

When things don't go as planned in transfusions

The use of blood transfusions in veterinary practice has increased dramatically in recent years. Providing safe and effective transfusion therapy is essential. The risk of a transfusion reaction is present whenever a blood product is administered. The clinical signs seen are often non-specific to the underlying cause. If a reaction is suspected the first action should be to stop the transfusion and perform a careful physical examination. Sampling to assess for hemolysis may be appropriate and if cardiovascular or respiratory instability is noted, symptomatic treatment should be provided. This lecture is aiming in describing how to effectively manage transfusion reactions to insure patient recovery.

An update on hydroxyethyl starch: debate on current use

Synthetic colloid solutions are widely used for volume resuscitation in veterinary medicine. Colloid solutions promise the potential for increased intravascular volume expansion relative to the volume administered with the possibility of more rapid restoration of normal physiology compared to crystalloid solutions. However, this comes at a cost - both financial and potentially due to an increased risk of adverse drug reactions to the infused colloid molecules. This lecture will focus on proponents of the use of hydroxyethyl starch (HES) solutions and counter arguments. This is a highly controversial area of human and veterinary medicine.

Parvovirus update

Canine parvovirus has a predilection to infect rapidly dividing cells of the gastrointestinal tract, lymphoid tissue, and bone marrow, leading to hemorrhagic diarrhea, vomiting, marked leukopenia, and immunosuppression within 4-5 days of exposure. It could lead to sepsis, septic shock, MODS and death if left untreated. This lecture is aiming in presenting an update of diagnostic tests, prognostic factors, fluid replacement, use of plasma and albumin, antibiotics use, alternative therapies, gastrointestinal motility and integrity support (i.e. early enteral nutrition) as well as gastrointestinal parasites treatment. Supplementation in EPA and DHA can help limit inflammatory processes, and antioxidants (vitamin E, vitamin C, taurine, carotenoids...) can be helpful in restoring the antioxidant status and in supporting the immune system.

Transfusion: blood compatibility testing

This lecture aims in describing blood typing and XM technics and their clinical relevance.

In cats *AB* typing of recipients and donors is generally recommended. Typing kits are used in clinical practice. In case *AB* typing is not available as well as in previously transfused cats, XM are recommended. Some also perform cross-matching prior to a first transfusion due to the potential presence of naturally occurring alloantibodies outside of the *AB* system. Cross-matching is technically restricted with limited availability of standardized protocols.

In dogs, in-clinic kits are available for DEA 1 typing. Only polyclonal typing reagents are available on a limited basis for other groups. Cross-matching of dogs is rarely done in veterinary practice.