Vitamin K1 (Phytomenadione)

(Vitamine K1 Laboratoire TVM (d), Konakion*, Phytomenadione*) POM-V, NFA-VPS, POM

- **Client Information Leaflet:** Vitamin K1
- **Formulations**

Injectable: 10 mg/ml. Oral: 50 mg tablets. Some nutraceuticals also contain small amounts of vitamin K.

- **Action**

Involved in the formation of active coagulation factors II, VII, IX and X by the liver.

- **Use**
    - Treatment of toxicity due to coumarin and its derivatives.
    - Before performing a liver biopsy in patients (primarily cats) with prolonged coagulation times.

Deficient states may also occur in prolonged significant anorexia. Although vitamin K is fat-soluble, its biological behaviour is like that of a water-soluble vitamin; it has a relatively short half-life and there are no significant storage pools. It may still require 6–12 hours for effect. Oral absorption is increased 4–5-fold in dogs if given with tinned food, especially food with increased fat content. Prothrombin time is the best method of monitoring therapy. Use a small gauge needle when injecting s.c. or i.m. in a patient with bleeding tendencies.

More +

- **DOSES**
    - **Dogs, Cats**
        - Known 1st generation coumarin toxicity or vitamin K1 deficiency: initially 2.5 mg/kg s.c. in several sites, then 1–2.5 mg/kg in divided doses p.o. q8–12h for 5–7 days. Recheck prothrombin time (PT) 48 hours after last dose. Restart therapy for another week if PT is still prolonged. If not prolonged, therapy can be discontinued. The patient's activity should be restricted for 1 week following full course of treatment.
        - Known 2nd generation coumarin (brodifacoum) toxicity: initially 5 mg/kg s.c. in several sites, then 2.5 mg/kg p.o. q12h for 3 weeks (due to longer persistence in body), then re-evaluate PT 48 hours after last dose. Restart therapy for another week if PT is still prolonged. If not prolonged, therapy can be discontinued. The patient's activity should be restricted for 1 week following full course of treatment.
        - Known inandione (diphacinone) or unknown anticoagulant toxicity: initially 2.5–5 mg/kg s.c. over several sites, then 2.5 mg/kg p.o. divided q8–12h for 3–4 weeks. Re-evaluate coagulation status 48 hours after last dose. If PT is prolonged, continue therapy for 2 additional weeks. If not prolonged, therapy can be

discontinued. The patient's activity should be restricted for 1 week following full course of treatment.

- Before performing a liver biopsy, particulary in cats: 0.5–1.5 mg/kg s.c. q12h. After 24–48 hours, re-evaluate coagulation times and if normal proceed with biopsy. If not, the dose should be increased and the procedure delayed. If there is further minimal improvement in coagulation times, fresh frozen plasma may be required.