

INTISARI

PENGARUH PAKAN STANDAR TERHADAP HISTOPATOLOGIK GINJAL TIKUS DEWASA OSTEOPOROSIS YANG DIINDUKSI PAKAN FOSFOR TINGGI

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Penelitian ini bertujuan untuk mengetahui pengaruh pakan standar terhadap histopatologik ginjal tikus dewasa osteoporosis yang diinduksi pakan fosfor tinggi. Lima belas tikus Wistar umur 8 minggu secara acak dibagi menjadi tiga kelompok (N, OS_k, OS) masing-masing 5 tikus. Tikus kelompok N diberi pakan standar yang mempunyai kandungan protein 20%, Ca 0,6%, P 0,4%, sementara tikus OS_k dan OS diinduksi osteoporosis dengan diberi pakan fosfor tinggi yang mempunyai kandungan protein 20%, Ca 0,6%, P 2,4% dan air minum aquadestilata secara *ad libitum* selama 8 minggu. Delapan minggu pasca induksi osteoporosis, tikus OS_k tetap diberi pakan fosfor tinggi, sementara kelompok tikus N dan OS diberi pakan standar selama 5 minggu dan air minum aquadestilata secara *ad libitum*. Pada akhir penelitian, tikus dietansi, kemudian ginjal kanan diambil untuk pembuatan histopatologik dengan pewarnaan Hematoksin Eosin (HE). Hasil pemeriksaan histopatologik ginjal pada tikus N terlihat normal, ginjal tikus OS_k terlihat timbunan protein di dalam glomerulus dan tubulus konvolutus proksimal serta epitel tubulus konvolutus proksimal mengalami atrofi dan vakuolisasi. Ginjal tikus OS terlihat sedikit timbunan protein di dalam glomerulus dan tubulus konvolutus proksimal, serta pada epitel tubulus konvolutus proksimal mengalami penurunan jumlah atrofi dan vakuolisasi. Dari hasil pemeriksaan dapat disimpulkan konsumsi pakan standar selama 5 minggu pada tikus dewasa osteoporosis yang diinduksi pakan fosfor tinggi menyebabkan nefrosis akut lebih ringan.

Kata kunci: Ginjal, osteoporosis, pakan standar

ABSTRACT

THE EFFECT OF STANDARD FEED CONSUMPTION TOWARD THE RENAL HISTOPATHOLOGY OF ADULT RAT WITH OSTEOPOROSIS WHO WERE INDUCED WITH HIGH PHOSPHORUS FEED

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This research was aimed to study the effect of standard feed consumption toward the renal histopathology of adult rat with osteoporosis who were induced with high phosphorus feed. Fifteen Wistar rats at the age of 8 weeks were randomly divided into three groups (N, OS_k, OS) with 5 rats each group. Rats in group N were given standard feed containing protein 20%, Ca 0.6%, P 0,4%, while rats in group OS_k and OS were induced with osteoporosis by giving highly phosphorus feed containing protein 20%, Ca 0.6%, P 2.4% and aquadestilata drinking water *ad libitum* for 8 weeks. After 8 weeks, rats in group OS_k were still given the high phosphorus feed, while rats in group N and OS were given standard feed for 5 weeks and aquadestilata drinking water *ad libitum*. At the end of the research, the rats were performed euthanasia, then the right kidney were taken for histopathological analysis using Hematoksilin Eosin (HE) staining. Renal histopathology examination results in rat group N showed normal, rat group OS_k showed protein heap in glomerulus and proximal convolute tubules, furthermore in epithel of proximal convolute tubules showed atrophy and vacuolization. Kidney of rats in group OS showed a little heap of protein in glomerulus and proximal convolute tubules, and in epithel of proximal convolute tubules showed decreased the amount of atrophy amount and vacuolization. Based on the results of the examination it could be concluded that the consumption of standard feed for 5 weeks on adult rat with osteoporosis who were induced with high phosphorus feed caused mild acute nephrosis.

Keywords: Kidney, osteoporosis, standard feed