

KOMPATIBILITAS *HUMAN SERUM ALBUMIN* (HSA) DAN REAKSI TRANSFUSI YANG DIHASILKAN PADA KUCING HIPOALBUMINEMIA

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INTISARI

Hipoalbuminemia dapat menyebabkan komplikasi umum pada sejumlah kasus penyakit dan berhubungan dengan peningkatan morbiditas dan mortalitas pada kucing. Penelitian ini bertujuan untuk mengetahui kompatibilitas *human serum albumin* (HSA) terkait dengan peningkatan kadar albumin dan total protein plasma (TPP) pada kucing hipoalbuminemia serta reaksi transfusi yang dihasilkan selama dan setelah pemberian infus HSA. Hewan yang digunakan dalam penelitian ini adalah 15 ekor kucing berbagai ras dengan umur dewasa 1-3 tahun, yang terdiri dari 5 ekor kucing sehat dan 10 ekor kucing penderita hipoalbuminemia. Sebelum perlakuan kucing diperiksa secara fisik dan diambil darah untuk pengujian hematologi rutin, kadar albumin, dan TPP. Rata-rata kadar albumin dan TPP sampel kucing sehat digunakan sebagai nilai kontrol normal. Tiga ekor pasien kucing diterapi infus NaCl 0,9% dan 7 ekor pasien kucing diterapi infus HSA. Infus HSA diberikan dengan dosis tunggal selama 4-6 jam melalui infus intravena. Selama pemberian infus HSA dilakukan pemeriksaan fisik meliputi suhu rektal, frekuensi dan ritme jantung, serta frekuensi dan ritme napas. Satu hari setelah pemberian infus HSA, dilakukan pengambilan darah kembali dan dilakukan pengamatan reaksi transfusi yang dihasilkan. Data hasil penelitian berupa kadar albumin dan TPP pasien kucing yang diterapi HSA dianalisis secara statistik menggunakan *Paired T-Test*, sedangkan data hasil pengamatan fisik selama pemberian HSA serta reaksi transfusi yang dihasilkan setelah pemberian infus HSA dianalisis secara deskriptif. Hasil pemberian infus HSA dapat meningkatkan kadar albumin plasma secara signifikan ($p < 0,05$) tetapi tidak memberikan perbedaan nyata ($p > 0,05$) terhadap kadar TPP pada kucing penderita hipoalbuminemia. Aplikasi HSA pada kucing penderita hipoalbuminemia menghasilkan reaksi transfusi segera maupun tertunda tetapi tidak ditemukan adanya reaksi yang merugikan. Infus HSA dapat digunakan sebagai terapi suportif pada kucing penderita hipoalbuminemia.

Kata kunci: *Human serum albumin*, albumin, total protein plasma, reaksi transfusi, kucing, hipoalbuminemia

**COMPATIBILITY HUMAN SERUM ALBUMIN (HSA)
AND REACTION OF TRANSFUSION THAT HAS PRODUCED IN THE
HIPOALBUMINEMIC CATS**

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ABSTRACT

Hypoalbuminemia can cause common complications in a number of cases of illness and is associated with an increase in morbidity and mortality in cats. This study aims to determine the compatibility of human serum albumin (HSA) associated with elevated levels of albumin and total plasma proteins (TPP) in hypoalbuminemic cats and transfusion reactions generated during and after HSA infusion. Animals used in this research were 15 cats of various breeds with an adult aged of 1-3 years, which consists of 5 healthy cats and 10 cats with hypoalbuminemia. Before the cat treatment was physically examined and collected blood for routine hematological, albumin levels, and TPP testing. Mean albumin and TPP levels of healthy cat samples were used as normal control values. Three cat patients treated with infusion of 0.9% NaCl and 7 cat patients treated with HSA infusion. HSA infusions are administered with a single dose for 4-6 hours through intravenous infusion. During HSA administration physical examination includes rectal temperature, heart frequency and rhythm, as well as the frequency and rhythm of the breath. A day after HSA infusion, blood sampling was collected and observation of the resulting transfusion reaction was generated. Data on the results of research on the levels of albumin and TPP of HSA-treated cat patients were statistically analyzed using Paired T-Test, while physical observation data during HSA administration and transfusion reactions generated after HSA infusion were analyzed descriptively. The results of HSA infusion increased plasma albumin levels significantly ($p < 0.05$) but did not give significant difference ($p > 0.05$) to TPP levels in cats with hypoalbuminemia. HSA application of hypoalbuminemic cats results in both immediate and delayed transfusion reactions no severe adverse reactions were observed. HSA infusion can be used as a supportive therapy in hypoalbuminemic cats.

Keywords: Human serum albumin, albumin, total plasma protein, transfusion reactions, cat, hypoalbuminemia