The article entitled "Renal effects of NSAIDs in albino rats: a comparative study" examines renal and hepatic toxicity of NSAIDs in rats. Although the data is not new, the subject is very important especially in view of widespread use of these drugs. I think that the paper should be accepted for publication after revision.

Comments:

1. I propose to change the name to "Renal and hepatic effects of non-steroidal anti-inflammatory drugs in albino rats."

2. Introduction:
   a) Authors should distinguish between different clinical syndromes caused by NSAIDs toxicity: acute renal failure, chronic renal failure, nephrotic syndrome, papillary necrosis. Differences between acute and chronic use need to be explained. Short-term and long-term outcomes of NSAIDs use should be discussed either in "Introduction" section or in Discussion.
   b) There are several mechanisms by which NSAIDs may cause kidney damage; authors mention only one of them: unopposed renal vasoconstriction due to inhibition of prostaglandin secretion resulting in ischemic form of ATN. Other mechanisms should be discussed including inflammation of tubulointerstitium (interstitial nephritis-acute and chronic), toxic effect on tubular metabolism (toxic ATN) and glomerular damage (minimal change disease and membranous nephropathy).
   c) Pre-existing data on the effects of NSAIDs in animals should be summarized. There are several reports on this issue, for example, Abatan MO et.al,2006 published in African Journal of Biomedical research, Vol.9, pp 219-223.

Materials and Methods

1. The authors declared that the animals were handled in accordance with international guidelines, but there is no statement regarding approval of the study by institutional ethic committee for experiments in animals.

2. Was the urine tested for protein, erythrocytes, sodium and uric acid?

   It is important to examine urine samples since NSAIDs may cause proteinuria as well as tubular damage resulting in abnormal (increased) fractional excretion of sodium and other electrolytes.

3. Was kidney biopsy performed? Since there are several possible mechanisms of renal injury caused by NSAIDs, it would be important to have histological analysis of renal tissue.

4. It's a pity that the animals were sacrificed immediately after discontinuation of NSAIDs administration, because it would be very interesting to find out whether the toxic effects of the drugs are transient.

Discussion

1. Lines 184-185:
a) It is important to emphasize that NSAIDs may cause renal toxicity not only in patients with known risk factors but in healthy individuals as well, especially in presence of hypovolemia (even mild and not always clinically evident). Ref. Krause I et.al, 2005 published in Pediatric Neprology, vol.2, pp 1295-1298.

b) Not only elderly patients are susceptible to NSAIDs renal toxicity but all patients with decreased effective blood volume due to dehydration, left heart failure, hypoalbuminemia or compromised renal perfusion due to renal arteries stenosis. Moreover use of NSAIDs in combination with medications that interfere with renal blood flow such as ACEI and calcineurin inhibitors is associated with greater risk for toxicity.

2. Lines 186-190

More detailed discussion of various mechanisms of kidney injury caused by NSAIDs should be provided (see remarks on Introduction).

3. Possible explanation of differences between various NSAIDs in regard to renal toxicity has to be provided.

4. Authors should discuss limitations of the study: lack of information regarding urinalysis and urine electrolytes, lack of tissue diagnosis, short-term follow-up

Note: Anonymous Reviewer