SNAKE ANTIVENOM FOR SNAKE VENOM INDUCED CONSUMPTION COAGULOPATHY – A COCHRANE REVIEW

Maduwage, K.[1,2]; Buckley, NA.[3]; de Silva, HJ.[4]; Lalloo, DG.[5];Isbister, GK.[1]

1 Clinical Toxicology Research Group, University of Newcastle, Australia.
2 Faculty of Medicine, University of Peradeniya, Sri Lanka.
3 Department of Pharmacology, University of Sydney, Camperdown, Australia.
4 Department of Medicine, University of Kelaniya, Ragama, Sri Lanka.
5 Clinical Research Group, Liverpool School of Tropical Medicine, Liverpool, UK.

Venom induced consumption coagulopathy (VICC) is a major systemic effect of snake envenoming. Observational studies suggest that antivenom is effective for VICC in some snakebites but not others.

Objectives: The objective of this study was to assess the effectiveness of antivenom as a treatment for VICC in snake envenoming.

Methods: We searched the Cochrane Injuries Group's Specialized Register, Cochrane Central Register of Controlled Trials (CENTRAL, *The Cochrane Library*), Ovid MEDLINE(R), Ovid MEDLINE(R) In-Process & other Non-Indexed Citations, Ovid MEDLINE(R) Daily, Ovid OLDMEDLINE(R), EMBASE Classic+Embase (OivdSP), clinical trials registers, and reference lists. We last searched on 30th January 2015. All completed, published or unpublished randomised controlled trials with a placebo arm where snake antivenom was administered for VICC in human snake envenoming were included. Two authors reviewed and identified trials and independently applied the selection criteria.

Results: We screened 5937 records and were unable to identify any published placebo randomised controlled trials of snake antivenom for VICC in human snake envenoming. There was one ongoing placebo randomised controlled trial. There were 32 published and two ongoing studies comparing two or more different antivenoms or comparing different doses of antivenom for VICC. Non-randomised trials including comparison groups without antivenom showed that antivenom was effective for envenoming by some snakes (eg, *Echis* species in Africa), but not others (eg, Australian elapids).

Conclusion: Placebo randomised controlled trials are required to investigate the effectiveness of antivenom for clinically relevant outcomes in patients with VICC resulting from snakebite. Although ethically difficult, the routine administration of a treatment that has a significant risk of anaphylaxis cannot continue without stronger evidence of benefit.