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The comparison of the effects of hepatic regeneration after partial hepatectomy, silybum marinaum, propofol, N-acetylcysteine and vitamin E on liver.

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Abstract

AIM: We investigated the comparison of the effects of N-acetylcysteine, **silybum** marinaum, propofol, and vitamin E on **liver** hepatic regeneration after partial hepatectomy.

METHOD: Forty-eight rats were randomized into 6 different groups of the same age and weight. After partial hepatectomy, all animals were resuscitated with 5 ml of isotonic sodium chloride solution administered subcutaneously while group 1 (sham) did not receive any injection, group 2 (control) received serum physiologic intraperitoneally, group 3 received 25 mg /kg of propofol intraperitoneally, group 4 received 20 mg/kg of N-acetylcysteine intraperitoneally, group 5 received 400 mg/kg of vitamin E intraperitoneally, and group 6 received 10 mg/kg of **silybum** intraperitoneally. None of these groups were given antibitotics. On the third day, a half of the rats, and on the seventh day, the other half of rats were reoperated and sacrificed.

RESULTS: Blood samples were used for biochemical parameters (AST, ALT). Ki-67 proliferation index was used for histopathologic parameters. A statistically meaningful difference was detected in **silybum**, vitamin E, N-acetylcysteine, and propofol groups for AST, ALT levels when compared to control and sham groups ($p<0.05$). Ki-67 regeneration proliferation index of all groups, which were given agents on the third and seventh days were statistically higher than the control and sham groups ($p<0.05$). During the evaluation, AST, ALT, Ki-67, Ro (regeneration value) levels of **silybum** group displayed a statistically significant difference according to other groups ($p<0.05$).

CONCLUSION: Our experimental study indicates that hepatic regeneration after partial hepatectomy was meaningful and significant in groups with intraperitoneal administration of **silybum** marinaum,vitamin E, N-acetylcysteine and propofol. Hepatic regeneration rate was particularly higher in **silybum** group compared to other groups (Fig. 16, Ref. 26).

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Publication Types, MeSH Terms, Substances

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