



Complete Summary

GUIDELINE TITLE

Monitoring patients on peritoneal dialysis.

BIBLIOGRAPHIC SOURCE(S)

Monitoring patients on peritoneal dialysis. Nephrology 2005 Oct;10(S4):S86-8.

Monitoring patients on peritoneal dialysis. Westmead NSW (Australia): CARI - Caring for Australians with Renal Impairment; 2005 Jul. 6 p. [1 reference]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT
CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY
DISCLAIMER

SCOPE

DISEASE/CONDITION(S)

End-stage kidney disease (ESKD)

GUIDELINE CATEGORY

Evaluation
Management
Treatment

CLINICAL SPECIALTY

Nephrology
Nursing

INTENDED USERS

Nurses
Physicians

GUIDELINE OBJECTIVE(S)

To review the available evidence for benefit of regular monitoring patients on peritoneal dialysis

TARGET POPULATION

Patients with end-stage kidney disease (ESKD) on peritoneal dialysis

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation

1. Monitoring after commencement of dialysis
 - Total weekly Kt/V_{urea}
 - Creatinine clearance (C_{cr})
 - Peritoneal equilibration test (PET)
2. Repeat monitoring
 - Residual renal $Kt/V_{C_{cr}}$ and measurements
 - Repeat weekly Kt/V_{urea} and C_{cr} measurements
 - PET measurements
3. Clinical assessment
4. Plasma urea, creatinine, electrolytes measurements

Management/Treatment

Peritoneal dialysis

- Small solute clearance targets

MAJOR OUTCOMES CONSIDERED

- Dialysis adequacy
 - Urea clearance (Kt/V)
 - Creatinine clearance
 - Serum creatinine
 - Serum electrolytes
- Morbidity

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Databases searched: Medical Subject Headings (MeSH) terms and text words for peritoneal dialysis were combined with text words for renal clearance, peritoneal clearance, small solute clearance, creatinine clearance and peritoneal equilibration test and then combined with the Cochrane highly sensitive search strategy for randomised controlled trials. The search was carried out in Medline (1966 – October Week 2 2003). The Cochrane Renal Group Trials Register was also searched for trials not indexed in Medline.

Date of searches: 18 November 2003; 25 November 2003.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

Level I: Evidence obtained from a systematic review of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from at least one properly designed RCT

Level III: Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method); comparative studies with concurrent controls and allocation not randomized, cohort studies, case-control studies, interrupted time series with a control group; comparative studies with historical control, two or more single arm studies, interrupted time series without a parallel control group

Level IV: Evidence obtained from case series, either post-test or pretest/post-test

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Recommendations of Others. Recommendations regarding monitoring patients on peritoneal dialysis from the following groups were discussed: Kidney Disease Outcomes Quality Initiative, British Renal Association, Canadian Society of Nephrology, and European Best Practice Guidelines.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the levels of evidence (I-IV) can be found at the end of the "Major Recommendations" field.

Guidelines

No recommendations possible based on Level I or II evidence

Suggestions for Clinical Care

(Suggestions are based on Level III and IV sources)

- Total (peritoneal plus residual renal) weekly Kt/V_{urea} and creatinine clearance (C_{cr}) measurement and a peritoneal equilibration test (PET) should be performed approximately 4 weeks after dialysis commencement, but no sooner than 2 weeks after dialysis commencement because of unstable peritoneal permeability at this stage (*Level III evidence*).
- Residual renal Kt/V and C_{cr} measurements should be repeated at the following times:

- i. Every 2 months in automated peritoneal dialysis (APD) patients and every 4–6 months in continuous ambulatory peritoneal dialysis (CAPD) patients who are dependent on residual renal function to achieve small solute clearance targets, particularly those with a small 'safety margin' (e.g., patients treated with 'incremental' rather than 'full-dose' peritoneal dialysis)
 - ii. Following a history of a substantial decline in urine output
 - iii. Following unexplained fluid overload
 - iv. With clinical or biochemical evidence of worsening uraemia
- Total (peritoneal plus residual renal) weekly Kt/V_{urea} and C_{cr} measurements should be repeated at the following times:
 - i. Every 6 months as a routine measure
 - ii. With clinical or biochemical evidence of worsening uraemia
 - iii. Within 4 weeks of any alteration in peritoneal dialysis (PD) prescription
- Measurements of clearance in PD patients should be interpreted in light of a patient's clinical status, giving attention to the possibilities of patient noncompliance and errors in sample collection or laboratory measurement.
- PETs should be repeated annually or if there is clinical evidence of a change in transport status (e.g., a clinically significant decrease in ultrafiltration or unexplained fluid overload).
- Patients should have clinical assessments and measurements of plasma urea, creatinine and electrolytes every 2 months.

Definitions:

Levels of Evidence

Level I: Evidence obtained from a systematic review of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from at least one properly designed RCT

Level III: Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method); comparative studies with concurrent controls and allocation not randomized, cohort studies, case-control studies, interrupted time series with a control group; comparative studies with historical control, two or more single arm studies, interrupted time series without a parallel control group

Level IV: Evidence obtained from case series, either post-test or pretest/post-test

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate management of patients with end-stage kidney disease (ESKD) on peritoneal dialysis

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Implementation and audit

Measurement of peritoneal and renal Kt/V and creatinine clearance (C_{cr}) on a 6-monthly basis and reporting of results to the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA) should be encouraged.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005 Oct

GUIDELINE DEVELOPER(S)

Caring for Australasians with Renal Impairment - Disease Specific Society

SOURCE(S) OF FUNDING

Industry-sponsored funding administered through Kidney Health Australia

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Authors: David Harris, Convenor (Westmead, New South Wales); Merlin Thomas (Pahran, Victoria); David Johnson (Woolloongabba, Queensland); Kathy Nicholls (Parkville, Victoria); Adrian Gillin (Camperdown, New South Wales)

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

All guideline writers are required to fill out a declaration of conflict of interest.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [Caring for Australasians with Renal Impairment Web site](#).

Print copies: Available from Caring for Australasians with Renal Impairment, Locked Bag 4001, Centre for Kidney Research, Westmead NSW, Australia 2145

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- The CARI guidelines. A guide for writers. Caring for Australasians with Renal Impairment. 2006 May. 6 p.

Electronic copies: Available from the [Caring for Australasians with Renal Impairment \(CARI\) Web site](#).

PATIENT RESOURCES

None available

NGC STATUS

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