Sigma's 29th International Nursing Research Congress

Does Baking Soda Slow the Progression of Chronic Kidney Disease?

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Purpose: Chronic Kidney Disease is a common referred to the “silent killer”. People with Chronic Kidney Disease are unaware that they have Chronic Kidney Disease until the disease progresses to the latent stages of the disease. Lower levels of serum sodium bicarbonate are shown to increase the progression of Chronic Kidney Disease. Development of treatment guidelines for the use of sodium bicarbonate as prevention of advancement of Chronic Kidney Disease is needed for this large population. The research question proposed is “Does oral sodium bicarbonate prevent the progression of Chronic Kidney Disease?”

Methods: An integrative research review of the literature was conducted. Cochrane Library, CINAHL Plus Full Text, MEDLINE Complete, HealthSource: Nursing/Academic Edition, and PubMed were searched using the terms: “sodium bicarbonate” and “chronic kidney disease”. The search included results from 2012-2017. Inclusion criteria included sodium bicarbonate as treatment option for Chronic Kidney Disease. Literature was excluded for treatments including contrast induced nephropathy or care for End Stage Renal Disease. Data were synthesized to evaluate quality and the level of evidence, using an Evidence Hierarchy.

Results: Findings were synthesized for comparative analysis of results. Eighty-three articles were initially identified. Twenty-one articles met the study inclusion criteria. One Cochrane review and one systematic review were found and determined to be level one evidence. Three randomized control trials considered level two evidence. Three quasi-experimental studies and one expert consensus clinical guideline used were considered level four evidence. Two Integrated research reviews were considered level five. Five Literature reviews two editorial reviews and three study protocols were considered level six.

Conclusion: Research suggests that sodium bicarbonate is an effective treatment for slowing the progression of Chronic Kidney Disease. However, there is a need for the larger randomized control trials to determine when to initiate treatment, dosage, and the therapeutic level of serum sodium bicarbonate for optimal care of the Chronic Kidney Disease**.**

Title:
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Keywords:
Chronic Kidney Disease, Progression and Sodium Bicarbonate

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Abstract Summary:
Chronic Kidney disease is a silent killer that progresses quickly if left untreated. Evidence suggests sodium bicarbonate slows the progression of CKD but further random control trial testing is needed. An integrative research review was completed to synthesize the current evidence on sodium bicarbonate and the progression of CKD.

Content Outline:

- Background and Significance of Chronic Kidney Disease (CDK)
    - Global incidence of CDK
    - Disease progression
    - Current treatment modalities
- Methodology
    - Integrative research review methodology
    - Keywords used in search strategy for CDK
    - Databases, years searched, inclusion and exclusion criteria
    - PRISMA Flow Diagram of search strategy
- Findings
    - 83 articles meeting study inclusions criteria
    - Procedure for evaluating the level of evidence informing CDK
    - Synthesis of evidence
    - Recommendations for nursing practice

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