To delay the process of blood coagulation using electrolysis technique in sheep

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The aim of this study was to evaluate the impact of electrolysis technique on blood coagulation process (BCP), hematological and biochemical parameters involved in BCP. A healthy ram was used as the experimental model. The ram were kept in order to spending adaptation period respecting to animal rights. Initial tests confirmed the health of BCP. Then blood samples were obtained from the jugular vein every 14 days. Each time, 10 ml were poured in a container made up of polypropylene polymers immediately. Using an electrical power supply and two pieces of platinum as the non reactive electrodes, a range of 500 to 800 mV electric charges were induced. At the same time 10 ml of blood was poured in another container as control sample. The remaining blood was divided into three tubes; EDTA, Citrate and tube without anticoagulant for hematological tests. During the electrolysis, BCP were examined using capillary tube every 30 seconds in both containers. After 12 minutes and 40 seconds, control blood clotted while the blood of electrolysis container (EC) did not clot 30 minutes after that. Partial Thromboplastin Time and Prothrombin Time increased significantly. Prothrombin activity, calcium, fibrinogen and total protein decreased. Other factors also confirmed the delay in BCP. Although BCP was delayed but macroscopic features of the blood was downgraded. In order to reaching more details, complementary experiments are needed.

Biography
Alireza Jahanbani has completed DVM from Islamic Azad University, Iran. He is a Member of Iranian Young Researcher Club since 2008 and a Member of Iran Biochemistry Association since 2010. He has published 6 papers and authored 6 books.

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