



THE SPECIALIST CONNECTION

Helica, An Advancement in Total Hip Replacement

Dr Helen Milner

Vetspecs are very proud and excited to be able to bring to New Zealand an entirely new hip prosthesis.

Hip osteoarthritis can be a significant debilitating condition in the dog. It most commonly develops as a consequence of hip dysplasia/hip laxity but can also be seen following hip trauma, for example, fractures and dislocations and as a sequel to developmental conditions like Legg-Calve-Perthes disease.

Patients that respond to medical strategies are generally not candidates for surgery but in those patients that are not successfully controlled, the myriad of surgical procedures described for hip osteoarthritis can be rather bamboozling. Regardless, the goal of any hip surgery is to provide a return to pain-free and optimal limb use.

Total hip replacement is a well-established procedure in both the human and veterinary worlds. Cemented endoprostheses are reported to achieve

favourable results but they have also been associated with complication rates as high as 22%. The most frequent complications include infection, luxation, bone infarct, bone fracture, sciatic neuropathy and aseptic implant loosening. Post mortem examinations by Frankel et al (2004) revealed 86% of cases showed evidence of endoprosthetic loosening. Complications associated with joint replacement surgery are often not minor things to deal with and may necessitate the loss of the prostheses (a rather expensive and round-about way of achieving a femoral head and neck excision) or revision of the endoprosthetics.

Cement-less hip replacement technologies have thus been extensively investigated. These rely on long lasting osteointegration of bone onto the prosthetic matrices in order to ensure the implant's long life. Helica is an exciting new cement-less system that is based on the results in human medicine using 'screw' and 'short-stem' prosthetic methodology. The Helica technique has several key advantages over other systems, making it an exceptionally attractive option in the world of hip replacement surgery:

- The relative ease of implantation and the associated shorter surgical times reduce costs and infection risks.
- The Helica system is associated with lower post-operative luxation rates (<1%) compared to other techniques.
- Helica's short-stem technology preserves femoral bone stock which is advantageous for younger patients and in those needing revision surgeries.
- Helica implants can be easily removed if necessary and they are compatible with other cemented and cement-less prostheses.

- The way in which the Helica stem is implanted in the femur results in favourable stress protection compared to other systems; thereby reducing aseptic loosening.
- Finally, a unique and attractive advantage of Helica is that its screw methodology affords instant implant stability in addition to its later-developing osteointegration. This fact makes owner compliance with respect to post-operative exercise restriction easier to achieve.

We would be delighted to discuss any of your hip cases with you and we look forward to being of continued and advancing service to you, your clients and your patients alike.

References:

- 1 Hach and Delfs, VCOT pp 153-8, 2009
- 2 Frankel et al., VCOT pp 216-24, 2004
- 3 Personal communication, Helica training course, San Diego, July 2011



Before surgery.



After surgery.



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Oh, Rats!!

Dr Robin Pullen

Archie presented to Vetspecs as an emergency transfer after being anesthetized and intubated for an oral exam. He had developed a progressive cough and there were concerns about something stuck in his throat. Due to the February earthquake, Archie and his family lost the use of their home and were living in a rental which unfortunately did not permit pets on the premises. During the day, Archie stayed with a playmate and enjoyed rough-housing throughout the day, but at night he was confined to the car with the windows left open a bit for circulation.

Physical exam of Archie while in recumbency revealed blood in the back of his throat, referred upper airway noises and his heart and lung sounds were muffled. Archie's chest was non-compressible, he had a deep cough and was tachypnoeic. His femoral pulses were weak. Based on auscultation of the chest, thoracocentesis was performed, which revealed blood that did not clot. On attempted catheterisation, blood would instantly start to leak around the catheter. Bronchoscopy found that Archie was bleeding into his lungs. A clotting profile was drawn and hand delivered to the laboratory with a request for immediate evaluation. Pending the results, based on our suspicions, Vit K1 therapy was initiated.

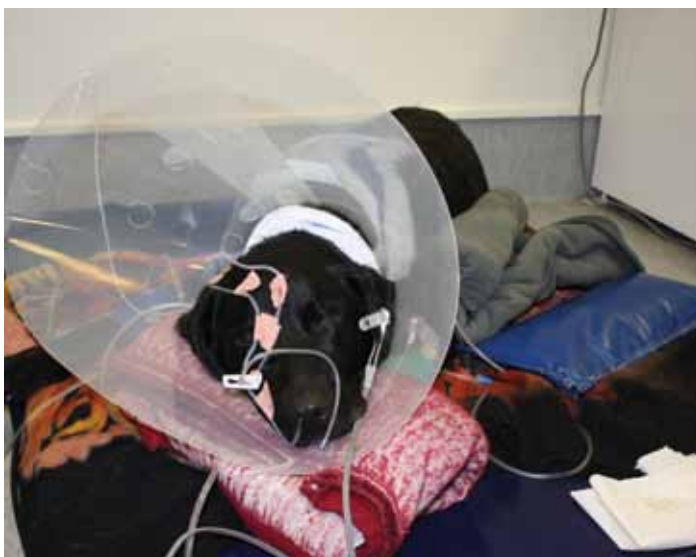
Next, a more extensive thoracocentesis was performed and removed 200 ml



of blood, which was used to auto-transfuse Archie. About that time, the results from the laboratory showed significant prolongation of the APTT and PT. The lab stopped timing the PT at 120 seconds and there were still no signs of clotting. At that point our diagnosis of anticoagulant rodenticide toxicity was confirmed, but Archie was far from being stable. We could remove the blood from around his lungs, but the blood in his lungs was the greater challenge. Archie's ability to oxygenate himself was poor which required supplemental oxygen support. Fresh frozen plasma was also required.

As the day progressed, Archie became more active. A deep pneumonia type cough started so Archie was nebulized and coupaged every two hours. The following day another clotting profile was performed this time the APTT and PT were within normal limits!

Further discussion with Archie's family revealed no obvious source of rat bait in the yard where he played during the day, but, with Archie being in the car at night with the windows opened slightly, it is anyone's guess what could have happened. Only Archie knows and he is not telling. >>>



After two days in the hospital, Archie was becoming increasingly anxious to go home to be with his family. The family's landlord was kind enough to allow Archie to be in the house at night. As of the writing of this abbreviated summary of Archie's adventures here at Vetspecs, he is doing very well on his daily Vit K1 supplementation. Due to the fact that the specific brand of rat bait is unknown, Archie will need to be treated for many weeks, with occasional clotting profiles being performed.



Henri's Roll In The Grass

Dr Caroline Whitty • Merial Ancare/SVS Intern, 2010

Henri is a three-and-a-half year old male neutered chocolate Cocker Spaniel who had a life and death encounter with a migrating grass seed.

Henri's story started with a ten week history of pyrexia, submandibular swelling and pneumonia subsequent to having multiple grass seeds removed from his coat and ears. It was suspected by the referring veterinarians that both the submandibular swelling and the pneumonia could be related to a migrating grass seed. He presented to Vetspecs from his primary care clinic after six days of thoracolumbar pain, hindlimb weakness, lack of bladder control and ataxia which had progressed to a non-weight bearing paresis.

A neurological exam localised the lesion to the T3-L3 region. Differential diagnoses included disc extrusion, discitis, foreign body reaction, fibrocartilagenous embolism or, less likely, a tumour.

Luckily we were able to organise an emergency MRI for Henri the day of the referral. The MRI showed abnormal soft tissue at the level of T12-T13 in

the left epidural space. Within this soft tissue was a linear low signal structure extending through the left neural foramen and protruding into the left ventral aspect of the thecal sac and spinal cord. These MRI findings were consistent with a linear foreign body extending into the spinal cord with surrounding inflammatory phlegmon. This was considered to be consistent with a migrating grass seed.

Blood samples were taken for biochemistry and haematology which showed only mild changes with marginally elevated alkaline phosphatase and a mild eosinopenia.

Henri was anaesthetised and a left-sided hemilaminectomy at T12-T13 performed. Dissection based on the MRI images led to a track in which a long grass seed was found. The seed was pointing through the foramina into the thecal sac. It was carefully removed and the pocket swabbed for culture and sensitivity. Multiple saline flushes were performed prior to routine closure.

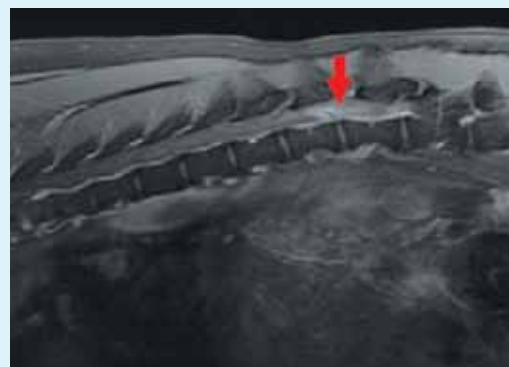
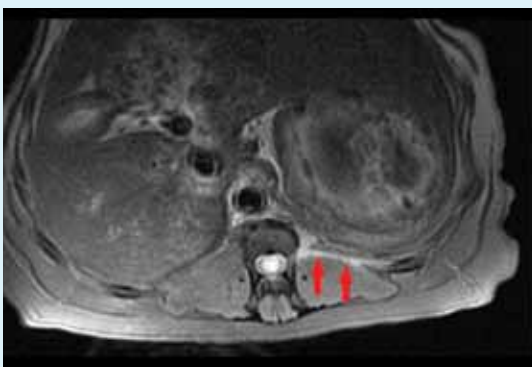
Culture and sensitivity testing revealed a pure growth of *Pasteurella multocida*

which was fortunately sensitive to a variety of antibiotics.

Henri recovered very quickly and by the following day was able to stand and was showing voluntary control of his toileting. Two days later Henri was walking and wagging his tail non-stop and was able to go home. He was still showing mild ataxia a week later but only when taking things too fast - despite his family's efforts to keep him confined, he was attempting to chase cats from his garden! Four weeks later Henri was almost completely back to normal. He was showing no signs of scuffing his hind paws and was bright and happy.

The use of MRI in Henri's case allowed us to safely localise the site of the problem and supported our suspicion that the cause was a grass seed. Migrating grass seeds are well known villains in the veterinary world but it is unusual for them to gain access to the spinal canal. Only a few cases like this are reported in the literature.

Henri is a wonderfully friendly, happy dog who is lucky to have such dedicated owners.



Far left: Henri in Dorsal recumbency.

Left: Cranial (left) - Caudal (right).

Post-GAD MRI images demonstrating a linear tract extending into the spinal canal (arrows).

An Interview with Henri's Family

Megan Wilks

When you meet Henri you immediately notice his energy and vitality, his exuberant personality and his utter adorability. You would never suspect that in April this year Henri was seemingly at death's door.

Owned by Vanessa and Simon Prentice, Henri is a three year old English Cocker Spaniel who, after coming back from a run around the Port Hills in Christchurch, started to show worrying signs.

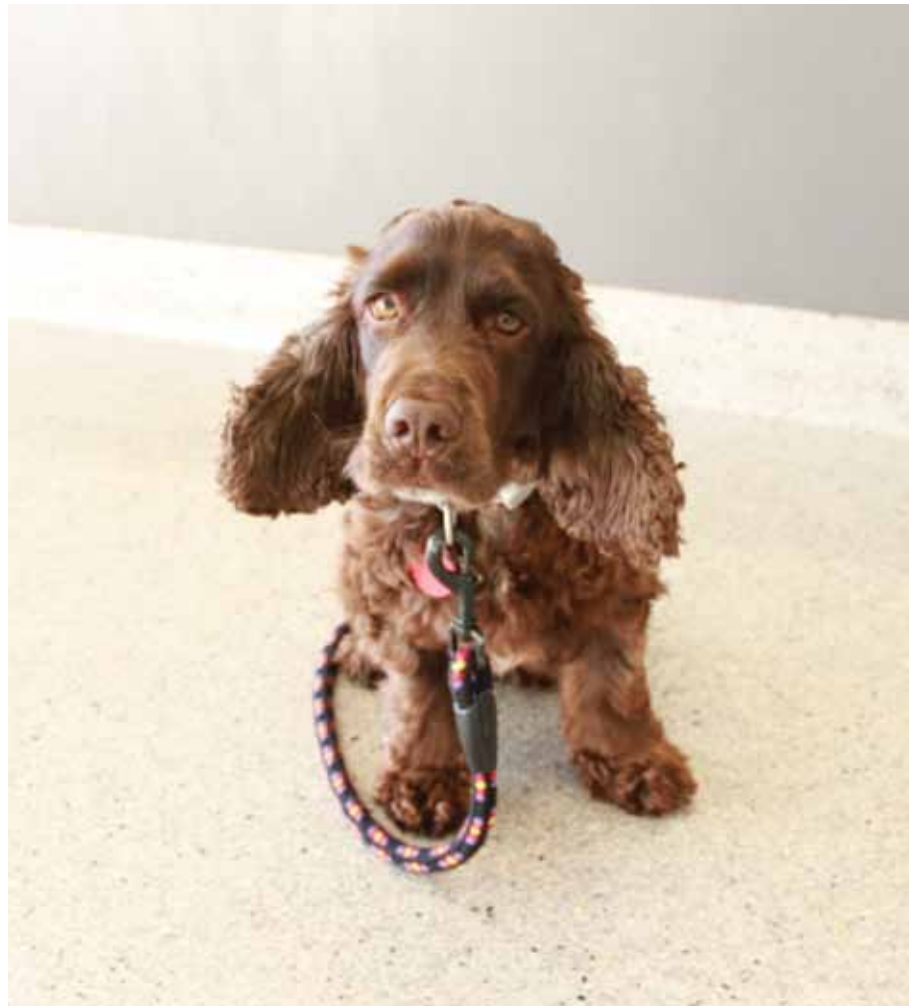
"Henri started coughing like he was trying to bring up something lodged in his throat but all he brought up was foam mixed with some blood" describes Vanessa.

The next day Henri was lethargic, no sign of his usual wagging tail and not at all himself. When Vanessa woke at 1am the next morning to find Henri shaking, trembling and his breathing laboured she rushed him into the Christchurch After Hours Veterinary Clinic where he was treated for pneumonia.

He took it easy back at home over the next week, on a course of antibiotics and strict rest. "He seemed to slowly pick up while on the antibiotics but the day after his last dose, he crashed" Vanessa explains. He started limping and eventually, being unable to weight bear on his hind legs, began to drag himself around. Having poor control over his bladder and not being able to move easily, Henri needed Vanessa's help with getting in and out of the house for toileting.



The offending grass seed removed at surgery.



Vanessa took Henri to their primary care veterinary clinic, At the Vets, where spinal x-rays were taken and blood tests were performed, revealing no abnormality. On the advice of Dr Heather Remnant of At the Vets clinic, Vanessa sought the expertise of the specialist team at Vetspecs.

Vanessa and Henri met with Dr Helen Milner that day who, after hearing from Dr Remnant that Henri had a history of barley grass seeds (having had one extracted from his ear six weeks prior) recommended an MRI. Dr Milner also wanted to rule out discitis, disc extrusion, fibrocartilaginous embolism, or an unlikely tumour.

Being a Friday and not wanting to risk any further deterioration over the weekend, Vetspecs was able to organise an MRI for Henri that afternoon. The MRI showed that there was a foreign body in T12-T13 in keeping with a barley grass seed and Vanessa was advised that Henri would require surgery.

Even though there were no guarantees that the foreign body could be removed

or that permanent damage hadn't already been done, Vanessa was determined to proceed with the surgery. This was a very fortunate decision for Henri, as during surgery Dr Milner found a long track leading to a barley grass seed in the thoracic spine, which she was able to remove successfully, flush and repair.

After spending the night with the team at the After Hours Clinic, the next morning Henri had gained control over his bladder, was already able to wag his tail again and had regained sensation in his hind limbs and tail.

"We couldn't believe how well and how quickly he recovered. Within a week he was back on his feet, wobbly, but walking and he continued to improve to the point now where he is totally recovered. He is a little bit slower than before, but you wouldn't know it to look at him, he is a very happy, very active dog" Vanessa enthuses. "Dr Milner was absolutely fantastic, Dr Caroline Whitty too, the whole Vetspecs team is brilliant."

Dr Caroline Whitty – Setting the Bar (Merial Ancare/SVS Intern 2010)

The opportunity to work with a team of talented and dedicated veterinarians in a specialist practice does not often occur, especially in a small country like New Zealand. When I first heard about the internship I initially thought how interesting it would be but dismissed the idea on the basis that I couldn't afford the salary reduction and that the hours were ridiculously long. After some encouragement from friends in the industry however, I began to think of the experience I would gain and the potential opportunities it could lead to. The more I thought about it, the less shocking the hours and pay seemed and the more interesting it sounded so after applying for the internship I was really excited to be offered the job.

Being the first Merial Ancare/SVS intern has had the occasional teething issues as nobody quite knew what my job description entailed. Luckily though there is a great team at Vetspecs and we managed to work out a routine that worked for everyone. I soon settled

into a rotation of alternate months on surgery and internal medicine. During my medicine rotations, I would sit in on consults, assist with working up cases and regularly assist with or perform procedures such as pericardiocentesis, biopsies and endoscopies. While on surgery, I would assist with workups, read up on cases and scrub in to assist with surgeries.

My knowledge of many different aspects of veterinary imaging has greatly improved over the past year. The opportunity to review radiographs with the surgeons or internists has been invaluable. My ultrasonography skills have gone from almost non-existent to being able to confidently use the machine and interpret the images obtained. I was often responsible for taking animals to MRI or CT scans and being able to discuss the cases with the radiologists and see the images as they were obtained has been much more useful than merely reading the resulting report on a computer screen.

One of the benefits of being in a referral practice is that your time is spent on relatively small numbers of interesting cases so you get to spend a lot more time working up, investigating and researching cases than you can in general practice. Instead of trying to squeeze in some reading between vaccinations, you can concentrate on one case at a time. This internship meant I had a lot of time to read up on cases and this, as well as discussing each case with the specialists, has been a wonderful luxury after general practice.

At the end of a year I am both grateful for the experiences and opportunities it has allowed me and relieved that I am no longer on call 24/7. I am going to miss working at Vetspecs but am looking forward to a new challenge working at the After Hours Emergency Clinic here in Christchurch. The past year has definitely encouraged me to continue my studies so I am sitting my Australian College Membership exams in Small Animal Surgery in the near future.



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Reference: 1. Ryan, W, Moldave, K, Carithers, D. Clinical Effectiveness and Safety of a New NSAID, Firocoxib: A 1,000 Dog Study. *Veterinary Therapeutics* Vol 7, 119–126, 2006.
*Long term was evaluated over 40 days; short-term was evaluated over 10 days. Always read label instructions.



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STAFF PROFILE

Dr Yael Schneider, Merial Ancare/SVS Intern 2011

I would like to thank SVS and Merial Ancare for their generous sponsorship which has enabled me to pursue the internship position at Vetspecs. I am honoured to be offered this outstanding training opportunity and I look forward to a busy and challenging year!

I am originally from Israel; however, I spent most of my school years growing up in Baltimore in the United States. In 2005, I graduated from the Hebrew University of Jerusalem, Israel, where I received my BSc. Ag (Hons) in Animal Science. I then continued my veterinary studies in South Africa where I've spent the last five years. During this time I was exposed to a wide variety of cases; everything from snake bite injuries to root canal treatments on cheetahs! Soon after graduating, I registered with the Royal College of Veterinary Surgeons in the UK before continuing to New Zealand.

I have always been drawn to New Zealand – with its stunning landscapes and friendly people, I have already fallen in love with Christchurch! I look forward to exploring the South Island's world renowned ski fields and beautiful trails. Although it is difficult to see Christchurch "post earthquake", I feel privileged to witness this beautiful city being rebuilt.

In the future I plan to pursue a residency position abroad and then sit the North American Board exams. This internship will certainly help me fulfil this goal, as well as allowing me to explore the possibilities of specialist veterinary work and guide me in deciding on an area of further professional development.

Following the steps of Caroline Whitty, Vetspecs' first intern, I know I have big shoes to fill – but I'm definitely up for the challenge! This coming year you



will see me rotating between the surgery and medicine departments here at Vetspecs. I look forward to meeting you all and working alongside you towards the common goal of providing the best veterinary care for patients and outstanding service to clients.

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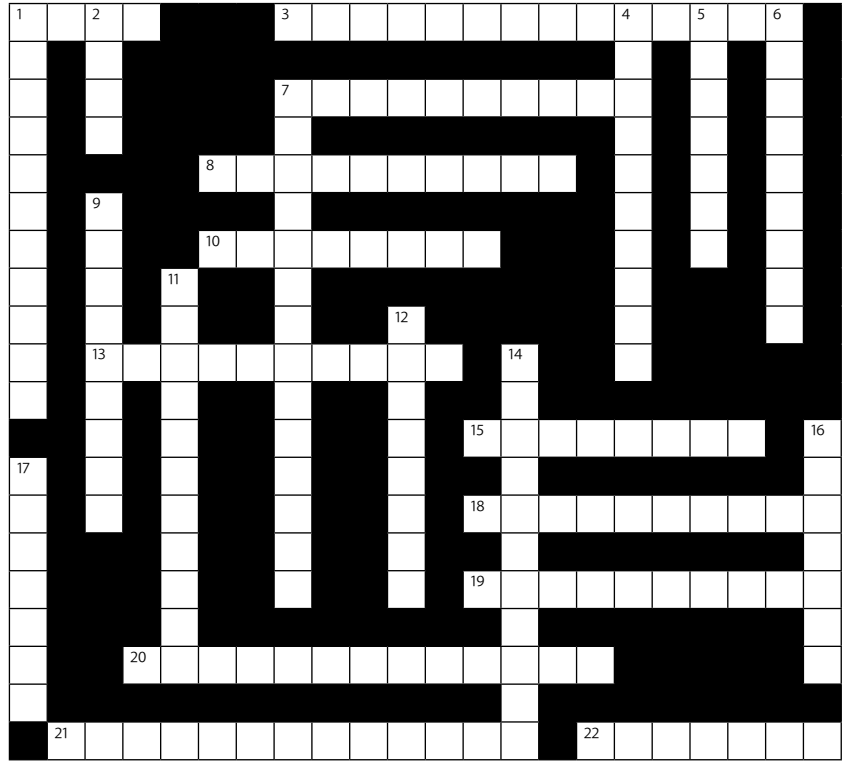
Crossword

ACROSS

1. Topical preparation used to reduce swelling due to trauma (1,1,1,1)
3. Injectable used to stimulate cortisol production
7. Drug used in pulmonary hypertension in animals, but has other uses in humans
8. Enzyme inhibitor used in Cushing's disease
10. Anaesthetic agent that has been indicted in the death of Michael Jackson
13. First generation cephalosporin
15. Cytolytic drug used in the treatment of Cushing's disease
17. Injectable which inhibits the vomiting reflex by blocking the NK-1 receptors in the medullary vomiting centre
19. Commonly used ACE inhibitor
20. Antibiotic used in anaerobic infections
21. Tablet used to treat interstitial cystitis or reduce anxiety
22. Opioid analgesic also used as a cough suppressant

DOWN

1. Injectable used as a chemical castration
2. Neutraceutical used to support liver function
4. Anti-fibrotic used in liver disease
5. Hormone that decreases blood glucose levels
6. Tablet used in the treatment of protein losing nephropathy and hypertension
7. Potassium sparing diuretic
9. COX-2 enzyme inhibitor
11. Local anaesthetic
12. Injectable appetite stimulant in cats and an anti-epileptic drug
14. Selective alpha-2 adrenoreceptor antagonist
16. Oral tablet used in the treatment of supraventricular or ventricular arrhythmias.
17. Used IV in the treatment of ethylene glycol toxicity and orally at veterinary functions



Fax, email or post your completed crossword to Vetspecs by 25th November 2011. All correct entries go into the draw to win a \$100 hamper, kindly supplied by SVS. Remember to include your name, clinic name and contact number so you can be notified. The correct answers will be shown on Vetspecs Facebook page from the 28th November 2011.



Vetspecs team

Left to right: Brent Higgins, Helen Milner, Amanda Jones, Becky Clarke, Eve Hinman, Lauren Keenan, Terri Doig, Yael Schneider, Kate Cambie, Robin Pullen, Mark Robson and Philippa Burns.



vet|specs

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