

Comparative study of rabies antibody titers of dogs vaccinated in Finland and imported street dogs vaccinated abroad

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Abstract

Seventy-two canine serum samples were analyzed for post-vaccination serum titers of rabies antibodies. The samples were divided into two groups: Group 1 dogs (n = 36) were imported dogs from the Russian Federation (n = 31) or Romania (n = 5), with a mean serum antibody titer value of 1.54 IU/mL. Group 2 dogs (n = 36) were Finnish dogs vaccinated in Finland, with a mean titer of 4.19 IU/mL. Altogether, 14 (39%) dogs (CI 95% 23-56) were without detectable antibodies (≤ 0.1 IU/mL) in Group 1, whereas in Group 2, all dogs had an antibody titer greater than 0.1 IU/mL. A statistically significant difference was observed between these groups when comparing the proportions of dogs with antibody levels less than or exceeding 0.5 IU/mL. In Group 1, 19 out of the 36 dogs (CI 95% 36-70) had serum titer values < 0.5 IU/mL, while in Group 2, only 2 dogs had serum titer values < 0.5 IU/mL. Despite the small sample size, this raises concern over the imported dogs having insufficient antibody levels required for international travel and implies that these dogs had perhaps not been vaccinated, even though they had documentation of vaccination upon arrival.

Keywords: Antibody; Canine distemper; Import; Prophylaxis; Rabies; Street dogs; Vaccination.

從俄羅斯聯邦(n = 31)與羅馬尼亞(n = 5)進口芬蘭的狗，合計共 36 隻；其中有 14 隻狗抗體力價小於 0.1 IU / mL，有 19 隻的血清力價小於 0.5 IU / mL，僅 3 隻大於 0.5 IU / mL(及格值)。而芬蘭犬僅 2 隻的血清力價小於 0.5 IU / mL(不及格)，其他均大於 0.5 IU / mL。這數據使芬蘭政府對防檢疫的擔憂：進口犬雖有疫苗接種證明，但也可能是假證明。

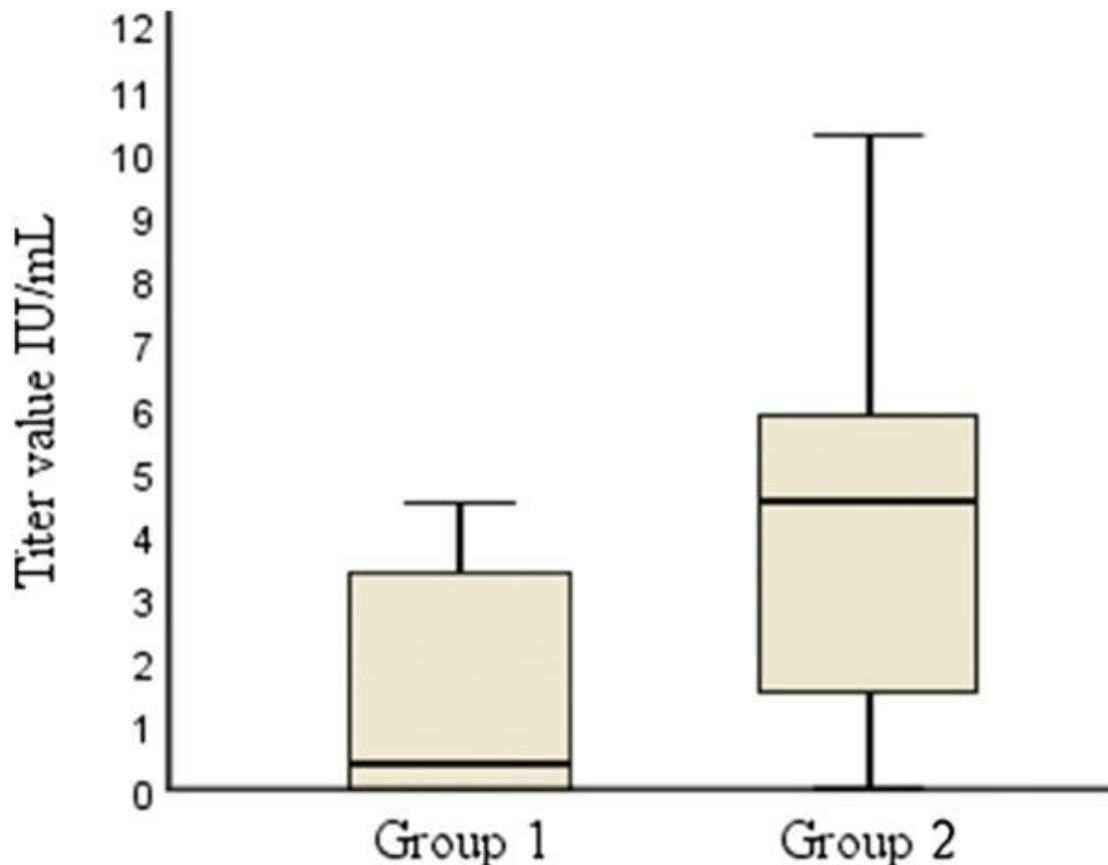


Fig. 1 Rabies vaccination titers in dogs vaccinated either in the Russian Federation or Romania (Group 1) or in Finland (Group 2). Median value for Group 1 is 0.35 IU/mL with a value range of 4.5 (0.0–4.5). Median value for Group 2 is 4.5 IU/mL with a value range of 10.20 (0.1–10.30) from: Acta Vet Scand. 2019 Mar 14;61(1):15. doi: 10.1186/s13028-019-0450-8.