

INTISARI

Tujuan penelitian ini adalah untuk mengungkapkan spektrum efek toksik perasan umbi wortel pada organ lambung dan usus halus, hubungan antara dosis dan spektrum efek toksik yang terjadi serta keterbalikan sifat efek toksik.

Penelitian ini menggunakan metode eksperimental murni rancangan acak lengkap pola searah. Enam puluh ekor tikus putih jantan dan betina dibagi acak dalam 5 kelompok perlakuan. Kelompok I merupakan kelompok kontrol aquadest dosis 53,32 ml/kg BB, kelompok II, III, IV, dan V merupakan kelompok perlakuan perasan umbi wortel dengan dosis berturut-turut 3,41 ml/kg BB; 8,53 ml/kg BB; 21,33 ml/kg BB, dan 53,32 ml/kg BB. Kekekapan pemberian sekali sehari selama 14 hari. Pada hari ke-15, 3 ekor tikus putih dari masing-masing kelompok diambil secara acak dan dikorbankan. Diambil organ lambung dan usus halusnya, ditimbang dan dibuat preparat histologis. Sisa tikus yang masih hidup dipelihara tanpa perlakuan perasan umbi wortel selama 14 hari. Pada hari ke-15, dikorbankan dan diperlakukan seperti diatas.

Hasil pemeriksaan histologis menunjukkan bahwa perasan umbi wortel dosis 3,41 ml/kg BB; 8,53 ml/kg BB; 21,33 ml/kg BB; dan 53,32 ml/kg BB memiliki efek toksik terhadap organ lambung berupa erosi epitel dan peradangan. Perasan umbi wortel tidak mempengaruhi terjadinya kerusakan pada organ usus halus. Tidak ada kekerabatan antara dosis perasan umbi wortel dengan besarnya efek toksik yang terjadi pada lambung, serta efek toksik yang terjadi bersifat dapat berpulih kembali.

Kata kunci: umbi wortel, toksisitas, subkronis, lambung, usus halus

ABSTRACT

The research's aimed to know the toxic effect spectrum of squeezed juice of carrot tuber on rat's stomach and small intestine histology, the relation between dose and toxic effect which happen, and to evaluate the reversibility of toxic effect.

The research is pure experimental with completely randomized design one direction. Sixty male and female rat were devided randomly into five groups. Group I as aquadest control dose 53,32 ml/kg BB, group II, II, IV, and V, as groups were given squeezed juice of carrot tuber with doses 3,413 ml/kg BB; 8,53 ml/kg BB; 21,33 ml/kg BB, and 53,32 ml/kg BB. The giving of squeezed juice of carrot tuber werw done once a day during fourteen days. On Fifhtteen day, three rats from each group were taken randomly, then the rat sacrificed. Their stomach and small intestine were taken to be made histologycal blood smear. The member of group that still alive were cared without treatment of squeezed juice of carrot tuber for fourteen days, after fifhtteen day all rat were sacrificed, then the same procedure at treatment were done.

The result of this research showed that squeezed juice of carrot tuber doses 3,41 ml/kg BB; 8,53 ml/kg BB; 21,33 ml/kg BB and 53,32 ml/kg BB can cause toxic effect on stomach's rat (erotion on epitel and inflammation). The squeezed juice of carrot tuber isn't cause toxic effect on small intestine's rat. There is no relation between dose and toxic effec on stomach's rat, and the toxic effect is reversible.

Keywords: carrot tuber, toxicities, subchronic, stomach, small intestine