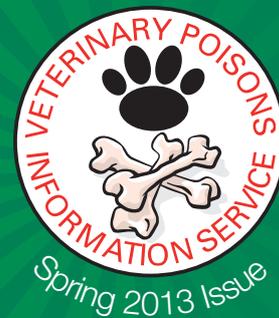


Toxic Times



Welcome to the Spring edition of Toxic Times

A warm welcome to the Toxic Times Spring edition. With the warmer weather enticing even the most reluctant gardener back into the garden, we will be looking at the hazards of plant bulb ingestion, and the surprising toxicities seen with different species.

There are no doubt a large number of left-over Easter eggs still to be eaten (or maybe not!), so we will also be providing a brief refresher on chocolate toxicity.

The VPIS is extremely happy to have just launched our new on-line CPD courses, and details of this, and the dates and venues for the class-based courses are also given.

As ever, we are very keen to hear your views and opinions so please feel free to contact us by email or telephone at anytime.

Tel: 020 7188 0200
Email: info@vpisglobal.com

Chocolate toxicity

With the recent Easter celebrations, there may be many as yet uneaten chocolate Easter eggs to tempt pets. Chocolate poisoning relating to dogs is one of the most common enquiries received by the VPIS, with the severity of the poisoning being influenced by the amount of chocolate eaten, and the type of chocolate (milk or dark).

Milk and dark chocolate differ greatly in the amount of theobromine, a methylxanthine similar to caffeine, they contain, which in turn is reflected in the toxic dose (see below).

The initial clinical effects are vomiting and diarrhoea, which may lead to dehydration given that theobromine is also a diuretic. Theobromine also stimulates the myocardium and the CNS,

leading to animals becoming hyperactive and hyperthermic, and developing hypertension and severe tachycardia; in extreme cases muscle rigidity, tremors and convulsions may be seen

Chocolate is also toxic to cats, rodents and rabbits, but there is insufficient data to determine a toxic dose; cats seem less inclined to eat chocolate, although each year there are a few cases where significant clinical effects are seen.

Treatment is essentially supportive with the emphasis on rehydration, reducing the stimulant effects with sedatives and monitoring vital signs. The use of repeated doses (4 hourly) activated charcoal to enhance elimination, is particularly useful, as theobromine undergoes enterohepatic recirculation.

The VPIS Rough Guide for Chocolate Poisoning in Dogs:

White Chocolate:
No treatment required, as insufficient quantities of theobromine present.

Milk Chocolate:
Treatment for amounts over 9g/kg

Dark Chocolate:
Treatment for amounts over 1.25g/kg

Cocoa Powder:
Treatment for amounts over 0.77g/kg





Minoxidil is used in humans as a peripheral vasodilator for the treatment of severe hypertension; it is also available as an over-the-counter topical preparation for treating alopecia androgenetica (male pattern baldness). It is not used in veterinary medicine.

Minoxidil in cats

There have been cases in the literature where a single dermal application of a minoxidil solution given by owners to their cats to treat patches of alopecia has proved fatal. The cats developed lethargy, dyspnoea, tachycardia, hypothermia and pale mucous membranes. Chest X-rays showed pleural effusion and pulmonary oedema, and both cats subsequently died.

In a more recent case (Meek *et al.*, 2011), an adult female cat licked her owner's head over a period of 10 minutes whilst the owner was sitting watching television. 24 hours previously, the owner had applied a 5% minoxidil solution to his head. The next day, the cat was found inappetent and lethargic, and by the time she presented at the surgery, she had developed breathing difficulties and fulminant congestive heart failure was diagnosed. Treatment consisted of oxygen, furosemide and dobutamine and required thoracocentesis to drain fluid from the chest. The cat made a full recovery.

Minoxidil reduces blood pressure by causing direct peripheral vasodilation of the arterioles, which decreases peripheral vascular resistance, with compensatory

tachycardia and resultant increase in cardiac output. The pulmonary oedema seen in cats with minoxidil toxicity may be a combination of cardiogenic and non-cardiogenic effects. It is not known why cats are so sensitive to the effects of minoxidil; the cardiac lesions they develop are not the same as those seen in dogs or pigs under experimental conditions.

There have been a small number of cases involving ingestion or skin application of minoxidil to cats reported to the VPIS. If dermal exposure has occurred within the last 48-72 hours, the cat should be thoroughly washed with water and a mild detergent. For recent ingestion, an emetic with activated charcoal should be given. Symptomatic animals should be assessed for congestive heart failure, whilst asymptomatic animals should be aggressively monitored and assessed for the next 36 hours.

Reference: Meek M, Barra V, Cockwell K. 2011 Anti-balding agent causes acute congestive heart failure in cats. *Control and Therapy Series* 263:8-9.

On-line CPD Courses

We are very happy to have just launched our On-line CPD Courses, which we hope will give you the ability to schedule your CPD training at a time that fits in with all the other demands of a busy veterinary practice.

The course is based on 10 of the modules that are covered in our class-based workshops, and is hosted on Vetstream's site, www.vetacademy.co.uk. The expertise and experience that Vetstream have in providing on-line CPD will become apparent when you see the ease of interacting with and following the courses. VPIS subscribers will be able to obtain a discount of £15 on VPIS modules by entering their Practice Group Number (eg Practice Number 1159/A would be entered as just 1159)

Class-based CPD Courses

We are also continuing to offer the class-based CPD courses; they are proving to be as popular as ever, so please book early to ensure that a place is reserved for you, and to take advantage of an early-booking discount.

Dates and locations are as follows, with all courses starting at 9.45am and finishing at 4.45pm:-

April 17th	London
June 21st	Bristol
July 10th	Edinburgh
September 9th	London
October 14th	Manchester
November 11th	London

Further details are available on our website, or please contact us at cpd@vpisglobal.com



Concentrated Laundry Liquids



Over recent years, there have been many developments in the formulations of laundry detergents, including tablets, small liquid-filled capsules and concentrated liquids, intended to reduce the amount of product required per wash.

The basic composition of all these products is the same, in that they all contain varying percentages of detergents; other chemicals may be present to soften water, prevent excess foaming or to enhance whiteness. Acute ingestion of these products, although carrying the risk of foam aspiration into the lungs, will generally lead to only gastrointestinal effects, such as vomiting and diarrhoea.

However, these products can be highly irritant to skin and eyes, and in such cases, prompt, thorough and efficient irrigation and decontamination will be required. This is particularly important when the product is one of the concentrated laundry liquids. The VPIS was recently contacted about a distressing case involving 5 cats

all of which had been exposed to spilt concentrated laundry liquid; the accompanying photograph shows the extent of hair loss on the cats' limbs, and were taken after severe erosive lesions had healed. One cat died from the resultant exposure, despite the best efforts of the vets, including treatment with IV fluids, antibiotics and anti-inflammatory drugs.

It is essential that any cat or dog exposed to one of these liquids undergo thorough decontamination with copious amounts of lukewarm water, and that the animal is then collared to prevent grooming. It is then important to monitor for signs of skin irritation and respiratory signs. Treatment is supportive.

Ingestion of plant bulbs

We receive many enquiries regarding the ingestion of daffodil bulbs and flowers (*Narcissus* species) during the Spring months, and plant material is in fact quite toxic.

All parts of the plant contain the toxic agents alkaloids and glycosides, although they are most concentrated in the bulb; the exact mechanism of toxicity is not fully understood, although even small doses can cause vomiting and diarrhoea. In addition, the bulb contains calcium oxalate crystals, which is a mechanical irritant and can facilitate the entry of other irritant substances and allergens into tissues.

Effects can vary from gastrointestinal upset of varying degrees, lethargy and pyrexia in mild cases to hypothermia, hypotension, bradycardia and dehydration in more severe cases. Contact with the sap of the plant can lead to the development of pruritis or erythema. Clinical effects can occur from 15 minutes to 24 hours post-ingestion. Treatment is essentially supportive, with emphasis on rehydration if necessary.

Other bulbs, such as Grape Hyacinth (*Muscari* species), Tulip (*Tulipa* species) and Primrose (*Primula vulgaris*) are considered to be of low toxicity and ingestion will probably cause nothing more than mild gastrointestinal upset. It is unlikely that treatment or observation in the veterinary surgery will be required.

Spring Crocus (*Crocus* species) is of a similarly low toxicity, although the Autumn Crocus (*Colchicum autumnale*) is highly toxic due to the presence of colchicum; however, as the name suggests, these bulbs flower in the Autumn rather than the Spring. The onset of clinical effects can be between 2-48 hours and is likely to include severe gastrointestinal irritation with inappetence, hypersalivation, vomiting, severe diarrhoea, abdominal tenderness and haemorrhagic gastroenteritis.

Treatment would include gastric emptying, activated charcoal, IV fluids and the administration of gastroprotectant drugs. In addition, blood count, liver and renal function should be monitored.



Meet the Team



Name: Lauren Davis
Job Title: Information Scientist

How long have you worked for VPIS?

I did a 6 month graduate internship with the VPIS which I thoroughly enjoyed and I was pleased to be employed as a full time Information Scientist in January.

What do you most like about your job?

I love the variety that comes with working here, you never know what you are going to get when you pick up the phone! It's always a challenge.

What do you most dislike about the job?

I commute from Kent to London so the long night shifts can be a challenge. Please call us at any time, we are always here to answer with a smile – even at 3am!

What is the silliest thing you have said down the phone?

'You will definitely need to treat this dog for chocolate injection!' I obviously meant chocolate ingestion, but it was 3am and the caller and I had quite a laugh as we were just as tired as each other.

Do you have any pets?

At the moment I have my beautiful cat (Nimmy), 2 gerbils (Pico & Nano), my huge tarantula (Troy) and a goldfish (Fiona) all in my bedroom! It's a bit crowded but... love me – love my pets!



Where is the most unusual place you have ever visited?

I was lucky enough to visit the Maldives with my parents who kindly took my sister and I with them on their 25th wedding anniversary! Snorkelling with tropical fish, turtles, and a white tip reef shark was an experience I will never forget. It's a natural paradise.

Favourite quote:

'Thousands of years ago, cats were worshipped as gods – my cat has never forgotten this!' – Anon.

Case credits and charging

We often receive enquiries regarding the various options relating to VPIS charges; in an attempt to simplify the issue, there are now 2 ways of using our service, each designed to fit in with the way your practice operates:-

Pay as You Go

Buy case credits on line.
Top them up when you run low

Benefits

- Plenty of options to buy the amount of case credits you think you will need.
- An inexpensive way to ensure that you have membership in place in case of emergency.
- Get discounts for more case credits and by opting for Auto Top Up

For more details visit
www.VPISuk.co.uk

Contract

Pay once per year based on expected usage

Benefits

- No need to check your balance or buy credits
- One transaction per year
- No out of hours charge
- Get a great deal on CPD training both class based and online alongside the access to the VPIS service.

Please email
contracts@vpisglobal.com

Thank You!

We would like to say a huge thank you to all who participated in our recent survey into the veterinary use of apomorphine. Given how many demands there are already on your time, the response was wonderful, and as a small thank you to those contributors who responded so comprehensively, we were very happy to send out some trial log-ons for our new on-line CPD modules.

As a result of our survey, we are now looking at ways that we can work with the industry to produce and deliver an apomorphine formulation that better meets the needs of veterinarians; please feel free to contribute any additional feedback or comments.