1. Case/problem
ARF in healthy elderly F pt after tobramycin-impregnated cement spacer implantation in hip infections; incidence of ARF with use antibiotic-impregnated spacers?

2. how article was found
antibiotic cement, renal failure

3. a) Study description: a single center/university-based retrospective cohort study assessing complication (other than infection) rate during surgical treatment of hip infections
   b) Research question: incidence of complications (other than infection) with use of antibiotic spacer during two-stage surgical treatment of hip infections

4. relation to question/importance
incidence of renal failure as a complication of antibiotic spacer implantation

5. methods
population: 88 hip spacer implantations (82 pts with hip infection) at single center between 1999 and 2008; 43M + 39F; mean age 70 (43-89)
intervention/exposure: antibiotic spacer implantation (time 90[14-1460] days) + 4 weeks IV followed by 2 weeks oral antibiotics in surgical treatment of hip infections (table I)
Comparison/control: none
Outcome: complications other than infection (stage I or II dislocation, fracture, renal/hepatic/oto-toxicity, adverse reactions, general post-op complication, e.g., PNA)

6. Critical appraisal questions
Patients not randomized/no controls

7. primary results summary
Overall complication rate: 48/82 (58.5%)
Acute renal failure: 5/82 (6%)
Liver or oto-toxicity: none
Allergic reactions: 2/82 (2.4%)

Mechanical
Spacer dislocations: 15/88 (15%)
Spacer fractures: 9/88 (10.2%)
Femoral fractures: 12/88 (13.6%)
Prosthesis dislocation: 16 cases (23%)

8. applicability to case
appropriate population
similar intervention/exposure
retrospective; not RCT
correlation not causation
small sample size
single center

9. my recommendation
Monitor renal function regularly and drug levels where possible until IV antibiotics completed