

عنوان مقاله:

Osteochondrosis dissecans (OCD) in horses: hormonal and biochemical study (۱۹ cases)

محل انتشار:

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خلاصه مقاله:

To investigate the hormonal and biochemical profiles of horses with osteochondrosis dissecans (OCD), serum insulin, cortisol, triiodothyronine, thyroxine, fasting blood glucose (FBG), cholesterol, triglyceride (TG), high- and low-density lipoproteins, albumin and uric acid were measured in horses definitely diagnosed with OCD (n=۱۹) as well as clinically normal horses (n=۱۸). Proxies representing insulin sensitivity [reciprocal of square root of insulin concentration (RISQI)] and beta cell responsiveness [modified insulin to glucose ratio (MIRG)] were calculated. Body fat percent (BF%) was estimated according to fat depth over the rump using ultrasonography. Body condition score (BCS), weight, and waist circumference were also determined. Glucose was significantly higher and MIRG, BCS, BF% and TG were significantly lower in OCD- horses compared to control group. Based on BCS scores, horses in control group were overweight. The results of the present study, higher FBG and lower MIRG, might implicate the existence of a footmark of insulin/glucose derangement. The body mass index and muscle mass were not measured in this study; nonetheless, a lower BF% might implicate a higher body muscle mass in OCD affected horses, which were comparably underweight compared to control group. While insulin resistance does also occur in human individuals and horses with lower BF%, horses with higher muscle mass may show greater potential for exercise, which in turn, exerts greater physical pressure on cartilages. An underlying hormonal predisposition could make these horses more prone to OCD, originally triggered by mechanical pressures.

کلمات کلیدی:

cortisol, Horse, Insulin-proxies, Osteochondrosis dissecans

