

Washout Policies in Long-Term Indwelling Urinary Catheterization in Adults: A Short Version Cochrane Review



Lesley Sinclair,^{1*} Suzanne Hagen,² and Stephen Cross³




1 Ailsa Hospital, NHS Ayrshire & Arran, Ayr, UK

2 Nursing, Midwifery and Allied Health Professions Research Unit,
Glasgow Caledonian University, Glasgow, UK

3 Macclesfield District General Hospital, Cheshire, UK

社區護理室 高雅玉護理師

Journal: NEUROUROLOGY AND URODYNAMICS

Mark	Journal Title	ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Citable Items	Cited Half-life	Citing Half-life
	NEUROUROL URODYNAM	0733-2467	3511	2.674	2.603	0.297	138	5.8	7.6
Cited Journal  Citing Journal  Source Data Journal Self Cites									

CITED JOURNAL DATA

CITING JOURNAL DATA

 IMPACT FACTOR TREND

RELATED JOURNALS

Journal Information ⓘ

Full Journal Title: NEUROUROLOGY AND URODYNAMICS

ISO Abbrev. Title: NeuroUrol. Urodyn.

JCR Abbrev. Title: NEUROUROL URODYNAM

ISSN: 0733-2467

Issues/Year: 8

Language: ENGLISH

Journal Country/Territory: UNITED STATES

Publisher: WILEY-BLACKWELL

Publisher Address: 111 RIVER ST, HOBOKEN 07030-5774, NJ,

Subject Categories: UROLOGY & NEPHROLOGY

SCOPE NOTE

 VIEW JOURNAL SUMMARY LIST

 VIEW CATEGORY DATA

Eigenfactor® Metrics

Eigenfactor® Score

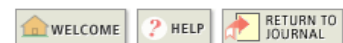
0.00890

Article Influence® Score

0.741

Journal Rank in Categories:  JOURNAL RANKING

Journal Citation Reports®



2012 JCR Science Edition

Rank in Category: NEUROUROLOGY AND URODYNAMICS

Journal Ranking ⓘ

For **2012**, the journal **NEUROUROLOGY AND URODYNAMICS** has an Impact Factor of **2.674**.

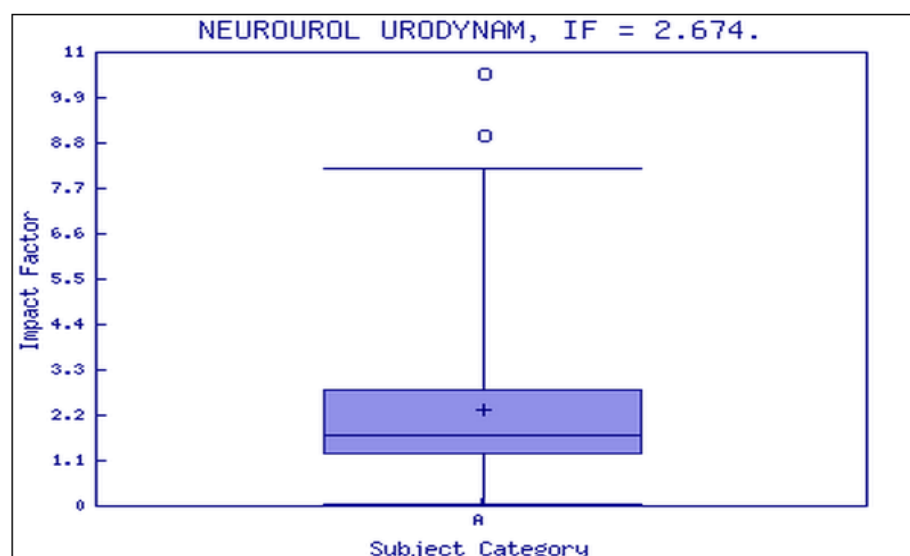
This table shows the ranking of this journal in its subject categories based on Impact Factor.

Category Name	Total Journals in Category	Journal Rank in Category	Quartile in Category
UROLOGY & NEPHROLOGY	73	20	Q2

Category Box Plot ⓘ

For **2012**, the journal **NEUROUROLOGY AND URODYNAMICS** has an Impact Factor of **2.674**.

This is a box plot of the subject category or categories to which the journal has been assigned. It provides information about the distribution of journals based on Impact Factor values. It shows median, 25th and 75th percentiles, and the extreme values of the distribution.



Key

A - UROLOGY & NEPHROLOGY

緣起: 1 泌尿道感染



紫色尿袋症候群
Purple Urine Bag Syndrome

緣起: 2 居家護理健保給付

特殊照護群組	診 療 項 目
1.氣切護理	換造口器，含氣切造瘻口處理
2.留置導尿管護理	留置導尿、更換腎臟引流或膀胱引流管
3.留置鼻胃管護理	胃管插入(或更換)
4.膀胱灌洗	膀胱灌洗
5.三、四期壓瘡傷口護理	淺部創傷處理-傷口長5公分以下者 淺部創傷處理-傷口長5-10公分者 淺部創傷處理-傷口長10公分以上者 深部複雜創傷處理-傷口長5公分以下者 深部複雜創傷處理-傷口長5-10公分者
6.大量液體點滴注射	大量液體點滴注射，含靜脈留置針設立，觀察病患對注射藥物之反應、教導家屬觀察注射部位之狀況及維護靜脈點滴之通暢
7.造口護理	肛門切除後治療、人工肛門灌洗、三路灌洗、迴腸造口永久裝具裝置、迴腸膀胱永久裝具裝置



資源耗用類別	內容	費用
第一類	需一般照護項目之病人	700
第二類	需特殊照護群組任一組之病人	970
第三類	需特殊照護群組任二組之病人	1170
第四類	需特殊照護群組任三組及以上之病人	1370

步驟 1：系統性文獻回顧探討的問題為何？

研究族群 / 問題 (Population/ Problem)	Long-Term Indwelling Urinary Catheterization in Adults
介入措施 (Intervention)	Regimens involving different solutions can be used to washout catheters
比較 (Comparison)	No washout catheter
結果 (Outcomes)	effectiveness, acceptability, complications, quality of life, and economics

步驟 2：系統性文獻回顧的品質如何

F - 研究是否找到 (Find) 所有的相關證據？

P1208

Background: People requiring long-term bladder draining with an indwelling catheter can experience catheter blockage. Regimens involving different solutions can be used to wash out catheters with the aim of preventing blockage. **Objectives:** To determine if certain washout regimens (including no washout) are better than others in terms of effectiveness, acceptability, complications, quality of life, and economics for the management of long-term indwelling urinary catheters in adults. **Search Methods:** We searched the Cochrane Incontinence Group Specialized Trials Register (searched April 30, 2009), MEDLINE (January 1966 to April 2009), MEDLINE In-Process (April 30, 2009), EMBASE (January 1980 to April 2009), and CINAHL (December 1981 to April 2009). Additionally, we examined all reference lists of identified trials and contacted manufacturers and researchers in the field. **Selection Criteria:** All randomized and quasi-randomized trials comparing catheter washout policies (e.g., washout vs. no washout), different washout solutions, frequency, duration, volume, concentration, method of administration) in adults (16 years and older, in hospital, nursing/residential home, community) with an indwelling urethral catheter. **Analysis:** Data were extracted by three reviewers. Disagreements were resolved by discussion. Data were processed as described in the Cochrane Handbook. For categorical outcomes, the numbers at risk in each group to derive a risk ratio (RR). For continuous outcomes, means, and standard deviations were used to derive

文獻搜尋至少包括二個主要的資料庫(如：Medline, Cochrane 考科藍實證醫學資料庫, EMBASE)

步驟 2：系統性文獻回顧的品質如何

F - 研究是否找到 (Find) 所有的相關證據？

P1209

RESULTS

Description of Studies

Twenty potentially eligible trials were identified. Fourteen of these were excluded from the review and one study is awaiting fuller translation. Descriptions of these are given in the tables of Characteristics of Excluded Studies and Studies Awaiting Assessment respectively in the full Cochrane review¹.

Five studies were therefore included in the review. Three of these were parallel-group randomized controlled trials and included a total of 173 participants¹³⁻¹⁵ and two were randomized cross-over trials that included a total of 69 participants.^{16,17} The trials generally had small sample sizes, ranging from 25 to 89, although the number of participants in some trials were far fewer, ranging from 4 to 53. Four trials were conducted in the UK,^{13,16} one in Canada,¹⁴ and one in the Netherlands.¹⁵ The results of the trials and an evaluation of the quality of the evidence are given in the full version of the review.

Three of the pre-specified comparisons (1, 2, and 7) were addressed by these trials. The remaining five pre-specified comparisons were addressed by the two randomized controlled trials were found addressing the remaining five pre-specified comparisons.

結果(Results)章節中可以找到本篇系統性文獻回顧評估的全文文獻數目、文獻納入與排除的數量及原因

步驟 2：系統性文獻回顧的品質如何

F - 研究是否找到 (Find) 所有的相關證據？

P1211

Summary of Main Results

可以找到本篇系統性文獻回顧評估的摘要

This review found a poor evidence base relating to the use of washouts for long-term dwelling catheters. The evidence consisted of two randomized cross-over trials which had poor data reporting, two parallel controlled trials with very limited amount of data, and one uncontrolled trial but potentially under-powered. The authors' conclusions were inconsistent, with one trial finding no effect of washouts, and no benefit of catheter replacement, and blocking of trials, their reporting, and poor quality of evidence were so poor that it is not appropriate to draw a conclusion of no effect.

Types of catheters. Different types of catheter were used across and within trials. It could be considered pragmatic to allow catheter type to vary in this way within a trial. However given the apparent difficulty experienced in recruiting and retaining participants in these trials, it may be sensible to standardize this variable in future trials to maximize the chances of detecting any differences between groups.

Volumes of solutions used for washouts. No trial looked at different volumes of the same washout solution. Studies tended to use the volume of solution provided in the manufacturers pre-prepared containers.

Frequencies of washouts. Neither were there trials comparing different frequencies of washout, for example, washout once a week versus twice a week. However the frequency of washout varied across studies from twice daily to twice weekly, as did the length of time the washout was retained in the bladder and the duration of the intervention.

Treatment-free periods between two arms of cross-over trials. It is important that a "washout period" is used in cross-over trials where there is potential for a carry-over effect from one treatment period to the next. Both cross-over trials in this review^{16,17} used this approach as well as incorporating run-in periods of 2 weeks of no washout and 1 week of saline washout respectively. No justification was given for length of the run-in or "washout periods."

Person performing washout. In all except one trial¹⁵ the washout procedure was undertaken by a health care professional. After the first washout Waites et al.¹⁵ gave pre-prepared solutions to the participant to use at home. This is an interesting, and may be the only trial where the washout was performed by the participant.

評讀結果：☐是 ☐否 v 不清楚

說明：文獻未說明搜尋是否不只限於英文，並且未說明是否有使用 MeSH 字串

reviews.

步驟 2：系統性文獻回顧的品質如何？

A - 文獻是否經過嚴格評讀 (Appraisal)？

P1209

METHODS

Criteria for Considering Studies for This Review

Types of studies. All randomized or quasi-randomized controlled trials, including cross-over designs, evaluating the use of urinary catheter washouts in long-term catheterized adults.

Types of participants. Adults, at least 16 years of age, in any setting (i.e., hospital, nursing/residential home, community) with an indwelling urethral, suprapubic, or perineal catheter in situ for more than 28 days.

Types of interventions. The interventions within the trials included no washout, and catheter washouts with water, saline, antiseptic, acidic, or antibiotic solutions or any combination of these.

Types of outcome measures. Primary outcomes considered were objective measures of catheter-associated urinary tract infection and catheter blockage. Secondary outcomes, including complications/adverse effects of washouts and quality of life, were also recorded.

See full version of Cochrane review¹ for details of the inclusion criteria as well as the search method, data collection and analysis procedures applied.

在文章的方法章節，可以找到所使用的文獻品質評讀標準的描述

步驟 2：系統性文獻回顧的品質如何？

A - 文獻是否經過嚴格評讀 (Appraisal)？

P1209

未詳細說明每篇研究的品質(如選用隨機分配、盲法、及完整追蹤的研究類型)

RESULTS

Studies

Twenty papers were identified. Fourteen of these were included in the review and one study is awaiting fuller transcription. These are given in the tables of Characteristics and Studies Awaiting Assessment respectively in the Cochrane review¹.

Five studies were therefore included in the review. Three of these were parallel-group randomized controlled trials and included a total of 173 participants¹³⁻¹⁵ and two were randomized cross-over trials that included a total of 69 participants.^{16,17} The trials generally had small sample sizes, ranging from 25 to 89, although the number of participants that completed were far fewer, ranging from 4 to 53. Two studies were conducted in the UK,^{13,16} one in Canada,¹⁴ and two in the USA.^{15,17} Full details of the trials and an evaluation of their methodological quality are given in the full version of the Cochrane review.

Three of the pre-specified comparisons of interest (Objectives 1, 2, and 7) were addressed by these five studies. No randomized controlled trials were found addressing the remaining five pre-specified comparisons.

步驟 2：系統性文獻回顧的品質如何？

A - 文獻是否經過嚴格評讀 (Appraisal)？

P1211

Quality of the Evidence

Concealment of group allocation was poor or inadequately described in all but one trial.¹⁴ Similarly, blinding was not described or was inadequate in all trials, although the difficulties associated with blinding in this type of trial are acknowledged.

Although the trials included were somewhat heterogeneous in terms of the outcomes they measured, the methods of measurement and definitions used varied. Standardized methods for reporting these key outcomes in catheter research are lacking, and there was a consistent lack of adequate reporting of allocation, blinding, and follow-up. This made interpreting the study results difficult, and extracting the data for comparison impossible in some cases. The methods of analyzing data in the cross-over trials seemed appropriate however the overall quality of the evidence was poor.

未詳細說明每篇研究的品質(如選用隨機分配、盲法、及完整追蹤的研究類型)

評讀結果：☐是 ☐否 v 不清楚
說明:結果章節未詳細列出每篇研究品質的評讀結果

步驟 2：系統性文獻回顧的品質如何

I - 是否只納入 (included) 具良好效度的文章？

P1208

Background: People requiring long-term bladder draining with an indwelling catheter can experience catheter blockage. Regimens involving different solutions can be used to wash out catheters and prevent blockage. **Objectives:** To determine if certain washout regimens (including no washout) improve catheter patency, effectiveness, acceptability, complications, quality of life, and economics for the management of urinary incontinence in adults. **Search Methods:** We searched the Cochrane Incontinence Group (CIG) database (January 1966 to April 2009), MEDLINE (January 1966 to April 2009), MEDLINE In-Process (January 1966 to April 2009), and CINAHL (December 1981 to April 2009). Additionally, we examined all references of identified trials and contacted manufacturers and researchers in the field. **Selection Criteria:** All randomized and quasi-randomized trials comparing catheter washout policies (e.g., washout vs. no washout, different washout solutions, frequency, duration, volume, concentration, method of administration) in adults (16 years and above) in any setting (i.e., hospital, nursing/residential home, community) with an indwelling urethral or suprapubic catheter in place for more than 28 days. **Data Collection and Analysis:** Data were extracted by three reviewers independently and compared. Disagreements were resolved by discussion. Data were processed as described in the Cochrane Handbook. If the trial data were not fully reported, clarification was sought from the authors. For categorical outcomes, the number of events was used to calculate the risk in each group to derive a risk ratio (RR). For continuous outcomes, the mean difference (MD) was used.

可以找到文章評估的方式，以及是由誰完成評估的，且提供審查者意見一致性的程度

評讀結果：V 是 ☐ 否 ☐ 不清楚

步驟 2：系統性文獻回顧的品質如何

T - 作者是否以表格和圖表「總結」 (total up) 試驗結果？

P1210

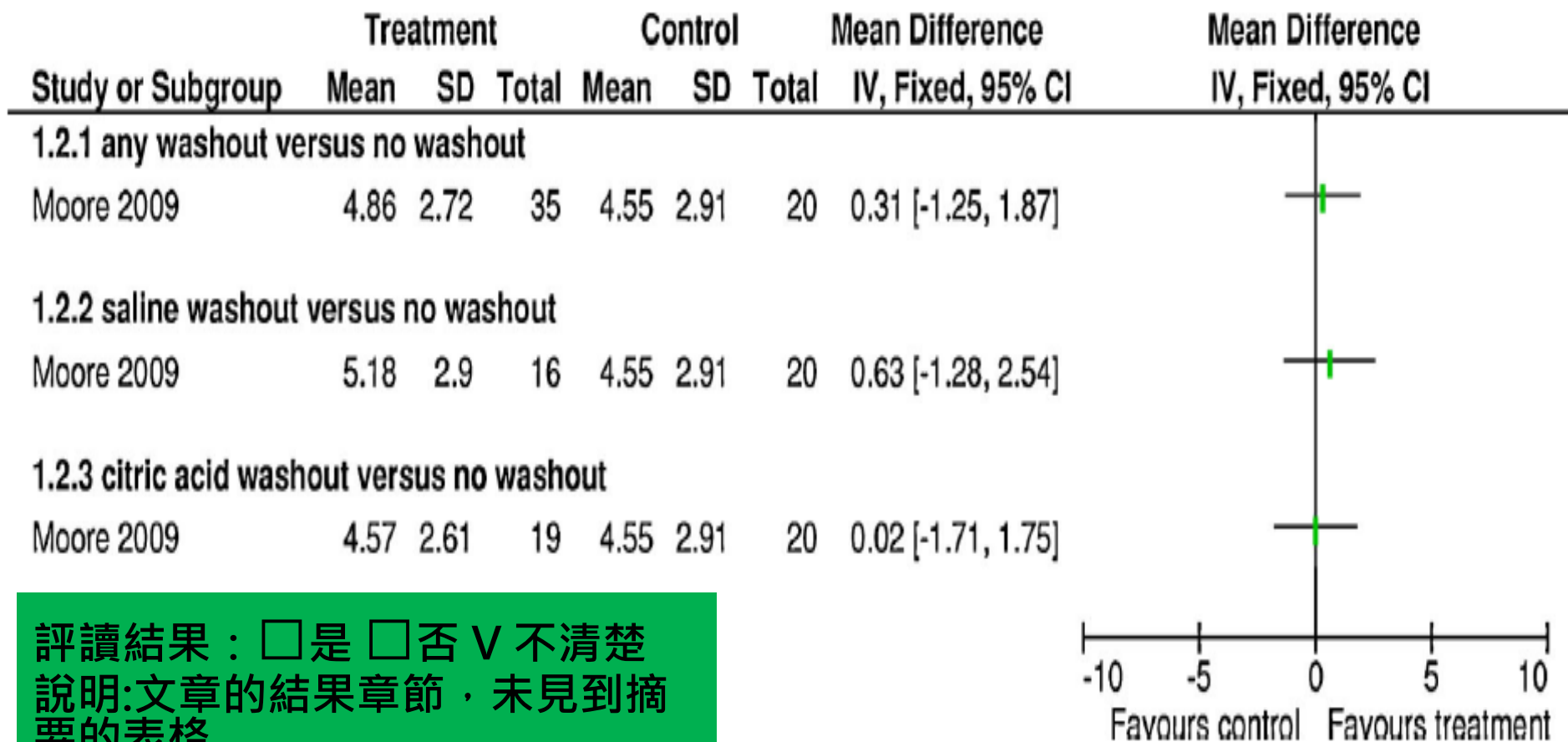


Fig. 1. Number of weeks to first catheter change.

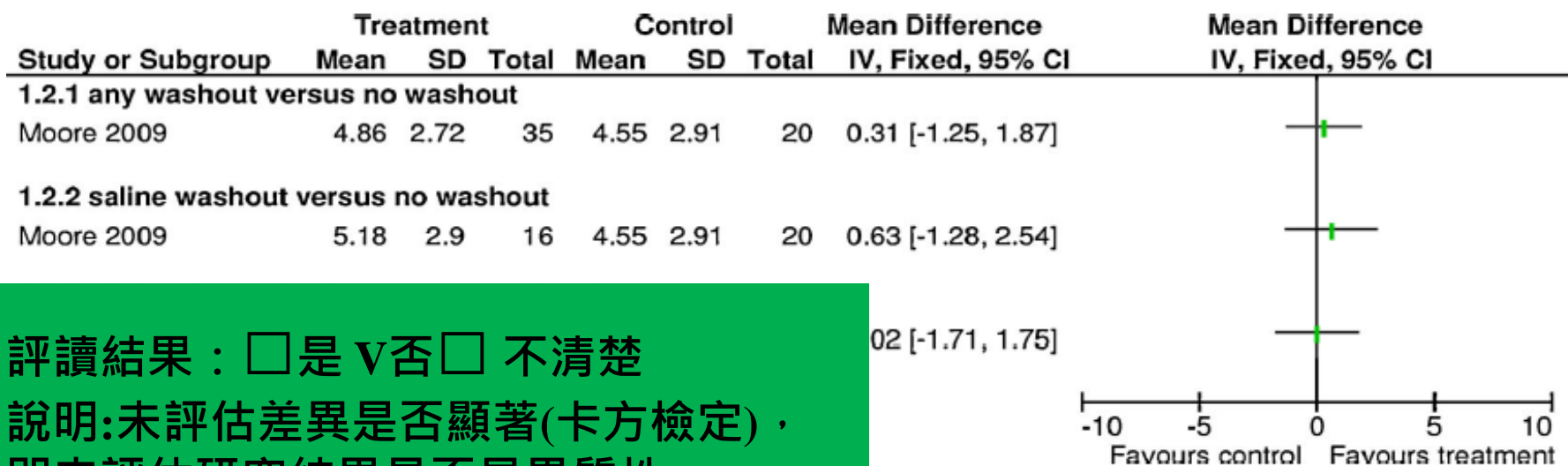
步驟 2：系統性文獻回顧的品質如何

H - 試驗的結果是否相近 - 異質性 (Heterogeneity) ?

P1209

home, community) with an indwelling urethral or suprapubic catheter in place for more than 28 days. Data Collection and Analysis: Data were extracted by three reviewers independently and compared. Disagreements were resolved by discussion. Data were processed as described in the Cochrane Handbook. If the trial data were not fully reported, clarification was sought from the authors. For categorical outcomes, the numbers reporting an outcome were related to the numbers at risk in each group to derive a risk ratio (RR). For continuous outcomes, means, and standard deviations were used to derive weighted mean differences (WMD). No meta-analysis of study results was possible. Results: Five trials met the inclusion

P1210



評讀結果：□是 √否 □不清楚

說明:未評估差異是否顯著(卡方檢定),
即未評估研究結果是否具異質性

Conclusion

Implications for Practice

There is insufficient evidence from randomized controlled trials to guide clinical practice regarding all aspects of using washouts for long-term indwelling catheters. Therefore we do not know whether washouts convey any benefit or harm to patients using indwelling catheters in the long-term. Neither do we know, therefore, whether the associated costs are justified.

Conclusion

Implications for Research

Further trials are needed with larger sample sizes and rigorous methods which will address many questions that remain unanswered. Standardization of outcome measurement is necessary so that future trials can be compared and combined. Future trials should include a “no washout” arm as there is first a need for evidence regarding whether catheter washouts compared to no washout are beneficial. Other variables that may influence outcome, and which could be allowed for in the design of future trials, include baseline characteristics of urine (e.g., acidity), condition of patient dictating the need for indwelling catheterization, and the patient’s fluid intake.

研究結果及臨床應用之討論

- 目前長照個案，執行膀胱沖洗技術仍可申請給付
- 有些醫師不建議執行膀胱沖洗技術，顧慮若個案有泌尿道感染，會因此造成細菌沿著輸尿管逆行至腎臟，反而造成感染源擴散
- 目前實證資料顯示，若個案無泌尿道感染症狀，不建議定期更換導尿管
- 長期導尿管留置個案，尿液中若有沉澱物，並不一定有感染，有可能是結石等其他因素，故應先確認導因，再考量是否需使用抗生素
- 臨床中，每次置入導尿管後，建議可先按摩膀胱，以協助將膀胱內餘尿及沉澱物排出，有助於降低泌尿道感染及導尿管阻塞現象？

討論

- 長期導尿管留置個案，若出現尿液中有沉澱物，是否建議進行膀胱沖洗，以減少導尿管阻塞？



■ 0人同意
■ 12人懷疑
■ 2人不同意

THANK
YOU

