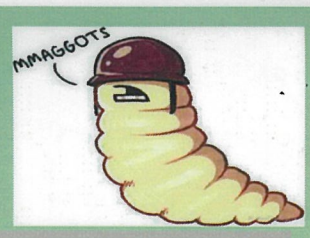
Marvellous Munching Maggots

By Rochelle Wilson

Should New Zealand utilise Maggot Debridement to promote wound healing.



Introduction

Nurses within the community are dealing with a prevalence of non-healing wounds which have received the gold standard conventional treatments. (Griffin, 2014). These infectious wounds become static in the inflammatory cycle, indications of this are: Oedema, pain, warmth, colour, purulent drainage and necrotic tissue (Leaper, Schultz, Carville, Fletcher, Swanson & Drake, 2012). Therefore, they become difficult to heal which can lead onto a loss of limb and quality of life. It also becomes a financial burden on the health care system. With the growing rate of antibiotic resistance many clinicians and researchers are now re-verting back to our old practices but implementing new technology and wisdom to provide a "medical grade" fly larvae to assist in healing difficult wounds (Sherman, 2009).

My aim was to discover if this therapy is worth exploring. This lead me to my question: "*For older adults with chronic wounds, is Maggot Debridement Therapy more effective than conventional debridement therapies*"

What is so exciting about Maggots?

Maggots have spined bodies with hooked mouths, this allows them to penetrate deeper into the necrotic wound to remove devitalised tissue. Maggots, described as a biochemical and mechanical device, secrete an enzyme which changes the environment from harbouring infection to providing antimicrobial compounds that prevent reinfection. The hooked mouth also breaks through the bacteria's biofilm which antibiotics are unable to eradicate (Sherman, 2009). The maggot is responsible for turning a chronic wound into an acute wound healing phrase (Griffin, 2014).

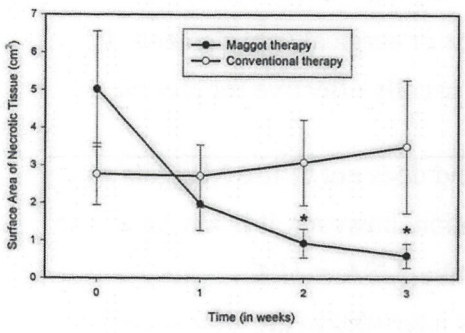
Literature Review

Maggot Debridement

* 14 days = Free range
  28 days = Bio-bag
  Number of days to debride
  (Dumville et al., 2009).
* Only debrides devitalised & necrotic tissue
  (Gwynne & Newton, 2006).
* MRSA colonization was eradicated in 92% of wounds (Tantawi, Gohar, Kotb, Beshara & El-Naggar, 2007).
* Some patients have experienced pain during debridement (Sherman, 2002).

Conventional Debridement

* 72 days to debride, Hydrogel
  (Dumville et al., 2009).
* Surgical debridement will remove both devitalised and newly granulated tissue
  (Gwynne & Newton, 2006).



(Sherman, 2002).

Implications for nursing

Within the community setting this alternative therapy is both cost effective and clinically sound (Griffin, 2014).

Rapid debridement reduces the number of treatments, therefore, less interventions, less travel costs and a lower patient load for nurses (Griffin, 2014).

Maggot debridement will reduced the amount of patients requiring amputations (Sherman, 2009). This will reflect in lower hospital admissions and follow up treatments within the community (Griffin, 2014).

Recommendations

Maggot Debridement Therapy is utilised in more than 30 countries: Australia, UK & USA. Research strongly recommends this therapy as a means to combat chronic ulcers when they become stationary within the inflammation cycle. The maggot has the ability to debride, disinfect, stimulate healing & inhibit or eradicate infection which results in optimal healing for the wound (Sherman, 2009).

Conclusion

- Debrides 3-4x faster than conventional treatments
- Reduce/eradicate wound infections including MRSA.
- Can salvage limb amputations

Maggot Therapy ▶▶ Debrides ▶▶ Disinfects ▶▶ Accelerates healing

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ummary

My aim is to present an eye catching document that will disseminate and transfer knowledge to help engage a target audience of health care professionals (Wilson, Petticrew, Calnan & Nazareth, 2010). Through research, I have discovered that Maggot Debridement Therapy is not an intervention which is part of our routine practice in New Zealand.

Posters presentations are commonly utilised to communicate information within the public and academic health fields (Ilic & Rowe, 2013). As a media, posters are a forum to present a logical flow of ideas which highlight two to three key themes (Miller, 2007), this allows the reader to disseminate the important facts within a short period of time (Briggs, 2009) and ultimately spark an interest. This interest, will initiate a conversation between the researcher & reader and allow them to discuss the findings in more depth. If implemented effectively this will increase the readers knowledge and possibly alter their routine of practice (Ilic & Rowe, 2013).

Pecot

There is an increase demand for evidence-based approaches within the health care system. Pecot provides a format which helps summarize a research question. (Riva, Malik, Burnie, Endicott & Busse, 2012). Through this format I was able to define my question "*For older adults with chronic wounds, is Maggot Debridement Therapy more effective than conventional debridement therapies*"? (Lansing Community College Library, 2017)

Pecot Category	Information relating to question	Explanation
Population	Older adults	Older adult with a chronic difficult to heal wounds which needs debridement.
Environment / Intervention	Utilising Maggot Therapy for chronic wound care management	This intervention will be utilised in the community setting where District Nursing practice occurs. The intervention will be applied by either free-range or biobag's until the wound shows signs of decreased surface area, reduced/complete debridement of necrotic tissue and new granulation.
Comparison	Maggot Debridement vs Conventional Therapies	My interest is in Maggot Debridement. I plan to compare this with the Gold Standard of Conventional treatments, this includes chemical: Silver, honey or iodine or surgical debridement. All treatments which are usually effective for chronic wounds.
Outcome	To introduce Maggot Debridement Therapy as an intervention for chronic wounds debridement	Currently New Zealand does not utilise Maggots as a debridement intervention, however, it is implemented into practice in Australia, USA & U.K. By implementing this intervention the wound can alter from a chronic state to an acute state which will allow the body to heal.
Time	Research indicates the average rate of debridement is 14-28 days	The key difference between the rate of debridement is due to the dressing applied. It usually takes 14 days for free range maggots to debride compared to 29 days if they are confined in a biobag.

Reference

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