluation and qualitative methods alongside trials; CONSORT guidelines. Course organiser: Laurence Moore
Various	Bristol, UK	Several courses. Further details of all courses available from http://www.cochrane.org/software/training/flyer20002001.doc or contact Iris Neale, teaching secretary, Department of Social Medicine, Canynge Hall, Whiteladies Road, Bristol BS8 2PR. Tel 0117 928 7382 Email iris.neale@bristol.ac.uk

Centre for Statistics in Medicine

Date	Location	Type of workshop
30 May – 1 June 2001	Oxford, UK	Finishing School for Systematic Reviews
<p>Overall aims and content This course has been developed in collaboration with the UK Cochrane Centre to provide training covering the last stages of the systematic review process. The course aims to equip participants with the knowledge and skills to be able to:</p> <ul style="list-style-type: none"> • plan and carry-out a basic meta-analysis • be aware of the appropriate use of methods for more complex analysis • be aware of pitfalls in meta-analysis • interpret the results of a meta-analysis • communicate the results and interpretation of an analysis accurately <p>Cost The course fee is £325 for non-profit organisations and £650 for profit organisations. This includes all materials and lunches, but no accommodation. A limited number of bursaries will be available from the UK Cochrane Centre to cover the course fee. Application forms must be submitted by 2nd April 2001. Application forms and further information available from: Rochelle Seifas, Centre for Statistics in Medicine, Institute of Health Sciences, Old Road, Headington, Oxford OX3 7LF, telephone 01865 226615, fax 01865 226962 or http://www.ihs.ox.ac.uk/csm/InfoAnalysis.html</p>		

Systematic Review Training Unit Institute of Child Health

Date	Location	Type of workshop
5 – 8 June 2001	London, UK	Getting on with your systematic review
<p>Overall aims and content The course aims to give health professionals the skills necessary to conduct rigorous systematic reviews of research evidence. Participants will be expected to be in the process of performing a systematic review, and will have the opportunity to proceed with their own review as part of the course. Course content will include all aspects of the process of systematic reviewing are covered, with an emphasis on clinical trials of health interventions.</p> <p>Cost The cost of the course is £450, which includes tuition fee, lunch, refreshments and course documents. Application forms may be obtained from Carole Davies, Administrator, Systematic Reviews Training Unit, Department of Epidemiology and Public Health, Institute of Child Health, 30 Guilford Street, London, WC1N 1EH, Tel: 020 7905 2203, Fax: 020 7813 8233, Email:srtu@ich.ucl.ac.uk, http://www.ich.ucl.ac.uk/srtu. Alternatively, you may submit an application online. You may download a flyer for local distribution (Word 97 or Word 6.0). The closing date for applications is 13th April 2001.</p>		

ABSTRACTS OF NEW REVIEWS

Issue 1 2001 of the Cochrane Library contains 11 reviews and 11 protocols from the Eyes and Vision Group. Below are the abstracts from the three new reviews on that issue. For information on how to access the full review on the Cochrane library, contact Kate at editorial base or visit <http://www.cochrane.org> or <http://www.update-software.com/cochrane/>

IVERMECTIN FOR ONCHOCERCAL EYE DISEASE (RIVER BLINDNESS)

Ejere H, Schwartz E, Wormald R

Background: It is believed that ivermectin (a microfilaricide) could prevent blindness due to onchocerciasis. However, when given to everyone in communities where onchocerciasis is common, the effects of ivermectin on lesions affecting the eye are uncertain and data on whether the drug prevents visual loss is unclear.

Objectives: The aim of this review is to assess the effectiveness of ivermectin in preventing visual acuity and visual field loss in onchocercal eye disease. The secondary aim is to assess the effects of ivermectin on lesions affecting the eye in onchocerciasis.

Search strategy: We searched the Cochrane Eyes and Vision Group specialised register, the Cochrane Controlled Trials Register - CENTRAL, MEDLINE, EMBASE, the reference lists of identified trials, the Science Citation Index and we contacted investigators, experts and pharmaceutical companies to identify additional trials. (continued on next page)

Selection criteria: We included randomised controlled trials with at least one year follow up, comparing ivermectin at a dose of 150 micrograms per kilogram of body weight with either placebo or no treatment. Participants were people normally resident in endemic onchocercal communities with or without one or more characteristic signs of ocular onchocerciasis.

Data collection and analysis: Two reviewers independently extracted data and assessed trial quality. Study authors were contacted for additional information. Trials varied in design and setting, so no meta-analysis was done.

Main results: This review includes five trials with data from 3810 participants. All the trials compared ivermectin with placebo and were judged to be of moderate risk of bias in terms of methodological quality. No statistically significant difference was observed in any trial (reporting visual acuity outcome) between ivermectin and placebo groups for visual acuity loss.

Reviewers' conclusions: Questions about the effectiveness of ivermectin in preventing visual acuity loss have not been answered by best available evidence.

INTERVENTIONS FOR HERPES SIMPLEX VIRUS EPITHELIAL KERATITIS

Wilhelmus KR

Background: Many clinical trials have been performed on the acute treatment of dendritic epithelial keratitis. Surveys of antiviral pharmacology and of herpes simplex virus eye disease have evaluated different commercially available agents, but a systematic review of all comparative clinical studies has not previously been undertaken.

Objectives: The objective of this review is to compare the effects of various treatments for dendritic or geographic herpes simplex virus epithelial keratitis.

Search strategy: Sources searched for relevant studies were the Cochrane Eyes and Vision Group specialized register, The Cochrane Controlled Trials Register - CENTRAL, MEDLINE, EMBASE, Index Medicus, Excerpta Medica Ophthalmology, reference lists of primary reports, review articles, and corneal textbooks and conference proceedings pertaining to ocular virology.

Selection criteria: This review includes comparative clinical trials that assessed oral or topical ophthalmic antiviral agents, or physical or chemical debridement in people with active epithelial keratitis. (continued)

Data collection and analysis: The reviewer extracted data and assessed trial quality. Interventions were compared by the proportions of participants healed at seven days and at fourteen days after trial enrolment.

Main results: This review includes data from 96 trials which randomised a total of 4991 participants. Compared to idoxuridine, the topical application of vidarabine, trifluridine, or acyclovir generally resulted in a significantly greater proportion of participants healing within one week of treatment. Among these three antiviral agents, no treatment emerged as significantly better for the therapy of dendritic epithelial keratitis. Insufficient placebo-controlled studies were available to assess debridement and other physical and physicochemical methods of treatment. Interferon monotherapy had a slight beneficial effect on dendritic epithelial keratitis, but not better than other antiviral agents, and was useful with debridement.

Reviewers' conclusions: Currently available and investigational antiviral agents are effective and nearly equivalent, but the combination of an antiviral nucleoside and interferon seems to speed healing. Future trials of the acute treatment of herpes simplex virus epithelial keratitis must aim to achieve adequate statistical power for assessing the primary outcome and should consider the effect of lesion size and other characteristics on treatment response.

INTRA-OPERATIVE MITOMYCIN C FOR GLAUCOMA SURGERY

Wilkins M, Indar A, Wormald R

Background: Trabeculectomy is performed as a treatment for many types of glaucoma in an attempt to lower the intra-ocular pressure. Mitomycin C is an antimetabolite applied between the sclera and conjunctiva during the initial stages of a trabeculectomy to prevent excessive post-operative scarring and thus reduce the risk of failure.

Objectives: The objective of this review is to assess the effects of intra-operative application of Mitomycin C in eyes of people undergoing trabeculectomy.

Search strategy: We searched the Cochrane Eyes and Vision Group specialised register, The Cochrane Controlled Trials Register - CENTRAL, MEDLINE, EMBASE and the reference lists of relevant articles. We used the Science Citation Index to search for articles that cited the included studies. We contacted investigators and experts for details of additional relevant trials.

Selection criteria: We included randomised trials of intra-operative Mitomycin C compared to placebo in trabeculectomy.

Data collection and analysis: Two reviewers independently assessed trial quality and extracted data. We contacted trial investigators for missing information. Data were summarised using relative risk, odds ratio and weighted mean difference.

Main results: This review includes 11 trials involving a total of 698 participants. The trials included three types of participants (those at high risk of failure, those undergoing trabeculectomy combined with cataract surgery, and those with no previous surgical intervention). Mitomycin C appears to be effective in reducing the relative risk of failure of trabeculectomy both in eyes at high risk of failure (relative risk 0.32, 95% confidence interval 0.20 to 0.53) and those undergoing surgery for the first time (relative risk 0.29, 95% confidence interval 0.16 to 0.53). No significant effect on failure was noted in the group undergoing trabeculectomy combined with cataract extraction. Mean intra-ocular pressure was significantly reduced at 12 months in all three participant groups receiving Mitomycin C compared to placebo. No significant increase in permanent sight threatening complications was detected. Some evidence exists that Mitomycin C increases the risk of cataract. The quality of trial reporting is poor in eight trials. Repeat analysis with three trials rated as low risk of bias did not yield different results.

Reviewers' conclusions: Intra-operative Mitomycin C reduces the risk of surgical failure in eyes that have undergone no previous surgery and in eyes at high risk of failure. Compared to placebo it reduces mean intra-ocular pressure at 12 months in all groups of participants in this review. Apart from an increase in cataract formation following Mitomycin C, no demonstrable significant increase in other side effects was detected.