Centre for Clinical Effectiveness
Enhancing patient outcomes through clinical application of the best available evidence

EVIDENCE CENTRE
CRITICAL APPRAISAL
Series 2001: Therapy

Is the combination of Hiprex and vitamin C beneficial in the long-term management of urethral indwelling catheters?

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SUMMARY STATEMENT:

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Publication of materials – please use the following format when citing this article:

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REQUEST:

Is the combination of Hiprex and vitamin C beneficial in the long-term management of urethral indwelling catheters?

REQUESTED BY:

Dee Greenwood, Coordinator, Southern Continence, Kingston

METHODOLOGY

Search Strategy

The Centre for Clinical Effectiveness defines the 'best available evidence' as that research we can identify that is least susceptible to bias. We determine this according to pre-defined National Health and Medical Research Council (NHMRC, 2000) criteria (see Appendix 1).

First, we search for systematic reviews, evidence based clinical practice guidelines, health technology assessments and randomised controlled trials. If we identify sound, relevant material of this type, the search stops. Otherwise, our search strategy broadens to include studies that are more prone to bias, less generalisable or have other methodological difficulties. We include case-control and longitudinal cohort studies in our critical appraisal reports. While we cite observational and case series studies, and narrative reviews and consensus statements, in our reports we do not critically appraise them. Such studies can produce accurate results but they are generally too prone to bias to allow determination of their validity beyond their immediate setting.

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Details of Evidence Request

Patient:	Subject (over 60 years) requiring urethral indwelling catheter
Intervention:	Combination of hiprex and vitamin C
Comparison:	No hiprex and Vitamin C
Outcomes:	Urinary tract infection, catheter blockage

Search terms: (see Appendix 2 for exact search strategy)

The following search terms were used to scour electronic databases and websites:

Table 1. Search terms used in the retrieval of articles from electronic databases and websites

Field of focus	Search term
Condition-related	Catheters indwelling, catheters
Intervention-related	Hiprex, methenamine hippurate, ascorbic acid, vitamin C

Resources Searched

We searched the following databases and Internet websites:

Cochrane Library CD-ROM- Issue 3, 2001

Medline (OVID)- 1966 to August week 2 2001

CINAHL (OVID) – 1982 to July week 2 2001

PreMedline (OVID)- August 16, 2001

National Guideline Clearinghouse- August 17, 2001

EBM Reviews ACP Journal Club – 1991 to March/April 2001

Current Contents (OVID)/All Editions – 1993 week 26 to 2001 week 34

Refinements, Searching & Reporting Constraints:

We included items of evidence that were available to us on 17 August 2001. The search was restricted to humans aged over 60 years and articles published in English in the last 10 years.

RESULTS:

We did not identify any studies related to the request. This left us with no articles for appraisal. As far as we are aware, the combination of hiprex and Vitamin C has not been assessed in controlled clinical trials based on our refinements, searching and reporting constraints.

REFERENCES

ARTICLE CRITICALLY APPRAISED

None

APPENDIX 1

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Levels of Evidence

Based on "How to use the evidence: assessment and application of scientific evidence" (National Health & Medical Research Council, Canberra, 2000):

Level I	Evidence obtained from a systematic review of all relevant randomised controlled trials.
Level II	Evidence obtained from at least one properly designed randomised controlled trial.
Level III-1	Evidence obtained from well-designed pseudo-randomised controlled trials (alternate allocation or some other method).
Level III–2	Evidence obtained from comparative studies (including systematic reviews of such studies) with concurrent controls and allocation not randomized, cohort studies, case control studies, or interrupted time series with a control group.
Level III-3	Evidence obtained from comparative studies with historical control, two or more single-arm studies or interrupted time series without a parallel control group.
Level IV	Evidence obtained from case series, either post-test or pre-test/post-test.

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APPENDIX 2

Search strategy

	Search terms for: Cochrane Library, Medline, CINAHL, PreMedline, etc.
1	Exp Methenamine/ or hiprex.mp. or exp hippurates/ or exp anti-infective agents, urinary/
2	Methenamine hippurate.mp
3	Hiprex.tw
4	Methenamine.tw
5	Or/1-4
6	Exp Ascorbic acid/ or vitamin c.mp
7	Vitamin C.tw
8	Ferrous ascorbate.mp
9	Hybrin.mp
10	1-ascorbic acid.tw
11	Magnesium ascorbicum.mp
12	Sodium ascorbate.mp
13	Monosodium salt of ascorbic acid.mp
14	Or/6-13
15	5 and 14
16	Exp catheters, indwelling/ or catheters indwelling.mp
17	Exp catheters/
18	Implantable catheters.mp
19	In-dwelling catheter$.mp
20	Indwelling catheter$.tw
21	Or/16-20
22	15 and 21
23	Limit 22 to (humans aged over 60 years, English language and yr=1990-2001)

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