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IMMUNE AND HEMATOLOGICAL CHARACTERISTICS OF 2016 OLYMPIC CHAMPION SHOOTING ATHLETE: A CASE STUDY INVESTIGATION IN TRANSITION PERIOD TRAINING

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KEYWORDS: Immune, hematologic, shooting, athlete, shooter, transition period training

The purpose of this study was to investigate the immune and hematological characteristics of the Vietnamese shooter who won gold medal in Olympic Rio 2016. The subject is a champion in 10m air pistol (60 shots) men. He practiced 4 weeks after returning from Rio 2016 as transition period before starting new circle training. Blood was taken in the morning before meals at the end of transition period. Blood chemistry included white blood cell (WBC), red blood cell (RBC), hemoglobin concentration (Hb), hematocrit (Hct), mean corpuscular volume (MCV), mean hemoglobin content (MCH), mean corpuscular hemoglobin content (MCHC), platelets (PLT), and testosterone hormone, cortisol hormone, metanephrine/plasma were analyzed. The results show that almost indicator were in normal range: WBC 6.37×10^9 L; PLT 208×10^9 L, Hb 17.0g/dL, Hct 47.8%, MCV 83.9fL, MCH 29.8 pg, MCHC 35.6g/dL, except RBC 5.7×10^9 L was slightly higher than normal range ($3.8 - 5.6 \times 10^9$ L). Eventhough the athletes was 42 years old but his hormon and metabolic system were still in good condition. Compared to baseline values, testosterone 499.4ng/dL, cortisol 9.2µg/dL, adrenaline 65.0pg/ml, metanephrine/plasma 57.26pg/mL were in normal range. This results demonstrated that elite shooter have a good response in immune and metabolic system. Training hard with the stress of focus and static strength has positive effects to shooting athlete and it still maintained a good response even during the transition period.

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