

INTISARI

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

Anastasya Rana Putri

Penelitian ini bertujuan untuk mengetahui pengaruh pemberian pakan standar terhadap histopatologik kelenjar paratiroid tikus dewasa osteoporosis yang diinduksi pakan fosfor tinggi. Limabelas tikus Wistar betina umur delapan minggu dibagi menjadi tiga kelompok (N, OS_k, OS) masing-masing lima tikus. Dua minggu setelah adaptasi dilakukan induksi osteoporosis, tikus kelompok N diberi pakan standar dengan kandungan protein 20%, Ca 0,6%, P 0,4% sedangkan tikus kelompok OS_k dan OS diberi pakan fosfor tinggi dengan kandungan protein 20%, Ca 0,6%, P 2,4% selama delapan minggu dan air minum aquadestilata secara *ad libitum*. Pasca induksi osteoporosis, tikus kelompok OS_k tetap diberi pakan fosfor tinggi, sedangkan kelompok tikus kelompok N dan OS diberi pakan standar selama lima minggu dan air minum aquadestilata secara *ad libitum*. Pada akhir penelitian, tikus dieutanasi, kelenjar paratiroid diambil untuk pemeriksaan histopatologik. Hasil pemeriksaan histopatologik kelenjar paratiroid tikus kelompok N tidak terlihat perubahan (normal) dan dalam keadaan tidak aktif yang ditandai inti sel relatif besar, sel prinsipal dan sitoplasma terang, sedangkan pada tikus kelompok OS_k terlihat ada peningkatan aktivitas kelenjar paratiroid yang ditandai sitoplasma gelap, inti sel kecil, sel prinsipal gelap dan hipertrofi. Sementara hasil pemeriksaan histopatologik kelenjar paratiroid tikus kelompok OS terlihat aktivitas kembali normal yang ditandai dengan adanya sel prinsipal yang terang dan gelap disertai sedikit hipertrofi. Berdasarkan hasil penelitian disimpulkan bahwa pemberian pakan standar selama lima minggu pada tikus dewasa osteoporosis berpengaruh menurunkan aktivitas kelenjar paratiroid.

Kata kunci: Kelenjar paratiroid, osteoporosis, pakan standar.

ABSTRACT

INFLUENCE OF STANDARD FEED AGAINST PARATHYROID GLANDS HISTOPATHOLOGIC OF ADULT RAT OSTEOPOROSIS THAT INDUCED HIGH-PHOSPHORUS FEED

Anastasya Rana Putri

The purpose of this study is to determine the effect of standard feeding on histopathologic of parathyroid glands in osteoporosis adult rat induced by high phosphorus feed. Fifteen 8 weeks old Wistar rats were randomly divided into three groups (N, OS_k, OS), each group consist of 5 rats. Two weeks after adaptation, rats were inducted osteoporosis, group of rats N were fed using standard feed that contains 20% of proteins, 0.6% Ca, 0.4% P, while group of rats OS_k and OS were consistently fed by using high phosphorus feed that contains 20% of proteins, 0.6% Ca, and 2.4% P for eight weeks and aquadestilata was given ad libitum. After induction of osteoporosis, group of rats OS_k constantly fed by using high phosphorus feed, whereas group of rats N and OS were fed using standard feed for five weeks and aquadestilata was given ad libitum. At the end of this study, the rat was euthanized and parathyroid glands was taken for histopathologic examination. The histopathologic result for group of rats N was normal and inactive showed by nucleus relatively large, principal cell and cytoplasm was bright, while group of rats OS_k the activity of parathyroid glands was increase showed by dark cytoplasm, small nucleus, and principal cell was bright and hypertrophy. Whereas the result for group of rats OS the activity of parathyroid glands was back normal showed by dark and bright principal cell with few hypertropic cell. Based of the results of the examination can be concluded that the standard feeding for five weeks in osteoporosis rats can cause the activity of parathyroid glands decreased.

Key words: Parathyroid glands, osteoporosis, standard feed.