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INTRAARTICULAR PLATELET RICH PLASMA (PRP) THERAPY:
EVALUATION IN 42 SPORT HORSES WITH OA

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Introduction: Scientific evidence exists validating the in vitro efficacy of PRP on chondrocyte metabolism. A few clinical reports have shown beneficial effects in joints treated with PRP with no adverse effects. Objectives: a) To assess the clinical progression of OA treated by intraarticular injection of PRP. Materials and methods: 42 sport horses (24 trotters, 4 dressage, 2 show-jumpers, and 12 general purpose) were included in the study and divided into 2 groups: Group 1: 12 horses, all with chronic histories with a well defined clinical problem, were considered as controls as they had not responded to rest and intraarticular steroid injection. Group 2: 30 horses with both acute (10 cases) and chronic conditions (20 cases). Complete lameness examination including diagnostic nerve and joint blocks and radiography were performed. Horses were classified according to chronicity of clinical disease and classical radiographic findings indicative of OA. All patients were reexamined before each treatment and at 45 days, 2 months and 4 months following treatment. Follow-up was from one year up to 3 and a half years. Preparation of PRP was done by manual double centrifugation A paired Student’s t test was used to compare the progression of lameness before and after treatment and an ANOVA was used to determine the influence of the factors “radiographic changes”, “chronicity” and “number of PRP doses”. Results: In the first group of 12 horses with chronic lesions (used as controls), 75% (9/12) went back to previous athletic performance and of these, 33% (3/9) relapsed while in competition. In the group of 30 horses (10 acute lesions and 20 chronic lesions), 70% (21/30) regained previous athletic level and 9.5% (2/21) relapsed. Discussion: The results of this clinical study support the use of intrarticular PRP for regenerative joint therapy. There was a negative effect of the factor “chronicity” (P<0.019) and factor “radiographic changes” (P<0.021) on athletic prognosis that is the more chronic the history and more severe the radiographic signs the more guarded was the prognosis. There was a significant difference (p<0.005) between 1 or more doses but not between 2 or 3 doses (p<0.532) of PRP on final outcome. Conclusions: Intra-articular PRP is a safe, effective, simple treatment that alleviates joint pain as evidenced by lameness examination and clinical
variables in horses with OA.