State of the art
Management of feline idiopathic cystitis

Behaviour
Management of behaviour problems

How to...
Use chemotherapy safely

Special interest
Health problems in flat-faced breeds

The International Society of Feline Medicine
Journal for Veterinary Nurses and Technicians

isfm
Vet Nurses and Technicians

icatcare.org/felinefocus
☑ Owner going on holiday?
☑ Cat going into a cattery?
☑ Owner moving home?
☑ Is there a new arrival in the home?
☑ Expecting fireworks?

Everyday events can cause stress in cats. ROYAL CANIN® Feline Calm contains L-tryptophan and alpha-cazosepine to help cats maintain emotional balance. Calm is highly palatable, and helps support the skin and digestive system which may be affected during times of anxiety.

Contact your ROYAL CANIN® Veterinary Business Manager or visit vetportal.royalcanin.co.uk for more information.
Here we are in December already! We have had a great year producing really useful articles, many authored by veterinary nurses and technicians. This issue is no exception, including a state of the art article on feline lower urinary tract disease by Sarah Caney. This condition is common, and nurses and technicians can directly help reduce recurrence by educating clients on how to reduce stress and increase water intake. Don’t miss our webinar by Sarah on this subject, register at www.icatcare.org/nurses, to listen live, or hear the recording.

Our second article compliments the first article, completing our series on the role of the nurse or technician in the management of problem behaviours. Trudi Atkinson provides some ‘first aid’ advice for common issues owners may contact the clinic about. Also in this issue, Ann Stanford explains the precautions we should take when handling chemotherapeutics in the clinic and, finally, our chief executive Claire Bessant discusses how the selective breeding of brachycephalic cats has compromised their welfare. The images in this article are shocking — and clearly illustrate the deformation of the normal anatomy of these cats.

Thanks so much for reading our journal in 2016, we hope you will continue to follow us in 2017 when we will try our best to provide more and more useful and up-to-date articles on all things cat.

Best wishes,

Sam Taylor, Veterinary Editor

Contents

325 State of the art
Feline idiopathic cystitis management: role of the nurse and technician

333 Behaviour
Prevention of behaviour problems 3: management of behaviour problems

343 How to...
Safe and effective use of chemotherapy: a nurse’s perspective

349 Special interest
Flat-faced breeds: scientific evidence for health problems is growing
Experience the difference in your home with FELIWAY®

Comfords cats in the home meaning less hiding away and more time to play! FELIWAY also helps stop unwanted behaviours such as spraying, scratching and helps during stressful events such as moving home, redecorating and travelling.

PROVEN RESULTS IN 9 OUT OF 10 CATS*

VETERINARY USED
AND RECOMMENDED

#1 BRAND

Now available!
NEW FELIWAY® FRIENDS
for conflicts between household cats

Behaviour therapy may be required. Ask your vet or behaviourist for advice.
*Source: Mills 2001. Evaluation of a novel method for delivering a synthetic analogue of feline facial pheromone (Feliway®) to control urine spraying by cats.

feliway.co.uk
Feline idiopathic cystitis management: role of the nurse and technician

Feline lower urinary tract disease (FLUTD) is a term used to encompass a number of conditions which affect the bladder and urethra and which may be associated with inappropriate urination. FLUTD is most common in young and middle aged cats. There are several important medical causes of FLUTD but idiopathic FLUTD (also known as feline idiopathic cystitis) is the most common by far. Successful treatment depends upon addressing sources of stress and encouraging affected cats to produce more dilute urine.

Feline idiopathic cystitis (FIC) is the most common cause of lower urinary tract disease in cats. It is the cause of FLUTD in 50–75% of young and middle aged cats. FIC can be obstructive or non-obstructive. Male cats are most vulnerable to obstructive disease, necessitating emergency treatment. Other risk factors for FIC include:

- being overweight;
- a sedentary or very inactive lifestyle;
- indoor-only living cats or those with restricted access outdoors;
- cats that use an indoor litter box;
- cats living in a multi-animal household as there is often tension between the FLUTD cat and other members of the household;
- neutered cats are more vulnerable than entire males or females;
- single cats living in indoor-only situations with little environmental enrichment;
- cats that are very dependent on their owners and that suffer from separation anxiety; and
- Persian and black-and-white domestic shorthaired cats may be over-represented with this condition and, in countries with cold winters, clinical signs may be seasonal being worse from autumn to early spring.

Clinical signs with non-obstructive FIC are usually self-limiting — the cats get better on their own, usually within 5–10 days. However, most affected cats suffer from repeated episodes of clinical signs which can be very distressing to both cat and owner.

Key point

Feline idiopathic cystitis is the most common cause of lower urinary tract disease in cats. Overweight, sedentary and indoor cats are at risk, along with cats in multi-cat homes.

Sarah Caney
BVSc PhD DSAM (Feline) MRCVS
RCVS Specialist in Feline Medicine

Sarah Caney is a veterinary graduate of the University of Bristol, UK, where she also did her residency in feline medicine and PhD. She is an RCVS Specialist in Feline Medicine and enjoys seeing a mixture of first opinion and referral feline patients. She has written a number of books for cat owners published by her company Cat Professional, a subdivision of Vet Professionals Ltd.
State of the art

Box 1: Pandora syndrome

Pandora syndrome is a recently devised term and describes cats with idiopathic cystitis that also have additional clinical signs (‘sickness behaviours’) affecting other organ systems. Cats suffering from Pandora syndrome may have clinical signs affecting multiple organ systems such as the gastrointestinal tract, skin, respiratory tract, central nervous system, cardiovascular or immune systems and lower urinary tract. These ‘sickness behaviours’ include non-specific clinical signs such as vomiting, diarrhoea, decreased food and water intake, fever, lethargy, enhanced pain-like behaviour, changed grooming behaviour, decreased social interactions and lower urinary tract signs.1 For cats suffering from Pandora syndrome, FIC may be the bladder’s manifestation of a systemic disorder.2

Unpredictable, inescapable periods of stress (Figure 1) are most likely to be associated with clinical signs of any or all of these organ systems. The most common sickness behaviours reported in association with changes to the normal routine are vomiting, diarrhoea, inappropriate urination, inappropriate defecation and inappetence.1

Figure 1: Pandora syndrome predicts that a susceptible cat placed into a provocative environment (such as a busy household containing a dog and small child) may suffer from sickness behaviours including those typically associated with idiopathic cystitis and during its first few weeks of life) is thought to cause abnormal development of the cat’s stress management system. The end result is altered processing within the brain and nerve supply between this and the bladder. It is not clear whether these cats have an abnormal stress response system which predisposes them to negative effects of chronic stress (such as FIC) or whether being in a state of chronic stress leads to malfunctioning of the stress response system. Suggested stressors are listed in Box 2.

How is FIC diagnosed?

FIC is a diagnosis of exclusion and depends upon ruling out other causes of FLUTD such as bacterial

326 icatcare.org/felinefocus
urinary tract infection, urolithiasis and neoplasia.

**How is FIC treated?**

Optimal treatment of FIC depends on making an accurate diagnosis. Although non-obstructive FIC is considered to be a self-limiting problem, treatment is usually recommended as this is such a painful and debilitating condition. Although FIC is common and has been a subject of much research, very few treatments have been assessed in a rigorous way. Since FIC usually resolves spontaneously, many treatments can appear to be effective when in fact the cat is making a spontaneous recovery.

All of the current medical treatments for FIC are palliative — aiming to support the cat through an episode and reduce the risk of further episodes occurring. The biggest long-term improvements are seen using a dual approach to reduce stress and encourage the cat to produce dilute urine. MEMO (Multimodal environmental modification) is an acronym coined by Professor Tony Buffington and his colleagues at Ohio State University where much research on FIC has been conducted. MEMO encompasses tactics to reduce stress and encourage the cat to produce less concentrated urine. In one study MEMO was effective in curing around 70–75% of cats with severe FIC and greatly reduced the severity of signs and frequency of relapses in the remaining cats.3 (See also Multimodal environmental modification (MEMO) for prevention and treatment of disease in cats, parts 1 and 2. Feline Focus 2015; 1[8]: 275–280 and 2015; 1[9]: 311–316).
State of the art

Successful management depends upon a long-term commitment and team approach between the cat’s care-provider and veterinary professional. Research studies have shown that it is possible to greatly reduce the frequency and severity of episodes of FIC for the vast majority of affected cats by:

- identifying and reducing stress;
- helping the cat to produce more dilute urine; and
- addressing other problems specific to the individual cat.

Reducing stress in the home
Identifying and addressing any potential sources of stress to the affected cat can reduce the severity of episodes of FIC. Common examples include tension between the affected cat and others in the household. In order to address this, care needs to be taken to understand the number of social groups within the home and determine whether there are adequate resources for each social group. Each social group needs access to litter boxes or other toileting facilities, food, water, somewhere to rest/hide and safe entry and exit routes. A successful strategy in this example would include ensuring that there are sufficient litter boxes to enable unrestricted access without the concern that a ‘bullying’ cat might be able to prevent a vulnerable FIC cat from accessing the litter box.

Restricting (or reducing) the number of cats in the home to socially compatible levels and resisting the temptation to expand the household by introducing new cats will help to reduce the incidence of stress-related diseases like FIC. In severe cases, referral to a veterinary behavioural expert may be valuable to accurately diagnose and resolve causes of chronic stress.

Environmental enrichment is also beneficial as a means of reducing stress. Examples of positive ways of improving a cat’s environment include provision of climbing frames with resting areas and playing games that stimulate natural cat behaviour.

Pheromone therapy
Synthetic pheromone preparations such as the facial pheromone (Feliway Classic, Ceva Animal Health) and the cat appeasing pheromone (Feliway Friends; Ceva Animal Health) can also be helpful in some FIC cases. Feliway Classic acts as a confirmatory signal that the environment is safe and therefore must be used in conjunction with other environmental management, such as ensuring that there are adequate litter boxes and so on. Feliway Friends is referred to as the ‘harmony marker’ and has been proven to decrease the frequency and intensity of conflict and tension in multicat households. Feliway Classic and Feliway Friends can be used simultaneously or individually, according to the individual situation.

Nutritional supplements
Nutritional supplements can be employed as an adjunctive management option to help alleviate stress. Alpha-casozepine is a milk protein hydrolysate which is thought to interact with the GABA-A receptor and result in anxiolytic
effects. A small double-blinded, placebo-controlled study using this product in cats identified to be suffering from anxiety showed beneficial effects in many of the cats receiving this dietary supplement.\(^4\) Tryptophan, another nutraceutical, is an essential amino acid and precursor for serotonin synthesis. Serotonin is an important neurotransmitter involved in mood control and believed to contribute to feelings of well-being. A placebo-controlled study showed that supplementation of L-tryptophan resulted in a reduction in stress-associated behaviours such as house soiling.\(^5\) Nutraceuticals can be supplied as supplements but are also contained in some therapeutic foods. A recent small case series reported an improvement in signs of FIC and anxiety-related behaviour in cats receiving a diet supplemented in alpha casozepine and L-tryptophan.\(^6\)

**Helping the cat to produce more dilute urine**

It is thought that cats will be less likely to suffer from episodes of FIC if they produce more dilute urine.\(^7\) Pursuing tactics that help the cat to produce more dilute urine (Figure 2) can help alleviate signs of FIC. The aim is for the cat to be producing urine with a specific gravity around 1.035. This encourages frequent urination and dilutes any irritant components of the urine. Producing dilute urine does not treat the underlying cause of FIC, so issues such as stress also need to be addressed. Strategies to encourage the cat to drink more include:

- offering wet rather than dry food;
- easy access to water bowls;
- use of specially designed prescription diets which also encourage drinking; and
- use of the tactics listed in Table 1.

Monitoring USG using free catch samples collected at home can help to incentivise owners that the above strategies are worthwhile.

**Additional tactics**

Additional tactics which may help individual cats include:

- **obesity management:** (Figure 3);
- **glycosaminoglycan (GAG) supplements:** GAG supplements are believed to work by attaching to the lining of the bladder and reducing the permeability of this to noxious substances. Unfortunately, several clinical studies have shown that GAG supplements are not generally effective in the majority of cats affected by FIC;\(^7,8\)
- **painkillers:** may be prescribed during an acute episode as FLUTD is a painful condition.
Examples include non-steroidal anti-inflammatory agents such as meloxicam and opiates such as buprenorphine;
- **medication to treat urethral spasm**: prazosin, dantrolene and phenoxybenzamine may be prescribed in cats suffering from urethral obstruction caused by spasm;
- **other medications**: tricyclic antidepressants and selective serotonin reuptake inhibitors may be prescribed.

While FIC is not an easy problem to

---

Table 1: Strategies to encourage increased water intake in cats

<table>
<thead>
<tr>
<th>Factor</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of water bowl</td>
<td>Most cats prefer glass, ceramic or stainless steel — experiment with your cat by offering different shapes and sizes. Most cats like wide, shallow bowls but some like drinking out of a tall glass or jug</td>
</tr>
<tr>
<td>Fill the bowl to the brim</td>
<td>Most cats do not like to put their head inside the bowl so fill it to the brim</td>
</tr>
<tr>
<td>Number of water bowls</td>
<td>Water bowls should be available in all areas of the home and the cat should be able to access water easily, without competition from other cats</td>
</tr>
<tr>
<td>Location of water bowl</td>
<td>The water bowl should not be next to food bowls, litter trays or in busy locations</td>
</tr>
<tr>
<td>Consider raising the bowl</td>
<td>Older cats (&gt;10 years) often have osteoarthritis which can make bending over to eat or drink uncomfortable. Water and food bowls can be placed on an upturned bowl or box to lift them by a few inches</td>
</tr>
<tr>
<td>Type of water</td>
<td>Try offering collected rainwater, mineral water and tap water and see if the cat has a preference</td>
</tr>
<tr>
<td>Temperature of water</td>
<td>Offer water at room temperature, chilled water tends to be less appealing to cats</td>
</tr>
<tr>
<td>Flavoured waters</td>
<td>Examples include the liquid from a defrosted packet of cooked prawns or a drained tin of tuna in spring water (avoid brine as this is very salty). A flavoured water can be created by, for example, poaching chicken or fish in water. The water left after cooking can be offered as a drink</td>
</tr>
<tr>
<td>Offering ‘broths’</td>
<td>A broth or soup can be made by liquidising cooked fish or prawns in water</td>
</tr>
<tr>
<td>Offer moist rather than dry food</td>
<td>Cats will take in more fluid if eating a moist food compared to what they would voluntarily drink when offered a dry diet. Some ‘dry food addicts’ will eat dry food to which water is added</td>
</tr>
<tr>
<td>Moving water sources can be popular</td>
<td>For example water fountains, a tap left dripping, a ping pong ball in a wide shallow bowl so that the cat can play with this</td>
</tr>
<tr>
<td>Type of diet</td>
<td>Some prescription diets encourage increased water intake</td>
</tr>
</tbody>
</table>
resolve, attention to all of the above is usually successful in at least reducing the frequency and severity of episodes. In around three quarters of cases of FIC, the above treatment will result in a ‘cure’.

References

Further reading
- Caney SMA and Gunn-Moore D. Caring for a cat with lower urinary tract disease. Published by Cat Professional, 2014.

FIC webinar
Sarah Caney will present a webinar on: ‘The role of the nurse and technicians in the management of feline idiopathic cystitis’ on December 1, 20.00 GMT. Details at: http://icatcare.org/learn/webinars
International Cat Care’s much-loved charity calendar is back for another year, with a new theme – *Cat Naps*. This A4-sized calendar features images of cats from all over the world – some are old and some are young, some are owned and some are street cats, but they’re all enjoying what cats love most – sleeping! All proceeds go to support International Cat Care’s work in improving the health and welfare of cats worldwide.

Order yours online at: icatcare.org/shop
or call 01747 871872
Prevention of behaviour problems 3: management of behaviour problems

The veterinary practice can play an important role in the management and treatment of feline behaviour problems. An initial step is understanding why cat owners may be reluctant to seek professional help, and how to address this issue. The next step is examination to rule out or treat any contributory organic disease. Referral to a behaviourist may be required, but as in most countries there are no statutory requirements as to who can treat companion animal behaviour problems, it is important to first research the education and experience of the person you intend to refer your client and their pet to. Being able to offer appropriate ‘first aid’ behavioural advice can also be of great help to the client and can help to boost practice and client relations.

In comparison to dog owners, relatively few cat owners actively seek advice for behaviour issues from the veterinary practice or behaviour professionals. This does not necessarily mean that feline problem behaviours are rare, in fact a quick look at social media ‘cat owner’ or ‘cat help’ groups will reveal numerous requests for help from owners seeking advice about their cats’ behaviour. This raises the question; if owners feel it necessary to seek advice from complete strangers on the internet, why do so few seek professional help at the veterinary practice?

Problem, what problem?
Misinterpretation of problem behaviour as ‘normal’
Owners may be reluctant to ask for help, or feel that there is little point in seeking professional assistance if they believe that the behaviour exhibited by their cat is ‘normal’. Unfortunately, feline behaviour indicative of suffering, either physically or emotionally, is fairly common and therefore can be...
Behaviour

considered by many as unexceptional and therefore acceptable. Body language is often misinterpreted, as are behaviours such as fighting which can often be misread as play. Even when fighting between two cats that live together is recognised as such, an owner may interpret this as ‘fighting for dominance’, a social state that seems very unlikely to exist between cats,1–3 and therefore accept and ignore it (Figure 1).

Behavioural distress, such as fear or anxiety, can also go unnoticed. For example, over-grooming (Figure 2) may not be noticed by the owner until a significant bald patch develops. Likewise, the fact that a cat spends a large part of its day hiding under the bed (Figure 3), or in a cupboard, may not be considered to be of any great significance for the owner. Even indoor urine spraying may be considered to be a feline behaviour that nothing can be done about, or the blame may be erroneously put on a ‘visiting tom’.

Less social obligation
A major reason why dog owners seek help is because they are worried about the effect that their dog’s behaviour may have on other people. This can be further enhanced by fear of possible repercussions in the form of complaints, prosecution and even the possible loss of their pet. These factors are far less likely to be a matter of concern for cat owners.

Less impact on owners
A pet dog’s behaviour is far more likely to have an impact on the owner, than that of a pet cat. A classic example of this is the noise phobic, or sound sensitive animal. A dog that is fearful of fireworks for example, may panic and bolt when on a walk, refuse to leave the house, possibly resulting in house soiling issues and may cause damage to furniture or household structures when attempting to hide or escape. A cat on the other hand may do no more than hide under the furniture. But the welfare of the animal is no less compromised.

Figure 1: Physical conflict between cats that live together can often be misinterpreted as play or ‘fighting for dominance’. (Photograph courtesy of Celia Haddon)

Figure 2: Stress related behaviours such as over-grooming may initially go unnoticed. (Photograph courtesy of Celia Haddon)

Figure 3: Even continual hiding may not be regarded as a problem or to be of any great significance
Unaware of health and welfare implications for the cat
A change in behaviour can be one of the first indications that a cat is unwell, and/or distressed, which can in itself be a contributory factor to several disease processes. Unfortunately, many owners are unaware of this and therefore unlikely to regard a change in behaviour as a reason to seek professional help.

A cat’s welfare may also be at risk in other ways. If the behaviour is unacceptable to the owner, it may lead to a severe disruption in the cat–owner relationship, which can increase potential for intentional or unintentional abuse by the owner; either due to frustration or misguided attempts at punishment. Problem behaviours may increase the likelihood of relinquishment of the pet for rehoming or requests for euthanasia.

Key point
The reasons problem behaviours are considered less important by owners in cats than dogs include; less impact on owners, misinterpretation of the behaviour as normal, and behaviours suggestive of distress going unnoticed.

Unaware that professional help is available
Even when an owner is aware that their cat has a problem behaviour, they may not be aware that professional help is available and where to access it. If they are also unaware of the importance of veterinary involvement and the link between behaviour and disease, then they are unlikely to consult a veterinarian or nurse/technician.

Advertising and problem finding
Discovering the extent of feline behaviour issues among your clients, and increasing client awareness that help is available via the veterinary practice, are important primary steps in helping cat owners. Consider the following:

• waiting room posters, newsletters and websites: these can be used to advertise the fact that help for feline behaviour issues is available and can encourage clients to discuss their pet’s behaviour with veterinary staff.

• questioning at routine consultations: discussing behaviour during routine consultations and health checks is advisable as it may reveal actual, or potential, problem behaviours that owners are unaware of or may already be concerned about.

• raising staff awareness of problem behaviours and associated illness: all veterinary surgeons and nurses/technicians in the clinic should be aware of problem behaviours, and the illnesses that may be associated with stress. For example, feline idiopathic cystitis cases and those with overgrooming problems should prompt discussion of the cat’s lifestyle and behaviour at home.

Treatment of behaviour cases
Role of the veterinary practice
Problem behaviours may be linked directly or indirectly with the animal’s physical condition. So once a problem behaviour has been identified, the first action should be examination by the veterinary surgeon to rule out or treat disease or injury that could be contributing to the behaviour. Once this has been done, the case may then be treated ‘in-house’ or referred by the veterinary surgeon to a suitably qualified behaviourist.
External referral for problem behaviours

Referral can often be the best option, but who should clinics refer to? Whoever the veterinary surgeon chooses to refer to, that person should be able to offer more in terms of relevant education, experience and practical help than can be offered by the veterinary clinic. It can be worthwhile doing research to find the most suitable person that covers your area and then building a good working relationship with them.

Designation

It is unwise to choose a behaviourist by ‘job title’ alone as this provides no information as to their qualifications, experience or aptitude, and currently there is no statutory requirement as to who can treat companion animal behaviour problems or what a practitioner may call themselves.

Qualifications

Post nominal letters may look impressive, but they are not always reliable evidence that the qualifications the person holds are relevant or sufficient. Post nominals may not even relate to qualifications but to memberships of groups or organisations. It can therefore be advisable to research the meaning of post nominals and if you are still unsure don’t be afraid to contact the person to ask what qualifications they have and what subjects they have studied.

Membership of groups or organisations

As with qualifications, evidence that an individual is a member of a behavioural group or organisation is meaningless unless you know what that group or organisation is and what the membership requirements are. Some organisations are exclusively for vets who specialise in behaviour and board examinations must be passed in order to become a member of the college, for example, The European College of Animal Welfare and Behavioural Medicine (ECAWBM) and the American College of Veterinary Behaviorists (ACVB). Both organisations have some members outside of Europe and the USA. Other organisations do not require a veterinary qualification for membership but do have rigorous selection procedures regarding

Key point

Research who is the best qualified to receive cases from your clinic in your area. Check qualifications and professional memberships, as they vary greatly in their requirements from extensive experience and ongoing study, to simply payment of a membership fee.

Asking the right questions

Asking non-specific questions such as ‘does your cat have any behavioural problems?’ is unlikely to prompt owners to mention subtle or unnoticed behaviours. Instead consider asking specific questions such as:

- Does your cat ever go to the toilet indoors other than in a litter tray?
- Do your cats fight?
- When they play with each other, do the cats make any sound? (As a general rule most play between cats is silent, whereas there is usually some vocalisation if aggression is involved.)
- In an average day does your cat come to you for food or attention?

At all times it is essential to be empathic and non-judgemental, as some owners may be reluctant to discuss behaviour, or might ‘play down’ serious or potentially serious issues for fear that euthanasia or rehoming will be the only solution on offer.

336 icatcare.org/felinefocus
experience, practical assessment, ongoing professional development and for some relevant education. Examples, include the Association of Pet Behaviour Counsellors (APBC), The Certified Clinical Animal Behaviourist (CCAB) scheme and the International Association of Animal Behavior Consultants (IAABC). A few organisations are only open to those who have completed specific courses, for example the COAPE Association of Applied Pet Behaviourists and Trainers (CAPBT) is restricted to those that have studied and achieved qualifications by the same organisation (COAPE). Additionally, an individual may cite membership of interest groups which should not be confused with qualifications as often membership of such groups is open to anyone.

Species specific behaviour knowledge
The behavioural repertoire and motivations to perform behaviours varies greatly between species, and a sufficient level of knowledge and experience of one species does not mean competency in dealing with the behaviour issues of another. The majority of companion animal behaviourists work predominately with dogs and it may be preferable, where possible, to refer feline cases to a suitably qualified ‘cat only’ behaviourist. However, don’t disregard someone dealing with both species if qualified, experienced and knowledgeable in feline behaviour.

Insurance
It is also important to ensure that any behaviourist the veterinary practice refers to holds full public liability and professional indemnity insurance so that they are able to meet any liabilities that they may incur.

‘In-house' internal referral for problem behaviours
Being able to offer ‘in-house' behaviour consultations benefits the clinic and clients, especially if there is no local behaviourist (Figure 4). However, behaviour cases can vary greatly in severity and complexity so a veterinary surgeon or nurse must recognise when a case or treatment is out of their area of competence and refer externally.

Figure 4: Having a staff member in the clinic who is trained to manage behaviour cases can be very valuable. (Photograph courtesy of Richard Murgatroyd)
As well as knowledge, the amount of time required to hold behaviour consultations is another consideration for a busy veterinary practice. Home visits can be preferable, especially for feline cases, and at least 2 hours are usually required to acquire all the necessary history and to impart all the necessary advice and information. Also, following each consultation, a full and individualised written report for the client should be prepared to augment the advice given verbally. Follow-up communication to assess progress and provide support is also an important part of the consultation process.

Other options
Some behaviourists offer telephone or ‘Skype’ consultations, which may be one option if you are unable to offer ‘in-house’ behavioural advice and you do not have a suitably qualified behaviourist in your area who can visit the client. If this is not possible then the best thing can be to direct clients to reputable written or online help and advice, such as can be found on the iCatCare website, www.icatcare.org.

First aid advice
Whether the decision is to refer, treat ‘in-house’, or direct to online help, being able to offer initial ‘first aid’ advice to help the client deal with the behaviour in the short term and prevent escalation of the behaviour problem can be of great help to the client. This can also boost client relations. However, to prevent unrealistic expectations it must be made clear to the owner that this advice is purely ‘first aid’ and not designed to completely resolve the problem.

Problem behaviours
House-soiling
House training issues are most commonly the result of litter tray, or substrate aversion or a reluctance to go outside (if the cat normally eliminates outdoors). Veterinary examination is particularly important as the aversion could be due to pain or discomfort, either when

Punishment
Whatever the behaviour, the client must be dissuaded from attempts at direct punishment such as shouting at the cat, making other loud noises, hitting the cat, using electronic ‘shock’ devices or squirting with water (Figure 5). Many problem behaviours stem from the cat feeling fearful, insecure or anxious. These acts, therefore, are more likely to increase distress for the cat and the underlying motivation for the behaviour. Such actions can also severely damage the cat’s relationship with the owner.

Figure 5: Attempts at direct punishment must be discouraged as they can increase distress for the cat and severely damage the cat-owner relationship
attem pting to eliminate, or when attempting to access the elimination area.

First aid measures that may help are:
• Review any recent changes, ie, change of litter substrate, litter box location, size, etc, and if the problem started since the change, go back to the previous provision.
• Ensure that a sufficient number of litter trays are provided, especially for indoor cats and multiple cat households. Many cats prefer one area to urinate and another area to defecate, so

Urine spraying

Indoor urine marking is one of the most common feline behaviour problems. In entire males and females in oestrus it is used as a way of advertising ‘fitness’ to potential mates and rivals, so neutering can be a highly effective means of curtailing this behaviour. However, neutered cats of both sexes can and do also urine mark (Figure 6).

When neutered cats spray mark the reason is more likely to be stress and insecurity, the underlying cause of which needs to be correctly identified and addressed. However, because cats will ‘over mark’ previous spray sites, correct cleaning and the use of a pheromone spray (see box right) to encourage the cat to leave scent from the facial glands instead, can often help to limit the behaviour.

Correct cleaning to prevent respraying
• Clean the area where the cat has sprayed urine using plenty of warm water, dry and then wipe over or spray with surgical spirit. Then leave for a few minutes to dry completely.
• Apply Feliway Classic (Ceva) spray from a distance of around 10 cm to the site and to nearby prominent objects.
• Apply a small marker (eg, a small piece of sticky paper) to the site so that the area can be easily identified.
• Check daily that the area has not been sprayed with urine again. If so, clean as described above.
• If the site is still clean, or once it is clean and dry — apply the pheromone spray.
• Repeat daily.
• Continue for at least 1 month, or until the cat is observed rubbing on the area.
• Biological detergent or commercial odour elimination products can be used to clean spray sites, but any remaining residue will deactivate the pheromone product.

Key point
Urine spraying can be an indication of stress and insecurity, but appropriate cleaning of the area may prevent the cat marking the same location again.
the general recommendation is one per cat plus one extra.

- The scent of urine and/or faeces can attract a cat back to areas where it has eliminated previously, so it can often help to rid the area of the scent as much as possible.
- Clean areas using either a proprietary veterinary odour elimination product or a 10–20% solution of biological detergent.
- Rinse and spray or wipe over with surgical spirit. (Advise the client to test a small area first to ensure that the area will not be damaged by cleaning.)
- The use of a pheromone product such as Feliway Classic is only indicated if the cat is scent marking (spraying).
- Deny the cat access to the area where it is eliminating inappropriately. If this is not possible, placing a litter tray in that area may encourage the cat to use the tray instead. The tray can then later be very slowly and gradually moved to a more suitable location.

Conflict between household cats

Fighting between cats that live together can often be caused by competition for resources. Doing as much as possible to reduce competition may therefore help:

- Feed the cats separately, preferably in different rooms.
- Provide sufficient litter trays, ie, at least one per cat plus one extra, situated in different locations so that one cat is not able to guard the entrance or exit to the litter tray ‘area’.
- Provide sufficient safe comfortable resting places for all cats.
- Ensure all cats have access to high places and escape routes so that they have the option to avoid contact.
- A ‘plug-in’ pheromone diffuser

Aggression towards people

Biting and scratching can be defensive, re-directed, predatory or, in many cases, a combination of these factors (Figure 7). So correctly identifying the reason for aggression is essential. However, the following basic advice can help to prevent further injury:

- Do not attempt punishment.
- Try to identify times, places and trigger factors for the aggression, and as much as possible avoid these.
- If aggression occurs while stroking, keep stroking times very short, or avoid stroking until professional help is available.
- Watch for the following body language that may indicate that the cat may be about to use aggression:
  - ears flattened to the side, or rotated backwards;
  - dilated pupils; and
  - ‘swishing’ tail.

If the cat attacks, try to keep still. Movement can often exacerbate an attack. If possible, try to redirect the cat’s attention to an inanimate moving object, eg, a toy. Then very slowly withdraw your hand, or whatever part of your body the cat is attacking, away from the cat.

Figure 7: In cases of aggression towards people, the underlying cause needs to be identified, but first aid advice may help to limit or prevent further injury
Fear and anxiety

Fear is normal and necessary for survival. In the wild, fear is usually short-lived. However, for some pets cats, prevalent stressors can mean fear and anxiety can be frequent emotional experiences. In such cases a behavioural consultation is necessary to fully assess the cat, identify the causes of the fear and address all necessary issues. However, a few ‘first aid’ dos and don’ts can be very helpful for both cat and owner:

- Don’t worry or fuss over the cat; continue to act as normal. But do not ignore the cat if it attempts to solicit affection and comfort. Dogs are more likely to take cues from their owners as to whether something is a threat or not, but cats may do so as well, especially if the cat has a strong bond with the owner. Ignoring the pet, especially if this is abnormal behaviour by the owner, can increase frustration and arousal in the animal and so also increase reactivity in association with fear.
- Never force the cat into situations or places, etc, that it finds frightening, unless it is unavoidable (eg, going to the vet).
- Avoid picking up or attempting to restrain the cat. This may cause the cat to panic resulting in re-directed defensive aggression towards the person holding the cat.
- Ensure that the cat has somewhere safe to hide, such as under the bed, behind a chair, etc, and allow the cat to remain there undisturbed for as long as it wants. Never force the cat to go anywhere it doesn’t want to go.
- Do try to block out or avoid whatever it is that the cat is scared of as much as possible. If it is a loud noise from outside close all the doors and windows; pull the curtains and turn up the volume on, for example, the radio or television.
- Always keep cats securely shut in when fireworks are very likely to be let off in the neighbourhood.

Conclusions

Problem behaviours are common in cats, but may go unnoticed by clients until severe. External referral to a suitably qualified individual may be required, but training a member of practice staff and so enabling them to give ‘first aid’ advice can be of great benefit to clients and the practice by enhancing practice/client relationships.

References


Useful links

- www.apbc.org.uk
- www.asab.org/ccab-register
- www.capbt.org
- www.abtcouncil.org.uk
- www.bvba.org.uk
Antifreeze

EXTREMELY DANGEROUS TO CATS

Every year cats die because they have been poisoned by antifreeze – don’t let your cat be one of them. Here’s how to keep your cat safe.

What is antifreeze?
Ethylene glycol, otherwise known as antifreeze, is a chemical used to prevent freezing. It is used in car radiators, screen washes and de-icers, and in water features to prevent them freezing up.

Why is it so harmful to cats?
Unlike most chemicals, cats seem to be attracted to the taste of antifreeze. However drinking just a tiny amount will cause serious kidney damage, often so severe that the cat will die.

How can I protect my cat?
› Avoid using antifreeze-containing products
› NEVER use in outdoor water features
› If you do have antifreeze products, store safely away from animals (and children) – a single lick from a bottle can be fatal for a cat
› Clean up any spillages immediately and keep cats away from affected areas until dry
› IF YOU SUSPECT YOUR CAT HAS INGESTED ANTIFREEZE, SEEK IMMEDIATE VETERINARY ATTENTION

icatcare.org/keeping-cats-safe

INTERNATIONAL CAT CARE – KEEPING CATS SAFE CAMPAIGN
Safe and effective use of chemotherapy: a nurse’s perspective

Chemotherapy is increasingly used in both first opinion and referral practice to treat cats with cancer. The aims of treatment may be curative, or palliative, and quality of life should be maintained throughout. Safety of staff is vital, personal protective equipment should be used and standard protocols for the handling and administration of chemotherapeutics should be created and followed. Nurses and technicians can ensure patients are comfortable, by minimising pain and stress during hospitalisation.

Chemotherapy is frequently used in veterinary practice today as an acceptable and common method of treating cancer in cats. This article will run through the reasons for giving chemotherapy, the role of the nurse in this treatment process, and how to help with safe administration and patient handling.

Why give chemotherapy?
The aim of chemotherapy is to treat cancer and prolong survival time, while maintaining excellent quality of life, by either:
• reducing the size and growth rate of a tumour or multiple tumours;
• helping to reduce recurrence of local tumours after incomplete surgical excisions;
• reducing the size of a tumour before surgery to make it easier to excise; and/or
• providing palliative care, to ease clinical signs.

The nurse’s role
The veterinary nurse/technician has a major role to play during the chemotherapy process, including:
• acting as an advocate for the owners, increasing client communication and confidence in their decisions, and as a point of contact if the owners have any concerns;
• helping with patient assessment, not just vital signs but comfort levels within the practice (stress and pain);
• helping with the administration of drugs, in a safe and animal friendly manner;
• providing nursing care including monitoring for adverse effects; and
• client education.

Key point
Chemotherapy treatment can be very worrying for owners, but veterinary nurses can provide advice and support throughout the process.

Ann Stanford
RVN BSc(Hons) Grad DipVN

After qualifying as a veterinary nurse in 2006 from the Royal Veterinary College, UK, Ann Stanford stayed at the university referral hospital for a period before deciding to locum. She then joined a first opinion and referral practice on the south coast of England where she completed her graduate diploma in advanced veterinary nursing in 2014.
How to...

Safe administration
Prior to administration of any chemotherapy drug, a full history should be obtained from the client including details of the patient’s wellbeing. A full clinical examination and blood screen should also be performed and the patient should be weighed. Temperature should be checked as pyrexia may indicate an infection as a result of neutropenia, a common side effect of chemotherapy.

Key point
Patients should be weighed at every visit to allow for accurate dosing of chemotherapy, and to identify weight losses or gains.

Each practice should perform a risk assessment for the use of chemotherapy drugs, and create a protocol to be followed for the different routes of administration and different drugs. Within these protocols personal protective equipment (PPE) should be paramount, as occupational exposure to chemotherapy drugs has been reported. The relevant legislation that should be followed within these protocols will vary from country to country.

Considerations when administering chemotherapy

Staff
All staff involved in the administration of chemotherapy, or the care of animals receiving chemotherapy:

- should be educated, trained and confident in the handling and administration of cytotoxic drugs;
- should be over the age of 18 years;
- should not to be pregnant; and
- should be aware of, and comfortable with, the protocols and equipment to be used.

Environment
The patient’s treatment environment should be:

- quiet;
- restricted access, with one entrance (no thoroughfares);
- draught free, to prevent air contamination;
- comfortable, with suitable bedding;
- free of human food or drink; and
- as ‘cat friendly’ as possible, ie, no dogs in the same area.

Equipment
Equipment (see Figure 1 for set up) should include:

- personal protective equipment (PPE) (see Box 1, Figure 2);
- spillage kit (see Box 2, Figure 3);
- a closed system for drawing up and administering chemotherapy (eg, Phaseal system: Figure 4);
- catheters of appropriate sizes;
- local anaesthetic (EMLA);
- tape and bandage material;
- scissors;
- saline flush, 10–20 ml;
- food/titbits;
- catnip and pheromone spray (see Figure 5);

Figure 1: Equipment prepared for chemotherapy
Patient comfort
As chemotherapy patients are going to become regular visitors to the practice, making their stay as welcoming and pleasant as possible is important. A feline friendly approach can be adopted by creating housing with hiding places, pheromone use in the environment and a restriction on noise.

Additional points to improve the cat’s experience at the clinic:

- cytotoxic sharps bin and chemotherapy waste bin,
- the chemotherapy drug required;
- a 100 ml saline bag for longer infusion; and
- Luer lock syringes.

Tip
Consider applying a local anaesthetic cream prior to catheter placement. Cover with a plastic dressing (cling film, for example) and leave for 20-30 mins to allow it to diffuse into the skin.

- asking owners about their pet’s favourite foods;
- use of local anaesthetic (EMLA) on the skin to prevent pain on venepuncture; and
- sedation may be required for some cats, especially if receiving long infusions.
How to...

Monitoring
After treatment, patients should be monitored for adverse effects. Temperature and demeanour should be assessed before discharge. Practice protocols should follow local rules, which include:
• the approach to patient care including soiled bedding;
• where patients can urinate; and
• handling while hospitalised.

Due to the multiple excretion routes of various cytotoxic drugs, patients on a treatment programme should be handled using PPE at all times. Soiled bedding should be dealt with in an isolation/barrier nursing manner and excretions should be cleaned up and disposed of into cytotoxic waste.

Safety
Contamination can occur via multiple routes and all staff dealing with the patient should be adequately trained.

Inadvertent exposure can occur via;
• skin or mucous membranes due to contamination via splashes or spillages;
• inhalation;
• ingestion; and
• needle stick injuries.

Reducing risks during administration
• It is now possible to obtain pre-constituted and dosed drugs for
administration, reducing risk of exposure during preparation of cytotoxic drugs.

- Positive pressure vials increase the risk of aerosol spread and contamination.6 Using a sealed, needle-free system, such as the Phaseal system, can reduce needle stick injuries and aerosol spread. The system has an equalisation chamber on the side of a vial adopter, which fits directly over the vial top.

- Tablets and capsules should not be divided as dust that is produced will cause environmental contamination. All tablets and capsules should be given whole, directly to the patient and not via food.

References
### Free webinars in 2017

In addition to the monthly online journal, *Feline Focus*, the International Society of Feline Medicine (ISFM) runs monthly webinars for veterinary nurses and technicians as part of the free ISFM nurse membership. All webinars are presented by internationally recognised experts in their field.

<table>
<thead>
<tr>
<th>Date (8 pm UK time)</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>Christine Heinrich&lt;br&gt;DVOphthal DipECVO MRCVS</td>
<td>Which eye drop, when and how?</td>
</tr>
<tr>
<td>February</td>
<td>Sam McMillan&lt;br&gt;VTS(Anaesthesia) DipAVN(Medical) RVN</td>
<td>Optimising recovery in feline anaesthesia</td>
</tr>
<tr>
<td>March</td>
<td>Vicky Halls&lt;br&gt;RVN DipCouns Reg. MBACP</td>
<td>Nurses role in managing problem behaviour</td>
</tr>
<tr>
<td>April</td>
<td>Nicola Ackerman&lt;br&gt;BSc(Hons) RVN CertSAN CertECC&lt;br&gt;VTS(Nutrition) A1 VI 1 C-SQP Hons MBVNA</td>
<td>Nursing the inappetent cat</td>
</tr>
<tr>
<td>18 May</td>
<td>Louise O’Dwyer&lt;br&gt;MBA BSc(Hons) VTS(Anaesthesia &amp; ECC) DipAVN(Medical &amp; Surgical) RVN</td>
<td>Nursing the collapsed cat</td>
</tr>
<tr>
<td>28 June</td>
<td>Martha Cannon&lt;br&gt;BA VetMB DSAM(Fel) MRCVS, RCVS&lt;br&gt;Recognised Specialist in Feline Medicine</td>
<td>Running a feline friendly ward</td>
</tr>
<tr>
<td>July</td>
<td>Helen Tottey&lt;br&gt;RVN</td>
<td>Running successful nursing clinics in practice</td>
</tr>
<tr>
<td>August</td>
<td>Lauren Finka&lt;br&gt;BSc MSc PhD</td>
<td>Reducing stress in the clinic</td>
</tr>
<tr>
<td>21 September</td>
<td>Louise O’Dwyer&lt;br&gt;MBA BSc(Hons) VTS(Anaesthesia &amp; ECC) DipAVN(Medical &amp; Surgical) RVN</td>
<td>CPR</td>
</tr>
<tr>
<td>October</td>
<td>Emily Thomas&lt;br&gt;BA VetMB MRCVS DACVECC</td>
<td>Dyspnoea for nurses</td>
</tr>
<tr>
<td>November</td>
<td>Denise Prisk&lt;br&gt;DipAVN (Surgical) VTS (Anaesthesia &amp; Analgesia) LCGI LTCL RVN</td>
<td>High risk anaesthesia in cats</td>
</tr>
<tr>
<td>12 December</td>
<td>Alex German&lt;br&gt;BVSc(Hons) Phd CertSAM DipECVIM-CA MRCVS</td>
<td>The obese cat</td>
</tr>
</tbody>
</table>

After the initial broadcast, members can access these webinars at any time via the online library.

To learn more go to: www.icatcare.org/nurses

![ISFM logo]

Together, beyond animal health
Flat-faced breeds: scientific evidence for health problems is growing

Some cat breeds, like some dog breeds, have progressively become more flat faced (or brachycephalic) as ‘fashion’ dictates — driven by misguided individuals or as the show judges encourage. There has always been denial that such cats are suffering. It has become accepted that if you have a Persian or Exotic Shorthair cat with a very flat face that you will have to wipe its eyes and clean the hair on its face because of tear staining, and provide food of a different shape to overcome eating difficulties caused by jaw and dental problems. Snoring is seen as amusing rather than an issue connected to poor airways. Now we have growing evidence to back up our worries on the welfare of such cats.

A recent scientific paper from the University of Edinburgh,1 has added to growing evidence that points to flat-faced, or brachycephalic, cats (Figure 1) having breathing difficulties, eye problems and many other issues which accompany ‘designing’ that very flat face. The paper comes on top of a recent successful prosecution in Switzerland under the Animal Protection Act, brought against two people who bred extremely brachycephalic cats. The revised animal protection law there has strengthened

Figure 1: (a and b) The flattened faces of extremely brachycephalic Persian cats. Narrowed nostrils can cause breathing problems. Eye and tear staining is another feature of the breed.
Special interest

regulations against intentional breeding to produce specific traits that compromise the health and wellbeing of an animal.

Health problems
This law recognises that affected animals suffer because of the shortening and flattening of the head, which constricts nasal passages and can result in respiratory and feeding problems. In addition, the tear fluid cannot drain normally from the eyes, explaining why such cats have permanent eye discharge and tear staining of the face.

The eye and facial abnormalities can result in chronic inflammation of the eyes, and problems with skin infections in the folds around the flattened nose and across the face.

Many affected cats also have difficulty in picking up food as the jaw is also malformed, with the teeth and jaw being misaligned.

Looks over welfare
Shamefully, in pursuit of a look or fashion, breeders of some cats and dogs are selecting for ever shorter muzzles (Figures 2 and 3), which inevitably results in serious welfare issues. Impaired breathing in these animals (part of a condition called brachycephalic obstructive airway syndrome [BOAS]) can lead to health problems throughout an animal’s life. This has been a common problem in many brachycephalic breeds of dog such as the Pug and Bulldog, and there

Figure 2: (a and b) Comparison of a normal cat muzzle and the extremely shortened muzzle of a brachycephalic cat

Figure 3: Brachycephalic cats, like this Exotic Shorthair, have been found to lead a more sedentary lifestyle. They are less likely to be very active, possibly due to chronic breathing difficulties
have been increasing calls from veterinary and welfare organisations to recognise the suffering this causes.

**Scientific evidence**

The Edinburgh study saw hundreds of owners submitting photographs of their cats and completing a detailed health survey so that researchers could measure the facial features of the cats and assess breathing abnormalities (noisy breathing or difficulty breathing after exercise). The research found that flatter-faced cats (breeds such as the Persian and Exotic Shorthair) were more likely to have breathing problems, and that
the breathing difficulties were also associated with increased tear staining and a more sedentary lifestyle. It is likely that the cats were incapable of being very active due to their difficulties in breathing.

A previous paper published in the Journal of Feline Medicine and Surgery,\(^2\) showed dramatically how the skull, especially the nose and jaw, are deformed in such cats. The images demonstrating the altered conformation (Figure 4) are shocking and a salutary reminder of how severely the normal skull structure has been changed.

**Cruel not cute**

Unfortunately, breeds of cat and dog with flat faces are becoming more and more popular, and extremes (of an already abnormal anatomy) can become instant internet celebrities. These breeds and individuals often have large or prominent eyes, which are considered by some to be ‘cute’ because they are baby-like — sometimes the eyes are so big that they cannot even close them, for example: www.instagram.com/exoticherma.

The flattened face often has an up-turned or down-turned mouth, which gives it a human or cartoon characteristic of smiling or scowling for example: www.instagram.com/realgrumpycat.

**References**


**Further reading**

- International Cat Care website. Inherited disorders in cats: http://icatcare.org/advice/cat-breeds/inherited-disorders-cats
- International Cat Care website. Severe brachycephaly in Persian and related breeds: http://icatcare.org/advice/cat-health/brachycephalic