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Warts and All

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One of the most famous cries in New Zealand politics was the then prime minister, in an election debate with the leader of the opposition, interjecting with the cry of “Show us the money.” It was a major reason the governing party of the day was re-elected; it was all about the burden of proof.

The pharmaceutical world is little different with controlled clinical trials being the gold standard, but that is not always possible; sometimes one has to use other standards.

This has often resulted in false claims being taken with true and real science often being relegated to the background.

We see this, in particular, in the large animal field of milk fever therapy where supposition and low cost can drive sales at the expense of products such as Calol that have real science and have been tried and true for several decades.

Also, in the current push for pain relief for lamb docking and castration, there is an actual paucity of evidence-based data, resulting in rather ineffective means being adopted by many, in order to be seen to be doing something.

It is against such a background that we introduce Manuka Cure, a honey-based spray for minor wounds. Part of the launch is a “warts and all” process where we take ownership of the fact that a lot of data surrounding honey use is anecdotal and we are well aware of the old adage that, “the plural of anecdote is not data!”

As we see on page 6 of this issue a systematic review of veterinary studies noted that much of the evidence is low-level or anecdotal. There is some promising evidence in the literature but, while there are many supportive case reports and some studies, robust clinical

trials in veterinary species are still relatively few.

The idea is not to oversell,

This doesn't mean honey is ineffective – just that we should stay critical and use it where it makes logical sense.

In other words, although there are few controlled clinical trials, there are enough reports from trained medical professionals about the value of Manuka honey for wound healing. The trick is to use the right honey with sufficient MGO levels.

Inside we detail on page 4 why Manuka works and on page 6 pitfalls and tricks with Manuka honey.

Why a warts and all approach? The idea is not to oversell, if the product works it will not only sell in but also sell through, and we are confident that Manuka Cure, in the convenient spray bottle will work very well.

Handwashing Compliance

Infection control has come a long way since the days of Florence Nightingale. She was famous for introducing hygiene to military hospitals in the Crimean War, saving many lives.

Nightingale reduced the death rate from 42% to 2% by such simple means like implementing handwashing in the hospital where she worked. However, it was Louis Pasteur, a French chemist who led the way a few years later with the germ theory of diseases and then English doctor Joseph Lister propounding aseptic surgery.

This was all mid to late 19th century, a little over 150 years ago, meaning that hygiene in hospitals is a surprisingly recent event in world history which makes it less startling to find surveys still going on today regarding the effects of handwashing in hospitals.

What is a surprise is that, in 105 Australian hospitals as late as 2009, handwashing compliance was common only 62.6% of the time.

By 2017, in 937 hospitals surveyed, compliance had increased to 84.3%, and this

resulted in, no surprise here, a 15% decrease in Staph aureus infections. (Grayson et al, Lancet Infect Dis. 2018 Nov;18(11):1269-1277).

While this may be seen as proving the blindingly obvious, it is the job of science to challenge existing norms.

The work looks at the scientific program to examine the effects of the World Health Organization (WHO) "My 5 Moments for Hand Hygiene".

This is a framework that defines the exact points during patient care when healthcare workers must clean their hands to stop the spread of germs.

The 5 moments are:

Moment 1: Before touching a patient

Moment 2: Before a clean or aseptic procedure

Moment 3: After body fluid exposure risk

Moment 4: After touching a patient

Moment 5: After touching a patient's surroundings

Other snippets from the survey included:

1. Medical staff compliance increased from 50.5% to 71.7%, although it consistently lagged that of nurses and midwives by 10% to 15% (kudos to nurses and midwives!).
2. Average rates of S. aureus infection dropped from 1.27 new cases per 10,000 bed-days (2010–2011) down to 0.87 per 10,000 bed-days (2016–2017).

While this was work in human hospitals the same principles would apply to veterinary hospitals.

The 5 moments are covered, among other topics, in the EA Infection Control Protocols, freely available to all.

These are the basis also for the NZVA Protocols readily available on the NZVA website.

The Oath

An elderly American lady had always wanted to travel abroad. Now that she was getting on in years, she thought she would really like to do so before she died.

Until then, she'd never even been out of the country. So she began by going in person to the Passport Office and asking how long it would take to have one issued.

"You must take the loyalty oath first," responded the passport

clerk. "Raise your right hand, please."

The old gal raised her right hand.

"Do you swear to defend the Constitution of the United States against all its enemies, domestic or foreign?" was the first question.

The little old lady's face paled, and her voice trembled as she asked in a small voice, "Uhm.... all by myself?"



Serafast – The Suture For Dentals

Serafast is definitely a premium synthetic absorbable monofilament suture made from polyglycolic acid and caprolactone (PGACL), giving key advantages for oral dental surgery.

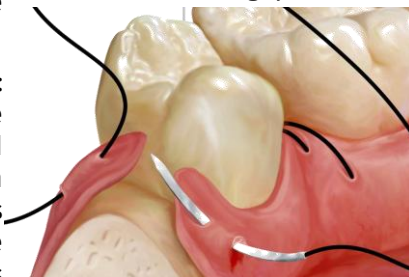
As a monofilament it has a completely smooth surface, so is designed to prevent bacterial accumulation and plaque build-up.

There are three main reasons why smooth surfaces reduce microbial build up.

1. Fewer Anchor Points: Rough surfaces have microscopic "peaks and valleys." Bacteria, which are only a few micrometers in size, settle into these valleys. Smooth surfaces offer fewer natural anchoring points for initial bacterial attachment.
2. Disruption of Biofilms: When bacteria attach to a surface, they secrete a slimy matrix called a biofilm that protects them. Smooth surfaces make it harder for this matrix to grip securely, making the early-stage biofilm easier to dislodge.
3. Enhanced Cleanability: Shear forces from wiping, scrubbing, or flowing liquids (like water in a pipe) are much more

effective on smooth surfaces. On rough surfaces, the cleaning tool often passes right over the microscopic pockets where bacteria hide.

In addition, a smooth surface minimises friction and eliminates the "sawing effect" common with braided sutures. The suture then passes smoothly through delicate oral structures such as thin gingival tissue or mucosal gaps.



A particular feature of the Serafast suture is the optimal short-term absorption profile, which suits the fast healing of the oral mucosa. The suture maintains at least 60% of its initial tensile strength at day 7 and 50% strength after 8 – 13 days, full absorption is in 90 days. This eliminates the need for suture removal, so is perfectly timed for tooth extractions and flap surgeries.

It also has exceptional handling and knot security; the polyglycolic acid and caprolactone combination of Serafast results in remarkable

pliability, providing very high knot-pull tensile strength (up to 157% higher than the minimum requirements set by European Pharmacopoeia standards).

Serafast has enhanced intraoral visibility, making it easy to see, violet-dyed Serafast provides strong contrast against the pink and red tones of the oral mucosa.

There is a DS needle swaged on. In explanation D means 3/8 circle (not quite half circle) which works well in easily accessible tissue areas and general closure.

S means reverse cutting meaning the cutting edge faces outward and downward to minimize the risk of tissue tearing or cutout. Reverse cutting needles are commonly used in medical procedures for smooth tissue penetration.



All of which makes Serafast the ideal suture for dental work.

Serafast is competitively priced in a cluttered market, however the suture cost is always the least expensive factor in any surgical procedure.

The Break In

A man woke up in the middle of the night and heard a burglar in the house.

He called the police who arrived quickly and arrested the intruder.

Next day the man went to the police station and asked to speak to the burglar.

"No," said the duty sergeant, "You'll have to wait until he appears in court."

Why do you want to speak to him?"

"Well," said the man, "He got into my house at 2am without waking my wife. I want to know how he did it!"

Why Manuka Honey Works

The antimicrobial properties of honey have been known for centuries, the one food that does not spoil. More recently Manuka honey has come to the forefront as a particularly strong antimicrobial and the reasons are clearcut.

Ordinary honey relies on bacteriocins for killing power. Bacteriocins are small proteins produced by living bacteria or the bee itself. They combat bacteria through distinct biological mechanisms, vary by honey type, and react differently to heat and enzymes.

They typically have a narrow target range. They usually only kill closely related bacterial strains (mostly Gram-positive bacteria) to eliminate niche competition for the bacteria producing them. Digestive enzymes (like pepsin) will break them down and neutralize their antibacterial properties almost immediately, they are also easily destroyed by heat and light.

Manuka honey has high concentrations of methyl glyoxal (MGO), thanks to the nectar of the Manuka flower (*Leptospermum scoparium*) containing high levels of the compound dihydroxyacetone

(DHA). As Manuka honey matures and ripens, DHA continuously and uniquely converts into large amounts of stable MGO, which is highly resistant to heat, light, and enzymatic degradation.

While other honeys derive most of their antibacterial action from hydrogen peroxide, Manuka honey relies on its stable, high concentrations of MGO for non-peroxide antimicrobial activity.

MGO has a broad-spectrum antibacterial effect. Because it attacks universal bacterial functions (like protein structure and cell division), it is highly effective against a wide array of both Gram-positive (e.g., *Staphylococcus aureus* / MRSA) and Gram-negative bacteria (e.g., *E. coli*).

Additionally, honey is naturally acidic (pH ~3.2–4.5) so it inhibits many bacteria, which prefer neutral pH.

Honey is a supersaturated sugar solution and the high osmolarity draws out fluid from the wound and surrounding tissues, reducing swelling and concentrating the antibacterial components of honey and keeping wound moist. The increased exudation

initially seen with honey use can aid in autolytic debridement, as the fluid helps liquefy and lift off necrotic tissue. (Practically, this means wounds may look “wetter” in the first days of honey therapy – a sign that the honey is removing debris from the wound).

In summary, manuka honey is not just antibacterial; it is bioactive on multiple fronts – reducing microbe levels, inflammation, and oxidative stress while fostering a moist, and nutritive environment conducive to tissue repair. This combination is what makes it such a powerful tool in managing difficult wounds.

Continued on page 5



Car Sale

An elderly couple returned to a Mercedes dealership to find the salesman had just sold the car they were keen on to a beautiful woman.

“You said you would hold that car until we raised the 75K asking price,” said the elderly man. “Yet I just heard you close the deal for \$65,000 to

that lovely young lady over there. You insisted there could be no discounts on this model.”

“Well, what can I tell you? She had the ready cash and just look at her.

How could I resist?” replied the grinning salesman.

Just then, the young woman approached the old folks and handed them the keys.

“There you go,” she said. “I told you I could get this joker to drop the price. See you later, grandpa.”

Why Manuka Honey Works

Continued from page 4

Unlike antibiotics, which target specific metabolic pathways, honey's multi-factorial killing methods (osmotic pressure, acidity, oxidative stress, etc.) make it difficult for bacteria to develop resistance. Indeed, laboratory studies have found an absence of bacterial resistance to medical grade manuka honey.

So, while there are other contributing factors to the antimicrobial action of honey and the combination of activities means lack of resistance development, it is the level of MGO that is the overriding factor determining efficacy. As we have seen there are different types of honey, all contain MGO but only Manuka honey has it in high enough levels for decent antimicrobial efficacy.

However, just as there are different honeys there are different Manuka honey products on the market, with not all containing high enough levels for antiseptis.

A minimum of MGO 500 (that is at least 500 milligrams of methylglyoxal per kilogram) is the standard for medical grade honey, and it is medical grade honey products only that should be used as they are sterilised (typically by gamma irradiation) to eliminate dormant clostridial spores and other contaminants that can be present in raw honey. Medical-grade products also have a more standardised antibacterial activity.

Keeping in mind that a minimum MGO level of 500 is required for medical grade Manuka honey it is refreshing to know that, of the Manuka honey products on the animal health market, there is one with a level of more than 700. That is Manuka Cure Spray with 750 milligrams of methylglyoxal per kilogram. Formerly marketed as Manuka Safe in a 10 ml bottle, the ubiquitous spray preparation is now in a much more practical 50 ml plastic bottle, ideal for any animal no matter what its size.



Proposal

An old man went on a date with an elderly woman.

During the meal, the man gave her a few admiring glances and then finally worked up the courage to ask her, "Will you marry me?"

After about six seconds of "careful consideration," she said, "Yes. Yes, I will."

The meal ended, and after some pleasant conversation, they went to their respective places.

The next morning, the man was in a bad mood. "Did she say yes or no?" He could not

remember. No matter how hard he tried, he couldn't remember. Not even a faint memory.

Frightened, he went to the phone and called her. First, he told her that he couldn't remember as well as he used to. Then he reviewed the good evening that had passed.

When he got a little more courage, he asked, "When I asked you to marry me, did you say yes or no?"

He was delighted to hear her say, "Yes, I did, and I said it with all my heart."

Then she continued, "I'm so glad you called because I couldn't remember who asked me!"



Replacing One Product with Another

Why replace the very successful spray on Manuka Honey product called Manuka Safe with something that appears similar?

2 reasons really:

- 1) The new presentation, 2) Manuka Safe did have a good MGO level of 500, qualifying as medical

size of 50 ml, making it far more practical for large farm animals and horses, while still being of reasonable size for small animals.

grade, but the new Manuka Cure spray has an even more impressive level, guaranteeing more than 700 milligrams of methylglyoxal / kilogram) which may explain its dramatic success in the photos below.

How's This for Anecdotal Evidence?

While we do state on page 7 that robust clinical trials in veterinary species are still relatively few for the benefits of honey, we do feel there is strong anecdotal evidence from users.

Case in point: the accompanying photos are a mere 15 hours apart and are of a horse with a painful wire cut. The horse would not tolerate clipping or touching the wound but accepted the spray. Within 15 hours the suppurating wound had granulated, and healing was on the way!



Pulled Over

An older couple was cruising down the highway, enjoying their retirement freedom — windows down, classic country playing, and just a tiny bit too much speed.

The wife was behind the wheel, confident and chatty. The husband was riding shotgun, alternating between giving directions and dozing off.

Suddenly, flashing lights appeared in the rearview mirror.

“Oh dear,” the wife sighed, pulling over. “What did I do?”

A police officer approached the window. “Ma’am, do you know how fast you were going?”

The wife leaned closer. “What was that?”

The officer raised his voice. “Do you know how fast you were going?”

She turned to her husband. “He wants to know how fast I was going.”

The husband shouted back, “He says you were going 85!”

The officer frowned. “May I see your license?”

The wife blinked. “What did he say?”

Her husband answered, “He wants to see your license.” She handed it over.

The officer looked at it and said, “I see you’re from Chicago. I spent some time there once. Worst experience of my life. I dated a woman there, meanest, most stubborn person I’ve ever met.”

The wife turned to her husband. “What did he say?”

The husband replied, “He says he thinks he knows you.”

Pitfalls and Tips With Honey

Like everything, there are ideal indications for using Manuka honey and times when it is not the best option. There are also negative sequelae that can be easily avoided.

Rather than pushing honey as a miracle cure, it makes more sense to be aware of potential pitfalls and how to avoid them.

This is why medical grade Manuka Cure Spray, with an MGO level of more than 700, is an ideal choice.

Manuka honey is NOT indicated for clean, surgical incisions intended to heal by first intention (more inflammation and thickening compared to controls in studies) and should be used in surgical wounds only when complications arise (e.g. dehiscence or infection).

Best use is where surgery is not an immediate option, i.e. the wound cannot be closed surgically due to size, location, or patient's condition (e.g. large skin defects, severe burns, or patients unfit for anaesthesia). Honey is ideal as interim or primary treatment to manage the wound.

Tip: Honey is ideally indicated for open wounds healing by second intention, especially contaminated or infected wounds: bite wounds, abscess cavities, pressure sores.

For necrotic or sloughy wounds honey will aid autolytic debridement in wounds.

Tip: Honey dressings can soften and lift off necrotic tissue in chronic ulcers or (burn) eschars, especially when surgical debridement is not feasible.

First, prepare the wound bed by clipping fur and gently cleansing any gross debris (avoid using heavy antiseptics).

Honey has a sweet taste, so it is crucial to prevent the patient from removing or ingesting the honey (collars, bandages, waterproof layer on bandage to avoid seepage). The same applies for insect attraction, which can be an issue. **Tip:** The lower the MGO rating the sweeter the honey! If it is sweet, it may not be medical grade.

Honey can sometimes make it a bit challenging to assess a wound because it can gel and turn a cloudy colour when mixed with fluids. **Tip:** Gently rinse the wound with saline regularly to truly evaluate the appearance of the wound bed. Expect to see an initial increase in fluid and possibly a thin yellowish film (honey mixed with wound exudate) – this is normal and not pus.

Over a period of several days, improvements should be seen: less odour, healthy red granulation tissue starting to form, and a reduction in slough.

Because honey draws fluid out, one must guard against maceration – where the skin around the wound becomes white, soft, and damaged from constant moisture.

This doesn't mean honey is ineffective – just that we should stay critical and use it where it makes logical sense.

This can happen if dressings are not absorbent enough or not changed soon enough. **Tip:** Use a barrier ointment/film on the peri wound skin to ensure your secondary dressing can handle the amount of exudate produced.

If the wound is becoming markedly more inflamed, or the animal shows signs of irritation (excessive licking or scratching at the bandage, hives, etc.), consider the possibility of a reaction to the honey.

Not “any honey will do.” There is an enormous variation in antimicrobial potency. Floral honeys other than Manuka honeys may not provide the same effect, and some can even contain contaminants like *Clostridium botulinum* spores.

Tip: This is why medical grade Manuka Cure Spray, with an MGO level of more than 700, is an ideal choice.

From a clinical perspective, one should also be aware of the limitations in scientific evidence. While there are many supportive case reports and some studies, robust clinical trials in veterinary species are still relatively few.

For instance, although many practitioners swear by honey's ability to speed up healing, a systematic review of veterinary studies noted that much of the evidence is low-level or anecdotal.

This doesn't mean honey is ineffective – just that we should stay critical and use it where it makes logical sense.

It's not a “failure” of honey if a massive wound doesn't magically close in a week; because conventional healing timelines still apply.

Manage client expectations: honey can improve wound conditions and sometimes shorten healing, but it won't instantly regenerate lost tissue or eliminate the need for diligent wound care.



Animal welfare is our business



The Diner

There is a diner in New Orleans that advertises that it will serve you anything you want...but if they can't, they will give you \$5,000 as an apology.

A man passing by sees this message advertised at the entrance. He thought it's probably a scam but decides to try it out anyway.

As he enters the diner, a waitress seats him at a table... She asks the man, "What can I get you, Sir?"

The man thinks for a moment then says, "How about an elephant's ear and a muffin?"

The waitress replies, "You bet, I'll be back with your order."

The waitress then heads back to the kitchen.

After waiting nearly 20 minutes, the man begins to think that this is going to be an easy \$5,000.

At the same moment, the waitress returns. Appearing a little anxious, the waitress asks, "I'm sorry sir, would you mind telling me what kind of elephant you want this ear from?"

The man is stunned... "Uhhh, how about an Indian elephant." replies the man.

The waitress says, "Thank you, sir," as she heads back to the kitchen. Not a minute later, the waitress returns... "I'm

sorry sir, would you like the left or the right ear?" she asks.

The man is starting to become very nervous at this point... "Uhhhh, the left ear, I guess."

"Thank you, sir," replies the waitress as she returns to the kitchen...

The man is beginning to wonder what he has gotten himself into, as he has no idea what an elephant ear costs. A few minutes later, the waitress returns with a platter of food and a \$5,000 cheque.

The waitress tells the man, "Here is your order sir. "And please accept this cheque and our apologies... we are out of muffins today."