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An open, randomized comparative trial of two antivenoms for thetreatment of envenoming by Sri Lankan Russell's viper (Daboia russelii russelii). JArticle; Transactions of the Royal Society of Tropical Medicine and Hygiene 2; Vol: 95; No.(1); 2001_.74-80pp

Abstract : Russell's viper (Daboia russelii russelii) is an important cause of morbidity and mortality in Sri Lanka. In a study in 1985, Haffkine equine polyspecific antivenom in doses up to 20 g proved ineffective in clearing antigenaemia and caused a high incidence of anaphylactoid reactions. A new, monospecific ovine Fabantivenom (Polonga TAb) has been developed against the venom of Sri Lankan Russell's viper and, to assess its safety and efficacy, we carried out (in 1997) an open, randomized comparison of this with the Haffkine antivenom currently in use in the country. Patients with systemic envenoming following Russell's viperbite were randomized to receive an initial intravenous dose of either 1 g of Polonga TAb (n = 23) or 10 g of Haffkine antivenom (n = 20). One dose of Polonga TAb permanently restored blood coagulability in only 9 (41%) of 22 patients and 13 needed repeated doses, whereas the majority (14/20; 70%) had restored coagulability after 1 dose of Haffkine antivenom. There was a tendency towards more rapid resolution of local swelling and systemic manifestations in the Haffkine group. Venom antigenaemia was eliminated more quickly in the Haffkine group and ovine Fab was cleared from the circulation more rapidly than equine F(ab')2. To evaluate safety, patients were closely observed for adverse reactions. Following a severe reaction with Haffkine antivenom all subsequent patients in this group were treated prophylactically with hydrocortisone and chlorpheniramine. Despite this, the incidence of adverse reactions was significantly higher in the Haffkine group compared with the PolongaTAb group (81% compared with 48%) and 4 patients had a severe anaphylactic reaction in the former group. In conclusion, the new antivenom is safer than Haffkine antivenom but, to avoid repeated doses, an initial dose higher than 1 g is needed in thetreatment of Sri Lankan Russell's viper envenoming. The safety of this larger dose is the subject of further studies.