نخستین همایش ملی کاربرد مدل های حیوانی
درپژوهش های تجربی پزشکی

مجموعه خلاصه مقالات

نخستین همایش ملی کاربرد مدل های حیوانی در پژوهش های تجربی پزشکی

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شیراز

Establishment of secondary heart Iron Overloaded Model in Sprague rat

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Objective: Secondary iron overload is one of complication of Periodic blood transfusion in patients with hematologic diseases. Iron overload can result in iron deposition in heart tissue, which decreases cardiac function, ultimately lead to death due to dilated cardiomyopathy and cardiac failure. Therefore, in this project, we established Rat model of secondary iron overload. This study can serve as an animal model for more investigations in the treatment of patients with cardiac iron overload.
Methods: In this work, we developed an experimental secondary iron overload model in rats by using iron sucrose injection. Sixteen animals were divided into two equal groups and treated with dose of iron sucrose : 75mg/kg body weight per day via injection for 12 consecutive days and Heart histopathology and iron overload was evaluated.
Result: Our histopathology findings in heart of all iron treated animals showed the deposition of iron to the cumulated iron dose.
Conclusion: Developing an appropriate animal's model best suited for the iron overload in-vivo study undertaken can reveal the pathogenesis of iron overload in heart. Hence, our data provides in-vivo evidence of iron overload may be useful for iron sucrose therapy, for iron deficiency anemia as well as for the prevention and diagnosis of iron sucrose-induced iron overload in pediatric patients.
Keyword: Iron overload, heart, animal model