

## عنوان مقاله:

Effect of cobalt nano-particles on serum biochemical and histopathological changes in liver and kidney of lambs

## محل انتشار:

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## خلاصه مقاله:

Cobalt is an essential co-factor in red blood cell production and function and its deficiency may produce clinical signs in sheep. Thus, present study was designed to evaluate the effect of cobalt nano-particles on serum biochemical factors and histopathological changes in liver and kidneys of lambs. Study was carried out in 3 groups of lambs (4 lambs per group). One group of lambs was kept as control group. Second and third group respectively received cobalt nano-particles and conventional cobalt chloride suspension daily for a period 25 day. Blood sample and then serum was collected before and at the end of study. Activity of ALT, AST, ALP and level of BUN, creatinine and vitamin B12 were measured in serum of lambs. Tissue sections of liver and kidney were stained with hematoxylin and eosin and examined by light microscopy. Activity of ALT, BUN and vitamin B12 was significantly increased by cobalt nano-particles and conventional cobalt chloride. Fatty change of hepatocytes occurred by conventional cobalt and granulomatous hepatitis, focal necrosis of hepatocytes and degeneration of hepatocytes by the nano cobalt was identified in liver. There were not any significant lesions and alteration in the kidneys of treated groups. Thus, cobalt nano-particles have similar effect to conventional cobalt for using in sheep with cobalt deficiency

## کلمات کلیدی:

Cobalt nano-particles, hepatotoxicity, renal toxicity, lamb

## لینک ثابت مقاله در پایگاه سیویلیکا:

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