Emergency patients can present with varied aetiologies, from patients having suffered trauma, to patients with significant metabolic diseases, neurological emergencies (such as seizures), gastrointestinal emergencies, respiratory emergencies, lower urinary tract emergencies, toxicoses, haematological crises or sepsis to name a few. Each of these conditions will require different management approaches.

**Initial Telephone Contact**
Practice staff other than veterinarians are likely to be primarily responsible for this phase of the patient management. The recognition of the described symptoms as a serious illness is vital. There is always the challenge however of different levels of recognition of clinical signs by the owner. There are certain symptoms that suggest a patient needs to be evaluated as soon as possible, such as a loss of consciousness, significant haemorrhage, cluster seizures or status epilepticus, sudden abdominal distension (especially with unproductive attempts at vomiting), recent observed ingestion of a toxin, significant respiratory distress, cyanosis, or trauma or serious fight wounds. In many cases advice should be given to attend the clinic as soon as possible. There are some situations where a delay in attending the clinic is recommended, such as a known hypoglycaemic animal that has collapsed, where administration of some glucose to the oral mucous membranes and then feeding when conscious would be recommended. In a haemorrhaging patient where possible advice should be given to try and apply pressure to the site of haemorrhage if superficial. Advice must always be given in a patient that has suffered trauma to try and minimise the risk of a client being bitten by a distressed patient.

**Arrival at the Clinic**
Often the receptionists and/or nurses are the first to see patients at the time of presentation at the clinic. Sometimes the staff will be expecting the arrival of an emergency patient if there has been a prior phone call, but other times they will be ‘walk-ins’. It is essential that the critical patient is recognised and taken immediately to a treatment area of the clinic where the patient can receive immediate care. The list of patients that require emergency assistance is described above. Obviously it may be harder for the receptionist or nurse to recognise a distressed cat that may be enclosed in a carrier unless the owner describes relevant symptoms. If an infectious disease is suspected, such as a puppy with parvovirus that is collapsed, the patient should ideally not be taken to a high traffic area of the hospital.

**Initial Evaluation and Therapy**
In patients that are unstable there may be minimal history collected, and a basic evaluation and emergency therapy are instituted prior to a full history is collected or a full physical examination is performed. Basic parameters should be evaluated, such as temperature, heart rate and rhythm, pulse character (and relationship to heart rate), respiratory rate and effort, mucous membrane colour and capillary refill time and the level of consciousness. In patients with respiratory distress care must be taken not to
stress the patient further. Extension of the head and neck can signify respiratory distress. A visual examination assessing the nature of respiration is recommended – tachypnoea vs dyspnoea, and if dyspnoea the character of the dyspnoea – inspiratory vs expiratory. Once the patient is a little more stable thoracic auscultation to determine breath sounds or abnormal respiratory sounds is important, and thoracic percussion may help indicate pleural space disease if there is respiratory distress. In a deep chested dog with significant abdominal distension there should be percussion of the abdomen to detect hyperresonance. In a patient that is not breathing or has no audible heart sounds should have resuscitation instituted immediately if the owner wishes. In a trauma patient with altered neurological function suggestive of possible spinal injury, movement should be minimised and the patient strapped to a board or table. A full physical examination can be completed once the patient has been stabilised.

In a patient with hypothermia, gentle rewarming should commence. Rapid peripheral rewarming can cause hypotension, but core rewarming may be of value, with warm intravenous fluids, enemas etc.

In some patients blood samples may be collected soon into the initial evaluation. Blood should be placed in EDTA, and heparin or serum tubes. If a coagulopathy is suspected blood should be collected into citrate tubes, which must be filled properly. Basic parameters that should be evaluated include PCV/TP, blood glucose, a blood urea, and depending on the patient and equipment available a blood gas analysis (which will also provide electrolyte values). Testing beyond this will be indicated on an individual patient basis.

In patients that have suffered trauma or have respiratory distress, a pulse oximeter can be used to gain an initial assessment of oxygenation. In a patient that has respiratory distress or has suffered trauma, oxygen therapy is indicated. This could be achieved with an anaesthetic circuit and face mask, flow by oxygen, an oxygen cage or tank for smaller dogs or cats, or even an Elizabethan collar with some plastic wrap over the front and an oxygen line in the side. Intranasal oxygen can be placed if needed once the patient has been at least somewhat stabilised. Minimal handling is ideal for cats with respiratory distress. In a patient with a suspected pleural effusion, ultrasonography can indicate a pleural effusion with minimal stress. Another alternative for a suspected pleural effusion or pneumothorax is an emergency thoracocentesis to improve ventilation. In patients with respiratory distress that have indications of left sided heart failure (tachycardia, murmurs, arrhythmias, gallop rhythms) administration of diuretics may be indicated. In a cat with suspect asthma, a bronchodilator may be life saving. In patients with severe dyspnoea from laryngeal paralysis that are distressed, mild sedation may be of value.

In patients that have collapse, or signs of shock or cardiac disease a blood pressure measurement is indicated. If there are signs of hypovolaemia or shock fluid therapy is indicated. If fluids are to be administered rapidly short, large bore catheters should be placed in the cephalic veins, and fluids administered by gravity or using pressure bags. There are some situations where very aggressive fluid therapy is contraindicated. Such situations include possible pulmonary contusions, head trauma, heart failure, or patients that are significantly hyperosmolar. In patients that are hypotensive or in shock that are poorly responsive to crystalloid fluids colloid therapy may be indicated. If a patient has lost a large amount of blood, either externally or internally into the peritoneal cavity or pleural space, a blood transfusion may be necessary.
In patients with toxin exposure, there is some general therapy that may be required. If the exposure was topical, such as permethrin in cats, the patient should be bathed and then dried to avoid hypothermia. If oral exposure of a toxin that was recent, emesis may be indicated. There are some contraindications for induction of emesis including a patient that is already vomiting, ingestion of corrosive agents, severe obtundation, a lack of gag reflex, ingestion of stimulants, or severe cardiac disease. Activated charcoal and cathartics may also be indicated. Specific antidotes should be administered if available for a particular toxin.

In patients with head trauma, and signs of increased intracranial pressure (hypertension and bradycardia), mannitol may be indicated.

Ongoing monitoring of emergency patients is essential. Monitoring of vital signs, serial examinations, and use of simple diagnostic techniques such as serial basic blood tests (PCV/TP, glucose), pulse oximetry, blood gases, and potentially serial imaging.
Triage in Mixed Cattle Practice

Ben Gardiner
Nandewar Animal Health Services
Barraba Manilla Bingara
Triage

• The prioritisation of patients for medical treatment
• In rural practice modified by the attempt to be in two places at once!
Strategies to assist efficient Triage

- Best possible definition of the “Emergency”
- Logistics of response
- Cost/Benefit of response
Defining the “Emergency”

- Single or multiple animals involved?
- Contagious? Suspect EAD?
- Is it life threatening?
- How time sensitive to treat? Impact of delay?
- Best guess over-the-phone diagnosis
  - Pictures
  - History
  - Client competence
Logistics of response

Is the problem fixable?
– availability of a veterinarian
– different treatment options, including likelihood of ongoing treatment
– drugs and equipment likely to be required
– estimated time to arrive on farm and then complete the job
– impact of rearranging schedule
Cost Benefit Estimations

• Single animal – Value of Bull v Cow v Calf
• Balanced against confidence of favourable result
• Multiple animal problem?
• Many clients overlook value of investigating DEAD animal(s) – risk to remainder of herd
• Grazing animal mortalities – shift paddocks
• Refer LHPA?
Interesting cases but fixable?

This is genuinely severe, acute, urgent! But certainly not fixable
True emergencies in cattle practice?

- Toxicoses
- Anaphylaxis
- Frothy bloat
- Acidosis
- Mastitis
- Metabolic crisis
- Prolapsed uterus?
- Dystocias
- Multiple mortalities

- LDA/RDA
- Uterine torsion
- Septicaemia
- Acute scours
- Lameness

- Remember the client does not often ring up with a ready made accurate diagnosis!
Effective Communication

• Good telephone communication skills vital
• Animal status – simple enquiries
  – Yarded or paddock?
  – Physical findings eg dystocia owner had a go?
  – History eg fed urea/molasses, administered Rumensin® capsule 5 days ago!
  – Smell? Esp. Dystocia!!!
  – Prolapses – Vagina or Uterus big difference
Effective Communication

• After the technical analysis, it is often important to convince the caller that the problem is not critical, that it can wait until a veterinarian can attend “this afternoon”!
Preparedness for Response

• Diagnostic tools
• Equipment
• Drugs
• PPE
• Fuel
• Directions to farm
• Suspected EAD?
Grain engorgement - Urgent?
Acute, Urgent response required
Ugly but passed urgent
Chronic, not urgent, not fixable
Timing can be important

May be able to resolve    Too late for this one
Sometimes we can attend too soon!

Too soon for surgery  A good surgical candidate
Is this an Emergency?
What about this?
Severe? Cost/Benefit?
Not a ½ hour job, potential loss
Past urgent!
The Real Problem
$15,000 bull v $600 steer?
90+% affected of 350 most bilateral
Focus on our Objective

• Our role in production animal veterinary science is to solve animal health and welfare issues, and to enhance productivity in a cost-effective manner
• Being a productive contributor to this essential industry makes for very rewarding careers
• Every production animal is bred to be slaughtered at some time and has a $$ value
• If the solution does not meet the equation: value $\times$ risk
• then euthanasia is a valid option
Envenomation: Tick Paralysis

Michael Cannon BVSc, MACVSc, GradDipEd.

Introduction

Professor Rick Atwell describes tick paralysis as “an acute, progressive, ascending motor paralysis caused by salivary neurotoxin(s) produced by certain species of ticks”. What he cannot describe well in a scientific paper is the anguish and emotion that is released when the diagnosis is missed or a patient dies because it was presented in an advanced stage of toxicosis.

Of the approximately 70 tick species found in Australia, the focus is mainly on one species – *Ixodes holocyclus*, the commonly named paralysis tick. This tick species regularly attaches to domestic animals including dogs, cats, cattle, and horses, and occasionally to humans.

In the area I live and work (Illawarra, East coast of Australia just South of Sydney) the tick species *Ixodes holocyclus* is endemic, supported by the natural host – bandicoots. These bandicoots are rarely affected, presumably acquiring immunity at an early age. Interestingly, if the bandicoots are deprived of exposure to the toxin they also become susceptible to its effects.

Using diagrams and images to assist clients in identifying ticks and understanding their life cycle can be a useful addition to your consultation room wall.

Factors contributing to envenomation

Host Factors:
- Species affected
- Sensitivity to toxin
- Age of animal affected
- Concurrent work factors
- Reaction to environmental factors
- Skin reactivity
- Population density

Tick Factors:
- Toxin absorption and circulation dynamics
- Virulence
- Paralysis-inducing capability
- Sexual activity
- Rate of infestation
- Frequency of the sucking stage

Many of these factors are unknown when an individual animal presents so predicting the outcome is only for the very brave or extremely foolish. Toxicity does not relate directly to tick size or duration of attachment.

Ticks are usually reported as being maximally active mainly in Spring and early Summer. In my experience, the female ticks are more active and more eggs appear to hatch whenever there is a short bout of rain (to cause a rise in humidity), followed by...
warm weather. The ticks are easily killed by extremes of temperature and wet conditions.¹

A tick needs to form a blood pool to suck blood effectively, hence the formation of a crater⁴. Most dogs become ill on day 4 of tick attachment⁴.

Paralysis usually occurs during the period of rapid engorgement by the adult female Ixodes, but there have been reports of it also being caused by large numbers of larval or nymphal ticks.¹ It is presumed that the toxin travels from the attachment site to the systemic circulation via the lymph system.¹

The main cause of death in severe cases is primary hypoventilation¹. The toxin also causes myocardial depression and diastolic failure which leads to cardiogenic pulmonary oedema and signs of congestive heart failure¹.

Throughout Australia, mortality and morbidity is the same but clinical signs vary from area to area.

**Clinical Findings**

Clinical signs are usually seen within 3-5 days of attachment (in rare cases it can be up to 18 days)¹. Progression of clinical signs is rapid over 24-48 hours¹. Removal of the attached tick does not stop progression of clinical signs but many animals will deteriorate over the subsequent 24 hrs.

Early signs include¹:

- Dysphonia or loss of voice (laryngeal paresis)
- Hindlimb incoordination and weakness
- Change in breathing rhythm, rate, depth and effort
- Gaging, grunting or coughing
- Regurgitation or vomiting
- Dilated pupils

Assessment of the respiratory tract is also important. Bronchoconstriction, fatigue of respiratory muscles and eventually aspiration of oesophageal/gastric secretions can lead to aspiration pneumonia¹. In many cases the poor airflow interferes with auscultation of crackles, so pneumonic changes are undetected until they are severe¹. Radiography may reveal extensive pulmonary opacity in dyspnoeic dogs with minimal clinical signs. These cases are often terminal.

Upper respiratory tract obstruction in dogs may be seen as a marked expiratory stridor with head and forelegs extended to maximise air flow¹. Palpation at or just below the larynx may reveal a thrill secondary to the obstruction and stridor¹.
Affected dogs lose their thermoregulatory capacity (secondary to airway compromise and loss of shivering reflex with paresis), so body temperature should be monitored for both hyperthermia and hypothermia, varying with the ambient environmental factors.

Pulmonary oedema, secondary to congestive heart failure, can occur with diastolic myocardial dysfunction and some dogs may develop a ventricular arrythmia that is lethal.

Cats that are affected may develop significant anxiety. It is important to handle these animals minimally as they may die suddenly (from dyspnoea, hypoxaemia, acidosis and hypercapnoea) if stressed.

The airway constriction seen with cats that are mildly paretic may be easily misdiagnosed as asthma as the signs they display are similar: expiratory wheeze on auscultation; forced abdominal respiratory effort; and easily induced.

Atwell has developed a 4-stage classification for Neuromuscular and Respiratory signs in the dog:

**Neuromuscular Score**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dysphonia (noticed retrospectively), weakness and incoordination but can still stand and walk. Best assessed walking up stairs</td>
</tr>
<tr>
<td>2</td>
<td>Can stand but unable to walk (obvious ataxia/paresis)</td>
</tr>
<tr>
<td>3</td>
<td>Cannot stand but can right itself</td>
</tr>
<tr>
<td>4</td>
<td>Cannot right itself</td>
</tr>
</tbody>
</table>

Any dog in stage 3 or 4 has a guarded prognosis.

**Respiratory Score**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Normal - No clinical respiratory compromise</td>
</tr>
<tr>
<td>B</td>
<td>Mild compromise - increased HR &amp; RR</td>
</tr>
<tr>
<td>C</td>
<td>Cannot stand but can right itself Moderate Compromise - restrictive breathing, gagging, retching</td>
</tr>
<tr>
<td>D</td>
<td>Cannot right itself Severe compromise - expiratory grunt, dyspnoea, cyanosis</td>
</tr>
</tbody>
</table>

These combined neuromuscular and respiratory scores (1A to 4D) are particularly useful when more than one person will be assessing the cases each day, to maintain consistency and assess if there is improvement or not.

Below are 2 tables that I add to the patient’s file on our computer to assist in being thorough when I am examining a tick case. It also helps someone who may be assessing it later as comparisons may be made more easily:
**Tick Assessment:**

<table>
<thead>
<tr>
<th>No. Ticks</th>
<th>Location:</th>
</tr>
</thead>
</table>

Observations as below: (circle or fill in appropriate data)

HR= RR=

Breathing Pattern: Normal
Obstructive (slow, deep)
forced exp effort, exp stridore, wheeze, grunt
Restrictive (Shallow, fast, crackles)

Coughing? Gagging? Increased Anxiety level? Regurgitation/Vomiting?

**Assessment of Signs:**

<table>
<thead>
<tr>
<th></th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score NM</td>
<td>1</td>
<td>2</td>
<td>3-4</td>
</tr>
<tr>
<td>Score Respiratory</td>
<td>AB</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Mucosae</td>
<td>NAD</td>
<td>Bright Pink</td>
<td>Dark Red/Cyanotic</td>
</tr>
<tr>
<td>Heart Sounds</td>
<td>NAD</td>
<td>softened</td>
<td>Barely audible</td>
</tr>
<tr>
<td>Pulse Amplitude</td>
<td>NAD</td>
<td>Low</td>
<td>Barely palpable</td>
</tr>
<tr>
<td>Blood PCV % TP</td>
<td>&lt; 45</td>
<td>45-55</td>
<td>&gt;55</td>
</tr>
<tr>
<td>ECG QT (50mm/sec)</td>
<td>&lt; 280</td>
<td>280-300</td>
<td>&gt;300</td>
</tr>
<tr>
<td>T wave inversion (lead 2)</td>
<td>NO</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>U/sound FS%</td>
<td>&gt;30</td>
<td>&lt;30</td>
<td>&lt;20</td>
</tr>
</tbody>
</table>

**Diagnosis**

Diagnosis can be frustrating as a tick may be difficult to locate or may no longer be attached and you are searching for a small crater. A tick must be part of the differential diagnosis when there are signs of lower motor neuron or neuromuscular disease. In a known tick area this is easier as it is an endemic problem. The more difficult cases are outside the traditional tick areas. For these cases, a history of recent possible exposure by either a visit to the coast or a tick being transported onto the property (another animal has been to a tick endemic area or turf has been recently placed on the property and it came from a tick endemic area).

**Differential Diagnoses**:¹

- Botulism
- Polyradiculoneuritis
- Acute peripheral neuropathies
- Snakebite
- Polyradiculoneuritis
- Hypokalemia
- Toadfish or ciguatera toxicity

Include tick paralysis in any presentation of megaoesophagus, unexplained vomiting, acute left –sided congestive heart failure in dogs, or asthma in cats¹.
Increased PCV with normal serum protein, indicates a fluid shift into the lungs and a more guarded prognosis.\footnote{1}

**Treatment**
To initiate treatment, you must locate the tick(s). I usually sedate the animal with acepromazine (0.03mg/kg SC) and allow it to become calm before embarking on this procedure. The best method is to pick up the skin and allow it to run through your fingers, feeling for a mass the size of a crater or tick. The majority of ticks are found cranial to the forelimbs and so initially this is where we concentrate our attention. Over the years I have experienced that they can be attached anywhere so for severe cases or where a tick cannot be found, we will recommend a full clip of the fur. This has to be balanced against any stress it may cause and so should be approached gently and slowly. Unlike humans, it is safe to pluck a tick once it is located and it will not cause anaphylaxis\footnote{1,4}. An alternative to clipping is to apply an effective acaricide to the dog. This should kill the tick, ensuring the toxin production ceases. Unfortunately, if the acaricide does not reach the tick (e.g. deep in ear canal, nasal cavity or rectum) toxin production continues. The situation is similar when more than one tick is present on the dog and a search fails to locate the second or third tick - the dog will initially improve and then deteriorate, toxin is still being produced and injected by the remaining tick/s.

Once the tick is removed or the crater located treatment can begin with confidence. There are many myths surrounding tick removal, most of them are incorrect e.g. Squeezing the tick during removal does NOT increase the toxicity\footnote{9}.

Treatment has to address all the signs found in your examination and so treatment of each individual will vary:

**Medications:**
- **Tick Antiserum** (TAS) – to neutralize the toxin
  - Dose calculation is more an art than a certainty as there are so many variables\footnote{1,4,9}.
  - Give as early as possible as the TAS can only neutralize toxin in the circulatory system. The molecules of the TAS cannot penetrate the wall of the blood vessels and so cannot reach toxin that has passed into the tissues and become bound\footnote{1,4}.
  - You cannot remove toxin once it is bound to tissue sites, this helps to explain why top up TAS is not useful and also why it is less useful in severe clinical cases – the toxin has left the circulation and is bound to tissue sites.
  - Minimum dose is 0.5-1.0ml/kg delivered slowly IV or IP. Rapid IV delivery can cause reactions in over 80% of dogs\footnote{1,4}. The best delivery route in cats is IP\footnote{4}.
  - In dogs, deliver TAS by slow IV injection(over 15-20 minutes) and there will be no side effects\footnote{9}. Mortality from TAS is around 0.01%\footnote{4}.
- **Sedation:**
  - Acepromazine: (0.03mg/kg) is often useful prior to any medication, but high doses should be avoided in animals that are depressed, hypotensive or hypothermic.\(^1,4\).
  - An alternative used by some is Domitor (Pfizer, Medetomidine hydrochloride, 1.0 mg/mL, 0.1ml-0.25ml/10kg)
  - Opiates can be used as an alternative (eg, methadone (0.3-0.5mg/kg), and Butorphanol (10mg/ml, 0.1ml/10kg), SC or IM \(^1\).

- **General anaesthesia:** in animals that are severely dyspnoic, pentobarbitone IV will reduce dyspnea and enable muscle rest to assist in overcoming primary muscle fatigue and general exhaustion\(^1,4\). Periods of 6-8 hours are best, with reassessment after each period\(^1\).

- **Atropine:** use a low dose (0.05mg/kg IM), repeat each 6 hours, for control of excess respiratory and gastrointestinal secretions\(^1\). However it may also reduce tear production (corneal ulcers may be more likely when the actions of atropine is combined with poor blink reflex from the tick toxin) and also affect heart rate and rhythm\(^1\).

- **Antiemetic** therapy may be required for animals that are vomiting.
  - Metoclopramide 0.5-1mg/kg IV or IM
  - Maropitant (Cerenia) 1.0 mg/kg equal to 1.0 mL/10 kg SC once daily for up to 5 consecutive days. For dogs only as not registered for cats.
  - If the animal is regurgitating it is better to aspirate the oesophagus of secretions that are pooling because of megaoesophagus\(^1\). Place the animal in the correct drainage positioning to assist in avoiding aspiration\(^1,4\).

- **Broad-spectrum antibiotics** are probably indicated in all tick cases as the best treatment for even mild aspiration that can lead to pneumonia\(^1,4\).

- **Diuretic** (eg, furosemide up to 8.0mg/kg aggressively IV q1hr until pulmonary oedema resolved – especially in dogs) with or without oxygen therapy is indicated for cases of congestive heart failure\(^1,4\). Pulse oximetry is useful to assess an animal’s ability to oxygenate.

**Supportive Techniques:**

- **Hospitalisation**
  - Most animals will continue to deteriorate over the first 24 hours from tick removal
  - Regular monitoring and nursing care is essential to address problems as they appear
  - Place the animal in a quiet dark and comfortable part of the hospital. This is essential with cats as they stress easily\(^1,4\).

- **Correct Drainage Positioning**
  - Place the animal on its sternum to maximize lung function\(^1\)
  - If the animal is unable to maintain sternal recumbency, place in lateral recumbency, left side down with the shoulder at the highest point – not the neck or pharynx and with the head slightly down\(^1\).
- Do not rotate the animal unless it can be done every 1-2 hours, 24 hours a day\(^1\).

  **Monitor body temperature**
  - Take temperature at least twice daily initially. Hypothermia and hyperthermia may suddenly occur and must be treated accordingly.
  - Heating – hot water bottles, blankets and hot air-flow blankets such as Bair-Hugger\(^1\).
    - Toxin may have caused arteriovenous shunts to shut and host’s vasoconstriction responses to hypothermia may interfere with peripheral heat absorption\(^1\).
    - Warmed IV fluids or rectal fluids may be required in animals that present with a temperature lower than 32\(^\circ\)C\(^1\).
    - Cooling – wet towels, direct fan flow, high rate air changes, air-conditioning\(^1\). Cooled rectal fluids may also assist\(^1\).
  - Hypothermia is better than hyperthermia because animal requires less oxygen when hypothermic.

  **Oxygen therapy**
  - Nasal Oxygen supplementation (not > 200ml/kg/min)
  - Trans-tracheal Oxygen supplementation: 12g teflon catheter passed between ventral mid tracheal rings. Then pass 5-6F infant feeding tube through this to tracheal bifurcation. Remove catheter and place IV drip line onto feeding tube. Bandage apparatus to neck and supply low flow rate O2 (approx 1L/min/20kg).
  - Tracheostomy and supplemental oxygen supply is better than ventilation as long term ventilation patients have a low recovery rate (less than 25\%\(^1,4\)).

  **Eye protectants**
  - Tick toxin causes eyelid paresis, loss of blink reflex and corneal drying\(^1,4\). This can be exacerbated by medication with atropine.
  - Use artificial tears or drops as required to maintain hydration of the cornea.

  **Stress reduction**
  - Cats particularly become dyspnoeic with any stress and may resemble asthma with even mild restraint\(^1\).

  **Monitor urination**
  - Some animal may not be able to evacuate the urinary bladder and may require catheterization and the bladder being expressed at least twice daily\(^1\).

  **Repeated tick searches**
  - Never assume there is only a single tick present once it has been removed. We routinely have at least 2 people search an animal in the first 24 hours. If the animal does not stabilize in the first 24 hours we routinely clip them with the least stress can achieve.
  - Application of an effective acaricide is recommended.
    - Frontline Plus\(^8\) Spray is recommended by Rick Atwell as being effective in his studies\(^4\).
- We have also used Permoxin Spray® on dogs and found it effective – it must not be used in cats.

The dog’s ability to bark is the last toxicity sign to recover, so when it can bark all other systems should be back to normal⁴.

Tick Home instructions

Below are the printed instructions we send home with each animal.

**Dog**: Avoid all excitement for 2 weeks. Feed 2-3 small meals a day for next 4 days. Precede each meal with a small volume of water to check swallowing is normal. If any gagging or spluttering with the water, do not give any food until the next meal is due, and try water first again. Check daily for Ticks. Avoid walking near creeks and areas with long grass. For all dogs on the property, consider using Frontline Top Spot or Advantix on the back of the neck each 2 weeks or preferably Frontline spray over whole body every 3 weeks to assist in preventing ticks, or alternately, they should be rinsed thoroughly every 7 days with Permoxin Rinse. Do NOT use Permoxin on cats. Use daily inspections for ticks to ensure good control. Take care with prolonged exposure to sun and subsequent sunburn now that coat is so short.

**Cat**: Avoid all excitement for 2 weeks. Feed 2-3 small meals a day for next 4 days. Precede each meal with a small volume of water to check swallowing is normal. If any gagging or spluttering with the water, do not give any food until the next meal is due, and try water first again. Check daily for Ticks. You may need to keep your cat indoors to avoid areas near creeks and areas with long grass for at least 2 weeks. Consider using Frontline Top Spot or Advantage on the back of the neck each 2 weeks or preferably Frontline spray over whole body every 3 weeks to assist in preventing ticks.
References:

6. Atwell RB, Campbell FE and Court E (2000). The Attachment Sites of the Paralysis Tick (Ixodes holocyclus) on dogs, Aust Vet Practit, 30(2)
Critical Care of veterinary practice: Keeping in touch with your clients

Dr James Ramsden
Agenda

• We help people look after their pets better
• What is “keeping in touch”?
• How to write an effective email newsletter
• How to make email reminders work
• What resources do you need?
We help people look after their pets better
What is “keeping in touch”?

• Regular monthly contact that reinforces the role the vet plays in pet owner and pet’s life

• Highly professional presentation – layout, typos, images

• Drip feed key health care information over and over

• Why do it? See over

• Activity: Survey of attendees’ current communications
Looking after pets properly is hard work

- We ask pet owners to cover 7 areas of health care – Vacc, Fleas, Intest worms, Heartworm, Diet, Skin, Dental

- Pet owners want to look after their pets well but struggle to actually do it

- Pet owners need help, contacting them once a year isn’t enough
Protect yourself: others are talking to your clients

• Supermarket – once a week. Clever marketers surf off your recommendations

• Large format pet stores – high visibility, access and perception of price

• Online retailers – changing the ball game
Keeping in touch is an opportunity to grow the business

- Pet owners are spending elsewhere
- 64% of pet owners use more than one vet
- Number of visits to clinics is decreasing

References: UVG study, NCVEI Bayer study, Bayer Australia 2011
Pet owners spend more at the clinic with good communications

• Pet owners look after their pets better

• They can spend $124 more per year at the clinic*

• Result: healthier pets, happier clients, more profitable practices

*Pet Pack study
How to write an effective email newsletter

• Strong clinic branding

• Regular monthly connection with clients

• Content is king - local and generic

• Example: Corio and Lara Pet Care News and compare with new templates – eg phone number at top and clickable
**Local content tips**

- 200 words max
- Focus on the images – remember the emotional connection
- Topics:
  - Puppy preschool
  - Pet of the month
  - Staff profile
  - Case study

  – Activity – write a local content article in 5 minutes
Newsletter resources

• If doing it by yourself:
  • 1 staff member who is trained as writer for 1 day per month
    • Writing
    • Image search and formatting
    • Building newsletter in email system
    • Sub-editing
  • Content planning – to ensure topics are relevant and fit marketing schedule
  • Email System – need web based distribution system
How to make email reminders work

• Clinic name and phone number

• Pet’s name and treatments

• Pets are reminded for every dose and every treatment

• Example: Reminder for Bruna from Morley - pet’s pictures in the reminders
Reminder tips

• Use product name where possible

• Remind for all products and services that you recommend

• The client wants you to recommend – don’t leave it up to them
Reminder resources

- Need a system that can generate reminders that work
- Need to be well presented
- Considerable staff time if reminders generated each month manually
How do we measure the impact?

- Each pet owner spends $124 extra per year – that’s $124 of better health care for the pet

- You can expect 500 emails [Pet Pack vets average 900]

- That’s $62,000 additional revenue
What are the other impacts?

• Better informed and happier clients
• Clients appreciate the contact and help – generates good will
• Clients feel included in the clinic community
• Increased word of mouth referrals – emails forwarded
• Newsletters link to website – boosts search and new clients [more in lecture 2]
• Online help to bolster you as progressive and caring of the environment
Great to be talking to you, thank you
Online marketing – how to get new clients with your website

Dr James Ramsden
Agenda

• We help people look after pets better
• Websites are about new clients
• 94% of all research is now done online
• The key elements of a successful website
• Managing your site
• What resources do you need?
We help people look after their pets better
History

• 40 years ago vet promotion restricted heavily

• Word of mouth and Drive by are always number one drivers of new clients

• Yellow Pages is rapidly losing relevance as online grows fast
94% of research is online

- This is the number one reason why you need to take the web seriously
- New clients are searching for you online
- Word of mouth and Drive by are still prime movers – but this then leads to online search – explain how
- Online will grow as primary source of new clients
How to be found online

- Google – 70%
- SEO – organic search - free
- SEM – search engine marketing - $ eg Reach Local
- Google places – free
- Directories eg Yellow Pages
- Show Google on screen and the components
SEO – organic search

• Google wants good relevant content
• Set your site up correctly
• Determine what the key search terms are that drive business in your clinic – use www.google.com/sktool
• Regularly update your content
• Free
SEM – search engine mkg

- Pay for ads that relate to specific search terms
- Good if you’re competing with others for the same search
- Good if you are prepared to pay for leads
- Must continue to pay or leads will drop away
- Do it yourself or use companies like Reach Local
- Will cost >$1200/mth
How existing clients can help you get new clients

• Unusual opportunity
• Email newsletter links to website
• Huge hits – Google boosts your site
• The cycle – draw diagram

Testimonial: Caz Mulcahy at Bellarine Vet Practice

• “Pet Pack email newsletters boosted our website search.”
  "You're fantastic to deal with. You're easy to get along with, nothing's too hard, easy to understand and you follow up with emails."
Google places

• Set this up yourself
• May already be there – check
• Edit it, make it correct, add content and your website link
• Excellent for maps on mobile devices
• Think about how people are going to search for you – they will use their mobiles and they’ll use maps

• Show how maps works
Clarify steps

• I need a vet
• Reach for mobile phone
• Search “vet tamworth”
• Click on the link – for potential client to call the clinic, what do they need to see? See over
The key elements of a successful website

• Can I trust you?
  • Images
  • Professional presentation
  • Content current – 90% of vet clinic sites are out of date

• Phone

• Address

Results from website

- Get up to 35% of your new clients with the website – this will increase with growth in web phone use

- Improve search by linking newsletter to site – rare opportunity
Website resources

- If doing it yourself, allocate one staff member 1 day per month to keep up to date
- Consider set up and management:
  - Domain registration
  - Email set up
  - Website design and build
  - Initial content creation
Great to be talking to you, thank you