1. Introduction

1.1. Statement of the Problem

Onychocryptosis (ingrown nails) is the most common of pedal foot maladies seen by podiatrists (Armstrong *et al.,* 2000) and is prevalent throughout the world (DeLauro, 1995). They can result from a variety of conditions that cause an improper fit of the nail plate in the lateral nail fold (Mayeaux, 2000) or can result from abortive self-attempts at curing the condition in its earliest stages (DeLauro, 1995).

Most cases first present in patients during the second and third decades of life (Zuber, 2002). It occurs most frequently in the hallux of males and may be either unilateral or bilateral (Johnson, 2002).

The pain associated with onychocryptosis is often severe enough to cause difficulty in walking, due to one-quarter of the body's weight being placed on the hallux joint (Martin *et al.,* 2001). It therefore hinders even basic activity performed on a daily basis.

Most treatments for onychocryptosis is rendered by podiatrists and includes either non-surgical or surgical approaches. The procedures can be quite painful and costly (Zipfel, 2003), and the recurrence rate of onychocryptosis, especially after non-surgical treatment, is high (Baran and Dawber, 1994).

Homoeopathy is a cost-effective (Bekker, 2003) and non-invasive therapy, which gives it the potential as a possible alternative or complementary form of therapy in the treatment of onychocryptosis of the hallux. Although homoeopathy does not usually use specific remedies to treat specific conditions, *Magnetis Polus Australis* is recommended for the treatment of onychocryptosis of the hallux in almost all homoeopathic literature on the subject. However there is no scientific verification as yet.

1.2. Aim of the Research

The aim of the research is to determine the efficacy and specificity of *Magnetis Polus Australis* 7CH and 30CH in the treatment of uncomplicated onychocryptosis of the hallux in terms of the symptoms commonly associated with the condition such as pain, pressure tenderness, oedema (swelling) and erythema (redness) of lateral nail fold.

2. Literature Review

2.1. The Normal Toenail

Before an explanation regarding the typical presentation of onychocryptosis can be given, it is important to understand the anatomy of a normal toenail (Figure 2.1.).

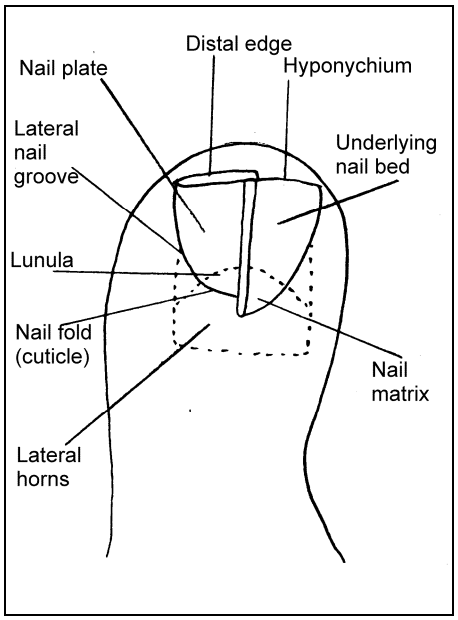

Figure 2.1. The normal nail plate (Zuber, 2002)

Nails form on the dorsal surfaces of the tips of the fingers and toes. The nail plate covers the nail bed, from which it receives nutrition, and extends from the nail cuticle up to the distal edge, and is bounded by the lateral nail fold.

The distal edge extends over the hyponychium. Nail production occurs at the nail matrix, which can be seen at the junction with the nail bed, called the lunula. The nail matrix extends to the lateral horns (Martini, 1998 and Mayeaux, 2000).

Fingernails grow about 1 cm every three months and toenails grow about one-third of this rate (Boon, 1999).

2.2. Onychocryptosis

Onychocryptosis, also known as ingrown nails, refers to the condition in which a spike, shoulder or serrated edge of the nail plate grows into and cuts the skin alongside the nail (Figure 2.2.) called the lateral nail fold (Johnson, 2002).

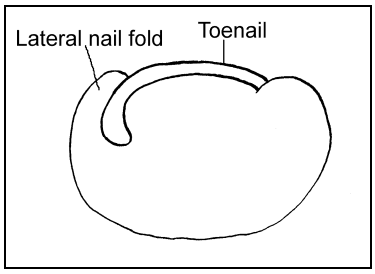

Figure 2.2. Onychocryptosis axial view (Bartolomeni and Port, 1992)

Onychocryptosis is more common in toenails than in fingernails (Bartolomeni and Port, 1992). Initially it causes little inconvenience, but as the nail grows, the ingrowing nail penetrates further and sets up an acute inflammation (Johnson, 2002).

It usually affects the hallux, or big toe, but may also affect the lesser toes. This condition is usually very painful, and some ingrown toenails are chronic, with recurring episodes of pain and infection (Hulm and Rounding, 2000).

The underlying cause of this condition is a foreign body reaction, which occurs when the body responds to the presence of the keratinaceous material of the nail in the flesh of the toe (Benzoni, 2001). There is also a possibility of bacterial infection, with the danger of this infection spreading and giving rise to cellulitis, subsequent lymphangitis and septicaemia (Johnson, 2002). Another possible complication is osteomyelitis (Cox and Jones, 1995).

2.2.1. Aetiology of Onychocryptosis

The aetiology of onychocryptosis is uncertain. Systemic diseases such as psoriasis, trophic changes or endocrine disorders usually only account for about 5% of cases, where as fungal infections directly or indirectly account for about 15% of cases (Wee, 1972).

Onychocryptosis has also been cited as a possible complication arising after use of oral terbinafine (an antifungal agent) (Jesperson and Weaver, 2000) or other antifungal agents (Connelley *et al.,* 1999) used to treat onychomycosis (fungal infection of the nail).

Research has also recommended the evaluation of hands and feet on physical examination for all patients being treated with Lamivudine (an antiretroviral) and Indinavir (an HIV protease inhibitor), especially when used in combination with Ritonavir (an HIV protease inhibitor) (Bincsik *et al*., 2001). These medications have been linked to causing onychocryptosis.

2.2.2. Predisposing factors of Onychocryptosis

The predisposing factors of onychocryptosis are as follows:

- Toenails are trimmed improperly or when nails are cut too short, the pressure on the underlying soft tissue is removed, thus the soft tissue tends to protrude.
- Excessive sweating.

- Shoes that place pressure on the toes and force the nail wall to roll over the edge of the nail plate.
- Abnormal weight-bearing pressure, often due to abnormalities in gait, which compresses the soft tissue against the underside of the nail plate and therefore deepens the lateral nail fold (Johnson, 2002).
- Hereditary nail deformities like overcurvature of the nails, abnormally long toes or high lateral nail folds.
- Overuse of foot baths (Martin *et al.*, 2001)

People who are at increased risk of developing onychocryptosis include persons suffering from arthritis, immune system deficiencies, neoplasms, obesity and circulatory disorders (Gale Encyclopedia, 2001).

Research conducted by the Department of Orthopedics in Turkey have shown a relationship between onychocryptosis and foot type. Participants with a Greek index minus and a squared index minus foot type had the strongest association with onychocryptosis, and after treatment with toe spacers a definite improvement in the onychocryptosis was noted (Balkan *et al.*, 2003).

John D. Mozena (2002) concluded in his research that there is also correlation between the depth of the ungula labia fold and the severity of the infected onychocryptosis.

2.2.3. Types of Onychocryptosis

According to Baran and Dawber (1994) there are five major types of onychocryptosis:

- subcutaneous ingrowing toenail
- hypertrophy of the lateral nail fold
- inward distortion of the nail
- distal nail embedding
- ingrowing toenail in infancy

2.2.4. Stages of Onychocryptosis

There are three basic stages of onychocryptosis. In stage one there is erythema (redness), oedema (swelling) and tenderness to pressure on the lateral nail fold. In stage two there is increased pain and drainage from the nail fold and signs of bacterial infection may be present. In stage three (which is the chronic stage) there is magnified pain and long-term oedema, the lateral nail fold hypertrophies and there is formation of granulation tissue (Zuber, 2002).

2.2.5. Diagnosis of Onychocryptosis

An accurate diagnosis relies on a clear and concise case history, as well as particular features, from which the practitioner can deduce a suitable treatment. The diagnosis of onychocryptosis is usually seen easily on physical examination (Alexander, 1997).

2.2.6. Treatment of Onychocryptosis

Several steps can be taken to decrease the likelihood of developing onychocryptosis. These include cutting the nails straight, without tapering the corners (Figure 2.3.), avoiding wearing constrictive socks and shoes and keeping the feet clean to prevent infection (McKinley Health Center, 2000).

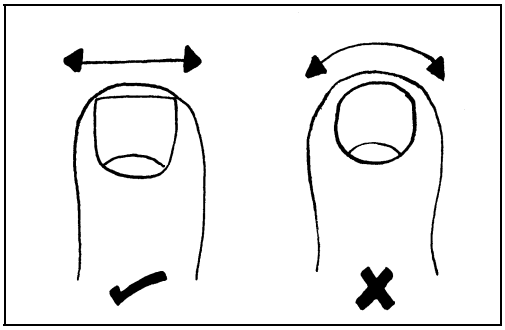

Figure 2.3. Properly and improperly trimmed toenails
(McKinley Health Center, 2000)

Podiatrists see the greatest number of cases of onychocryptosis. Virtually all of their treatments are aimed at removing or lifting the offending portion of nail from the lateral nail fold (Kemp and Winkler, 1983).

There are many management options for onychocryptosis, which are divided into non-surgical or conservative management and the surgical treatment (Zuber, 2002).

2.2.6.1. Non-surgical Approach

Non-surgical approaches focus on relieving the pressure of the onychocryptosis (Jay, 1989) and eliminating any infection with medication.

2.2.6.1.1. Medication

The medications most often used are anti-inflammatories (Benzoni, 2001), cephalosporins (an anti-infective agent) and second-generation macrolides (an antibiotic) (Martin *et al.*, 2001).

A report published in the Archives of Family Medicine (Armstrong, 2000) has shown that the use of oral antibiotics as an adjunctive therapy in the treatment of onychocryptosis does not play a role in decreasing the healing time or post-procedure morbidity.

2.2.6.1.2. Warm water soaks

With the non-surgical approach the affected nail edge is trimmed and the patient is then instructed to soak the foot frequently in a disinfectant solution (Birrer *et al.*, 1992).

2.2.6.1.3. Cotton-wick insertion in the lateral nail groove corner

A small amount of cotton can also be packed under the ingrown nail edge to allow better drainage and prevent further damage by the nail (Birrer *et al.*, 1992).

2.2.6.1.4. Plastic nail guard

P.J. Parker and D.G. Robertson (2001) wrote in the Journal of the Royal Medical Corps, that the use of the plastic nail guard in treating onychocryptosis compares favourably to simple avulsion and wedge resection with regard to recurrence rates.

2.2.6.1.5. Debridement and Silver nitrate cautery

The lateral nail groove can also be debrided (debulked) or the hypertrophied lateral nail tissue can be cauterized using silver nitrate (Zuber, 2002).

2.2.6.2. Surgical Approach

The surgical approach is often considered in severe onychocryptosis or when the non-surgical treatment has been ineffective. Surgery can be divided into either the partial or complete excision of the toenail. Surgery is, however, avoided on an infected toe (Brahms, 1995).

2.2.6.2.1. Partial nail avulsion

The partial excision or partial nail avulsion is the removal of the offending portion of toenail, and is performed under local anaesthesia (Figure 2.4.). The operation takes less than 20 minutes and is an outpatient procedure (Kemp and Winkler, 1983).

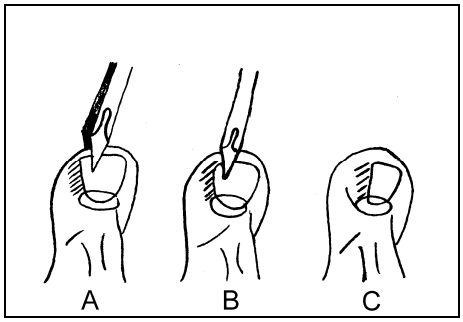

Figure 2.4.

Lateral nail avulsion (Zuber, 2002)

(A) An ingrown nail with lateral nail fold hypertrophy on the left side of the nail. After administering local anaesthesia, scissors, a scalpel blade, or a nail splitter (onychotome or nail chisel) can be used to cut proximally and create a smooth, straight edge. *(B)* The free lateral nail now is grasped with a clamp and removed. *(C)* The lateral nail bed and matrix are now exposed for ablation, the surgical removal of tissue (Zuber, 2002).

2.2.6.2.2. Complete nail avulsion

A complete matricectomy or nail avulsion may also be performed, which is the complete removal of the nail (Baran and Haneke, 2002).

2.2.6.2.3. Matricectomy

Research has shown that the partial matrix excision, while being the more preferable surgical procedure because the use of the toxic agent phenol (used in chemical matricectomy) is avoided, has a high recurrence rate (Geelkerken *et al.,* 2002).

Therefore when matricectomy is performed the part of or the whole nail plate is removed and the nail matrix is then destroyed by performing either a chemical matricectomy in which 88% phenol or 10% sodium hydroxide is applied to the matrix (Chesler *et al.,* 1998), or by performing a carbon dioxide laser matricectomy (Serour, 2002).

An article published by David A.R. De Berker (2001) in the Australasian Journal of Dermatology, shows that most of the research published on the surgical treatment of onychocryptosis favours the use of phenol as a simple procedure with low morbidity and the least chance of recurrence. Research done in Denmark indicated that phenol cauterization may be preferable to nail wedge resection (Herold *et al.,* 2001). Another study published in the Acta Dermato-Venereologica found that the success rate of phenol cauterization was 98,8% (Bostanci *et al.,* 2001).

A problem associated with phenol matricectomy is the postoperative drainage (the weeping of the wound after surgery), which can continue for 5-6 weeks. Research has found that applying 20% Ferric Chloride to the nail bed after phenolization provided a statistically significant reduction in oozing from the operation site (Aksakal *et al.*, 2001)

There has also been a documented case report on burns following phenol treatment, which resulted in amputation of the distal phalanx of the affected hallux. Guidelines were suggested in the literature to prevent any similar cases from occurring (Levy *et al.,* 2001)

Research conducted by M. Takahashi and Y. Narisawa (2000) and published in the Journal of Cutaneous Laser Therapy, indicated that using the carbon dioxide laser reduced operating time, mitigated mid-operative and post-operative bleeding and pain and showed positive signs of reducing the recurrence rate of onychocryptosis. Even partial nail avulsion followed by carbon dioxide Matricectomy showed a high cure rate (Li and Yang, 2002).

2.2.6.2.4. Modified Sleeve Method

An uncommonly used treatment for onychocryptosis is known as the Modified Sleeve Method. Patients are given a local anaesthetic and then a flexible narrow plastic tube is inserted under the toenail along the offending lateral border. The tube is fixed in place with silk or nylon sutures passed through the toenail. Any granulomatous or inflamed tissue is removed through electrocautery or local excision. This treatment has been found to be simple and effective, with relatively low recurrence rates (Abby *et al.,* 2002).

2.2.6.2.5. Silicone Gel Sheeting

A new method known as Silicone Gel Sheeting, involves placing the silicone on the granulation tissue and exposed nail bed after the partial excision of the offending nail. This treatment has shown success in reducing the thickness of the hypertrophic nail fold and preventing recurrence during regrowth of the nail plate, without being destructive to the nail matrix and adjacent tissue (Aksakal *et al.,* 2003).

2.2.6.3. Cost of Surgical Intervention

The cost of surgical intervention also varies according to each procedure. In South Africa, the basic cost of a nail wedge resection with phenolization matricectomy on one sulcus of one nail (which is the most common treatment for onychocryptosis in South Africa) is between R 180 to R 300 all inclusive, if performed in the consultation rooms. If performed in a day clinic, the cost would increase to R 1000 or more (Zipfel, 2003).

2.3. Homoeopathy

2.3.1. The History of Homoeopathy

The word Homoeopathy comes from two Greek words, "*Homoios*" meaning similar and "*Pathos*" meaning suffering. Homoeopathy's principle of "similia similibus curentur" or "let likes be treated by likes" was first applied to medicine by Hippocrates, alongside the principle of contraries (Eizayaga, 1991).

Later this principle of similars was elaborated on and developed by Dr Samuel Christian Hahnemann, a medical doctor from Germany. In 1970, while translating a Materia Medica by William Cullen (a well-known professor of chemistry at Edinburgh University), Hahnemann came across the statement that *Cinchona* (Peruvian bark) had properties of curing malarial fever. He tested the theory on himself by taking "four drams" of *Cinchona* daily for several days. The symptoms Hahnemann developed were typical for malaria. Intrigued, he started experimenting on family and friends and started proving other substances as well. Thus homoeopathy was born (Rawat, 1998).

2.3.2. The Principles of Homoeopathy

There are a few general principles which govern the homoeopathic approach to treatment of disease. These principles include the law of similars, the proving of remedies, the potentizing of remedies, prescribing only a single remedy in the smallest dose and treating all patients as individuals.

It is through applying these principles that homoeopaths practice their art. Hahnemann wrote in his Organon of Medicine (1997) that "homoeopathy is a perfectly simple system of medicine, remaining always fixed in its principles as in practice, which, like the doctrine whereon it is based, if rightly apprehended will be found to be complete."

2.3.2.1. The Law of Similars

This principle, stated above as “similia similibus curentur”, suggests that diseases should be treated with remedies, which in a healthy individual, produces similar symptoms to those now observed in the sick patient (Hahnemann, 1997).

2.3.2.2. The Proving of Remedies

Hahnemann did the first proving on himself using *Cinchona* and recorded the symptoms he experienced. Other homoeopathic remedies are derived from the vegetable, mineral and animal kingdoms. They are harvested from their source and then prepared in accordance with the directions of the homoeopathic pharmacopoeia (Rawat, 1998).

These medicinal substances are first proven on healthy individuals, in order to “ascertain their pure action in order to effect the homoeopathic cure of natural disease” (Hahnemann, 1997). The set of symptoms exhibited by the healthy individual are recorded and used as a reference to treat similar symptoms in patients. This record of symptoms constitutes the homoeopathic Materia Medica.

2.3.2.3. The Single Remedy

It is suggested that only a single homoeopathic remedy should be prescribed at a time to ensure that there is no confusion regarding the action of the remedy (Hahnemann, 1997).

2.3.2.4. The Minimum Dose

The smallest dose needed to effect a cure should be prescribed at any time, as they have been shown to be just as "sufficient, by the similarity of their symptoms, to over power and remove… the similar natural disease" (Hahnemann, 1997).

2.3.2.5. Potentization

The original substance is diluted in a specialized process called potentization, which involves vigorous succussion of the remedy with each step of dilution (Weiner, 1996). Homoeopathic remedies are available in different potencies and are dispensed in different mediums, such as alcohol, distilled water and lactose.

Hahnemann found that by potentizing homoeopathic medicines, the "medicinal powers of the crude substances" become "immeasurably and penetratingly efficacious" (Hahnemann, 1997) and the toxic nature of crude substances are eliminated while maintaining their therapeutic action.

2.3.2.6. Individualization of the patient

Each patient is treated by a homoeopathic practitioner as an individual, and all mental, emotional and physical aspects are taken into account before a remedy is selected (Weiner, 1996). These totality of symptoms then provide the homoeopathic practitioner with enough information in order to select the appropriate remedy for the individual patient (Wells, 1993).

2.3.3. *Magnetis Polus Australis*

Within the Materia Medica, the homoeopathic remedy *Magnetis Polus Australis* is indicated in the treatment of the symptom of "ingrowing toenail" (Vermeulen, 1997). *Magnetis Polus Australis* is an attenuation of media that has been saturated with emanations from the South Pole of the magnet (Clarke, 1994).

In order to understand the results obtained by this research and possibly explain the dynamics of how *Magnetis Polus Australis* works, an understanding of magnets (specifically the south pole of the magnet) in their natural form and their history is important.

2.3.3.1. The history of magnet therapy

Magnets were first discovered some 2500 years ago. The earliest written medical text, The Yellow Emperor's Book of Internal Medicine, published in China around 2000 BC, mentions the application of magnetic stones to correct health imbalances (Goldberg *et al*., 2000). The healing power of the magnets is also mentioned in many religious texts, the oldest being the Vedas (Badat, 2002). Many other ancient cultures wrote about or used magnets for healing, including Cleopatra (who slept with a magnetic stone on her forehead to preserve her youthful; appearance), Aristotle, Paracelsus, Pliny, Galen, Marcel and Alexander of Tralles. In 1600 William Gilbert, court physician to Elizabeth I of England, published the first treatise on magnetism, and was also the first to describe the Earth as a huge magnet. Even Albert Einstein, in postulating his general theory of relativity, showed that electricity and magnetism are different aspects of the same phenomena, and at that time both magnetism and electricity were therapeutic alternatives for treating mental disorders and other conditions (Goldberg *et al*., 2000).

2.3.3.2. Modern day magnet therapy

A lot of research is being conducted these days in the use of magnets as a form of healing. Research published in the International Journal of Paediatric Dentistry shows how magnets are beneficial in the management of unerupted teeth in children and adolescents (Cole *et al*., 2003), while studies done in the United States of America show static magnetic field therapy as improving disability and reducing pain associated with chronic pelvic pain (Brown *et al*., 2002). It can be deduced from all the literature available on the internet and also from the scientific research being conducted using magnets to treat specific conditions, that while the scientific community still regards magnet therapy with considerable skepticism, their conclusions remain tentative until supported by further studies (Livingstone, 1998).

Modern magnet therapy courses teach that the application of magnets on the body has therapeutic benefits. The south pole of the magnet is used to reduce muscle pain but increase other pain, increase inflammation and infection and stimulate tissue regeneration (Badat, 2002).

2.3.3.3. The history of *Magnetis Polus Australis*

No exact documentation has been found to explain why this remedy came to be proved as a homoeopathic remedy. It is however known that Hahnemann was assisted in the proving of *Magnetis Polus Australis* by Franz, Harnisch, Kummer and Stapf, all pupils of Hahnemann.

Hahnemann did write in Aphorism 287 in the Organon of Medicine (1997) "the powers of the magnet for healing purposes can be employed with more certainty according to the positive effects detailed in the Materia Medica Pura."

Hahnemann (1996) also wrote in his Materia Medica Pura that "a carefully-constructed magnetic steel rod can effect such a powerful derangement of our health, even when it is not in actual contact with the body, but may even be covered with some thick material (such as cloth, hide, glass), so that we suffer from violent morbid affections; or, what is equally remarkable, that a magnetic rod can quickly and permanently cure the most severe disease for which it is the suitable medicine, when it is brought near the body, for but a short time, even though covered as above described." It is probable that Hahnemann's experience in using magnets made him decide to prove it as a homoeopathic remedy as well.

2.3.3.4. *Magnetis Polus Australis* as a Homoeopathic Remedy

Hahnemann wrote in his Materia Medica Pura (1996) that the ingrown toenail is extremely sensitive to touch, while Clarke (1994) states in his Dictionary of Practical Materia Medica, that he has cured many cases of ingrown toenails in the absence of other symptoms indicating another remedy. Most homoeopathic Materia Medicas generalize this symptom as "ingrowing toenails" (Boger, 1995 and Schroyens, 1995), while Vermeulen (1997) characterizes it as a "severe pain on inner side of the nail of big toe, worse for walking or the slightest touch".

Helios Homoeopathic Pharmacy (2002) manufactures a 2M potency of *Magnetis Polus Australis*, which they consider a specific for onychocryptosis. It is the only remedy they make in this potency (Appendix A). Even Clarke (1994) suggests the use of the remedy in this potency.

Magnetis Polus Australis also has a homoeopathic picture in its own right and includes symptoms such as painful and dry eyes, easy dislocation of the metatarsal joints, an aching in the patella and shooting pain in the soles of the feet, among other symptoms (Vermeulen, 1997).

2.3.3.5. Cost of *Magnetis Polus Australis*

In South Africa, the average price of the over-the-counter preparation of *Magnetis Polus Australis* by Natura is R 26,83 for 25mℓ directly from the company and between R 40 to R 60 from most health shops (Bekker, 2003).

2.3.3.6. Preparation of *Magnetis Polus Australis*

Helios Pharmacy Ltd. (Lawrence, 2002) make their *Magnetis Polus Australis* from both solid and liquid media. Three vials (of water, alcohol and lactose sugar respectively) are strapped to the south pole of a strong audio speaker magnet (whose poles have previously been determined by a compass). The vials are left for 24 hours before attenuating the three media. The lactose is triturated to a 3CH and then potentized to a 4CH, while the liquid media are potentized to a 4CH. The three media are then combined into one mixture and then taken up to higher potencies in 90% alcohol (Appendix A).

3. Methodology

The potencies used in this research were *Magnetis Polus Australis* in the 7th and 30th potencies, since homoeopathy frequently uses lower potencies in the treatment of physical complaints.

3.1. Purchasing of Medication

The homoeopathic remedy *Magnetis Polus Australis* in the 6th centesimal potency was purchased from Helios Homoeopathy Ltd. in the United Kingdom, while the 30th centesimal potency was purchased from W. Last Homeopathic cc. in South Africa.

3.2. Preparation of the Remedies

Magnetis Polus Australis in the 6th centesimal potency was potentized up, in 20% alcohol, to the 7th centesimal potency at the TWR Homoeopathic Clinic Dispensary (Appendix B), while the 30th centesimal potency was dispensed in 20% alcohol.

Each bottle was allocated a control number, which was randomly selected by the Dispensary Supervisor (Appendix C). The current study was a double-blind placebo study.

3.3. Recruitment of Participants

Thirty participants were recruited by means of advertisements posted on the notice boards at the TWR Health Clinic and through an advertisement posted in the Benoni City Times newspaper on 29 November 2002.

3.3.1. Inclusion Criteria

The participants suffered from uncomplicated onychocryptosis of the hallux, in either acute or chronic form.

3.3.2. Exclusion Criteria

The participants:

- did not suffer from onychocryptosis that had been complicated by infection
- were not under any other allopathic or alternative treatment for their onychocryptosis of the hallux within the duration of the research
- were not using any topical over-the-counter medication for their onychocryptosis of the hallux within the duration of the research
- did not suffer from arthritis, immune system deficiencies or diabetes mellitus.

3.4. The Control and Experimental Groups

A total of thirty participants were recruited for the study. The placebo group included ten participants and the experimental group included twenty participants, ten of which received the 7CH and the other ten received the 30CH.

The experimental group received a labeled 30mℓ amber glass bottle with either the 7CH or 30CH potency, while the control group received a labeled 30mℓ amber glass bottle filled with 20% alcohol only.

3.5. Initial Consultations

Participants were first seen at the TWR or Benoni Podiatry clinic. There the participants signed a consent form (Appendix D) and then completed a form giving details of relevant personal data (Appendix E). Participants also filled in a form in which they graded their symptoms of onychocryptosis (Appendix F).

After the onychocryptosis was diagnosed by a qualified podiatrist, the participants were given one of the numbered bottles allowing them to be randomly placed into a control or experimental group. Each participant was instructed to take five drops from their prospective bottles twice daily orally for a period of three weeks.

3.6. Follow-up Consultations

Follow-ups occurred at fortnightly intervals during which questionnaires regarding the progress of their onychocryptosis were completed (Appendix F). The venue of each follow-up varied depending on the participant's individual preferences. A total of two follow-ups took place within the research period.

3.7. Data Collection and Analysis

At the end of the research period these questionnaires with the data were collected and statistically analyzed using chi-squared tests.

4. Research Results

4.1. Validity of Sample Groups

Before the data collected from the participants can be statistically analyzed, it is important to determine whether the groups were correctly sampled. Only if the sample groups were comparable in terms of gender, age, grading of initial symptoms and amount of years that they have suffered from onychocryptosis of the hallux, could the research be statistically viable.

4.1.1. Gender Distribution

Table 4.1. to Table 4.3. show the gender count within each sample group. This shows matching between sample groups, even though the participants were randomly placed, and allows further statistical analysis to be performed since the research is statistically viable in terms of gender distribution within each sample group.

	Gender
	Count
Male	4
Female	6

Table 4.1. Gender distribution within placebo group

	Gender
	Count
Male	6
Female	4

Table 4.2. Gender distribution within 7CH group

	Gender
	Count
Male	3
Female	7

Table 4.3. Gender distribution within 30CH group

	Gender
	Count
Male	13
Female	17

Table 4.4. Overall gender distribution

Table 4.4. shows the overall gender distribution of the participants who took part in the research. It is notable that there are more female participants than male participants. In this research the ratio may be explained by the fact that more females are willing to participate in experimental research and they can see the podiatrist at the times set out during the day, since many worked in the area where the podiatrist centers were situated.

4.1.2. Age Distribution and Number of Years Participants Suffered from Onychocryptosis

Figure 4.1. to Figure 4.3. show the average age distribution of the participants in the various sample groups. These show the similarities between the sample groups, which are then verified statistically in Table 4.5. to Table 4.7.

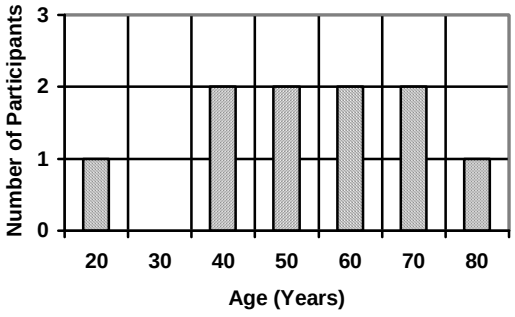

Figure 4.1.
Average distribution of the ages of the participants in placebo group

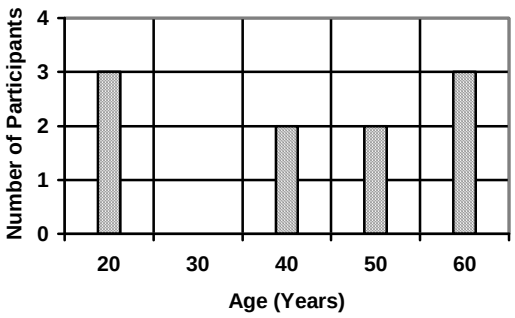

Figure 4.2.
Average distribution of the ages of participants in 7CH group

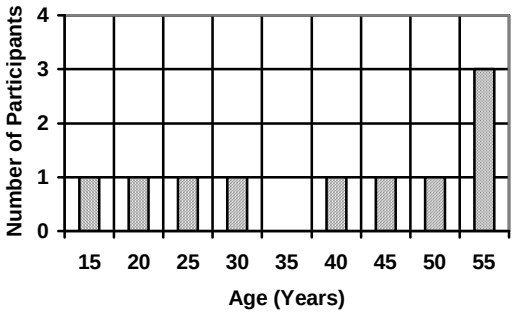

Figure 4.3.
Average distribution of the ages of the participants in 30CH group

Figure 4.4. shows the overall age distribution of the participants who took part in the research.

Figure 4.4.
Average distribution of the ages of the participants

Figure 4.5. to Figure 4.7. show the number of years the participants in the various sample groups have suffered from onychocryptosis of the hallux. They show similar ranges for all the sample groups.

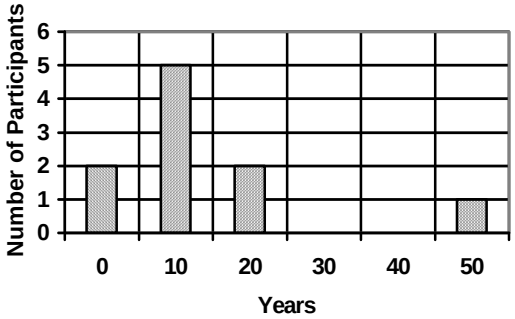

Figure 4.5.
Number of years participants in placebo group suffered from onychocryptosis of the hallux

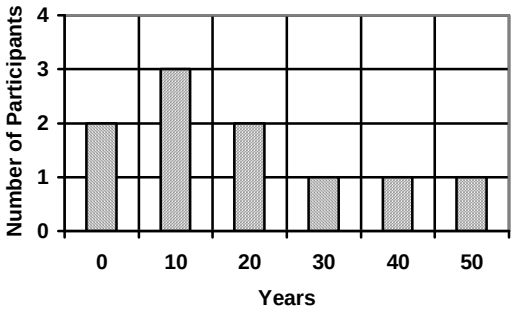

Figure 4.6.
Number of years participants in 7CH group suffered from onychocryptosis of the hallux

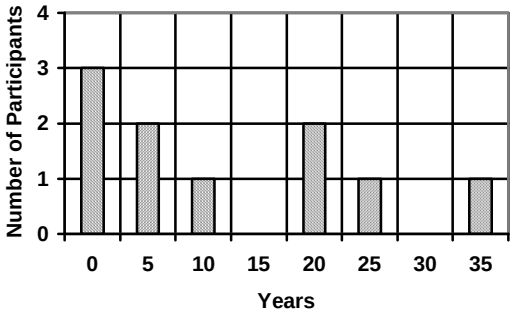

Figure 4.7.
Number of years participants in 30CH group suffered from onychocryptosis of the hallux

Figure 4.8. shows the overall number of years participants who took part in the research suffered from onychocryptosis of the hallux.

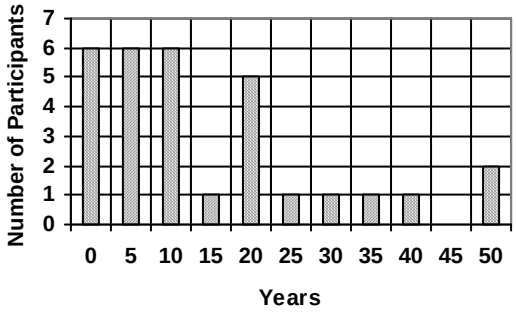

Figure 4.8.
Number of years the participants have suffered from onychocryptosis of the hallux

The age, second column, and number of years the participants have suffered from onychocryptosis, the third column, are then analyzed (see Table 4.5. to Table 4.7.) using the measures of central tendency and variability of the different sample groups.

		AGE	SUFFER
N	Valid	10	10
	Missing	0	0
Mean		53.7917	13.40
Median		54.3750	10.00
Mode		23.75 [a]	10
Std. Deviation		17.246	14.025
Variance		297.41	196.711
Minimum		23.75	1
Maximum		76.00	50

[a] Multiple modes exist. The smallest value is shown.

Table 4.5. Measures of Central Tendency and Variability of the placebo group

		AGE	SUFFER
N	Valid	10	10
	Missing	0	0
Mean		42.5583	18.80
Median		44.3333	15.00
Mode		20.67	1 [a]
Std. Deviation		16.665	16.612
Variance		277.74	275.956
Minimum		20.67	1
Maximum		63.25	50

[a] Multiple modes exist. The smallest value is shown.

Table 4.6. Measures of Central Tendency and Variability of the 7CH group

		AGE	SUFFER
N	Valid	10	10
	Missing	0	0
Mean		38.7167	12.20
Median		42.2917	7.50
Mode		15.75 [a]	2 [a]
Std. Deviation		15.500	11.774
Variance		240.25	138.622
Minimum		15.75	1
Maximum		56.92	35

[a] Multiple modes exist. The smallest value is shown

Table 4.7. Measures of Central Tendency and Variability of the 30CH group

In these tables the two important values to consider are the mean and the standard deviation (Swinscow, 1997). These show that this research is statistically viable in terms of age distribution and number of years the participants suffered from onychocryptosis of the hallux, therefore allowing further statistical analysis to be performed.

4.1.3. Grading of Symptoms in Pre-test

Figure 4.9. to Figure 4.11. compares the grading of the symptoms of onychocryptosis by the participants within each sample group. They show that the sample groups are similar enough in their gradings to allow this research to be viable statistically.

The pre-test (abbreviation "Pre" in Figure 4.9. to Figure 4.11.) refers to the first consultation before the participant is given the labeled bottle.

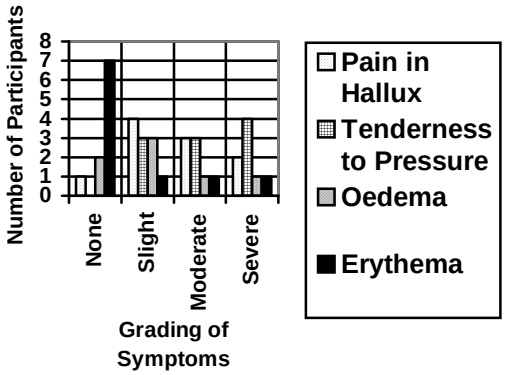

Figure 4.9.
Overall results for placebo group in pre-test

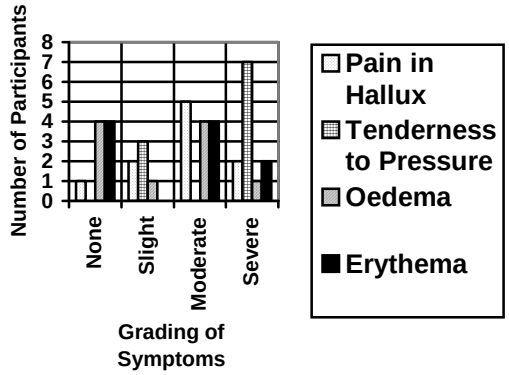

Figure 4.10.
Overall results for 7CH group in pre-test

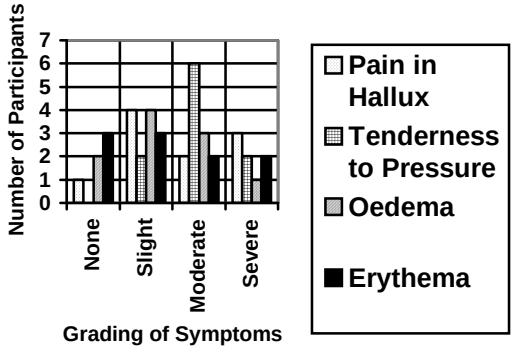

Figure 4.11.
Overall results for 30CH group in pre-test

4.2. Results obtained

The participants taking part in the research graded their pain in the hallux, tenderness to pressure on the hallux, oedema of the lateral nail fold and erythema of the lateral nail fold under the headings none, slight, moderate and severe.

Each symptom of onychocryptosis that is graded by each participant in this research was reviewed in the context of pre-test, post-test 1 and post-test 2. The pre-test refers to the first consultation before the participant is given the labeled bottle. The post-test 1 refers to the first follow up that takes place two weeks after the commencement of the research. The post-test 2 refers to the second follow-up that takes place four weeks after the commencement of the research.

All the results collected from the participants have been placed into a table (Table 4.8.) to allow for an overall view regarding the trend for grading the symptoms of onychocryptosis in general.

		None	Slight	Moderate	Severe
Pre: Pain in the big toe	Count	3	10	10	7
Pre: Tenderness to pressure	Count		8	9	13
Pre: Swelling	Count	11	8	8	3
Pre: Redness	Count	14	4	7	5
Post1: Pain in the big toe	Count	12	10	5	3
Post1: Tenderness to pressure	Count	7	14	7	1
Post1: Swelling	Count	21	6	2	1
Post1: Redness	Count	23	6	1	
Post2: Pain in the big toe	Count	13	10	6	1
Post2: Tenderness to pressure	Count	10	13	5	2
Post2: Swelling	Count	19	8	3	
Post2: Redness	Count	25	3	2	

Table 4.8. Overall results of all the sample groups

Within this table a general shift can be seen towards the left column, which represents the grading “none”, and this trend is visually seen when comparing the bar-graphs of Figure 4.12. to Figure 4.14.

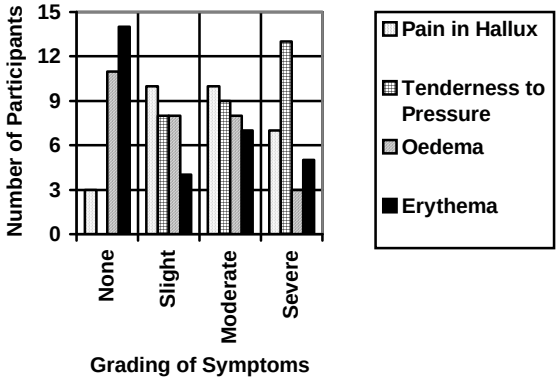

Figure 4.12.
Overview of the Grading of Symptoms by the Participants for Pre-Test

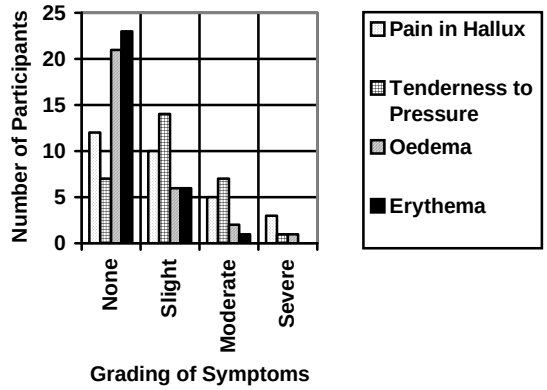

Figure 4.13.
Overview of the Grading of Symptoms by the Participants for Post-test 1

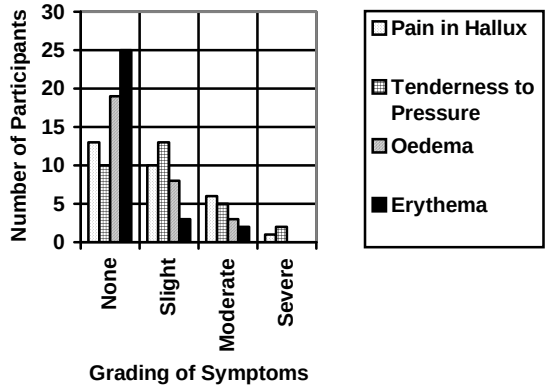

Figure 4.14.
Overview of the Grading of Symptoms by the Participants for Post-test 2

The results from Table 4.8. can also be compared for each symptom graded by each of the sample groups (see Figure 4.15. to Figure 4.18.).

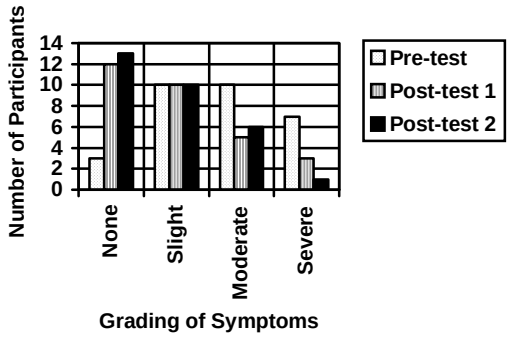

Figure 4.15.
Comparison of pain in the hallux between pre-test, post-test 1 and post-test 2

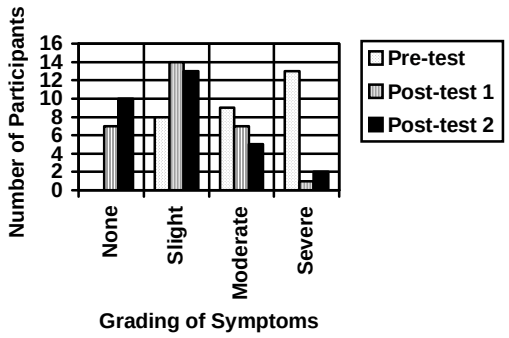

Figure 4.16.
Comparison of tenderness to pressure on the hallux between pre-test, post-test 1 and post-test 2

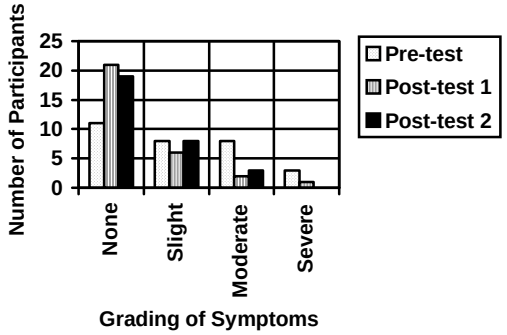

Figure 4.17.
Comparison of oedema of lateral nail fold between pre-test, post-test 1 and post-test 2

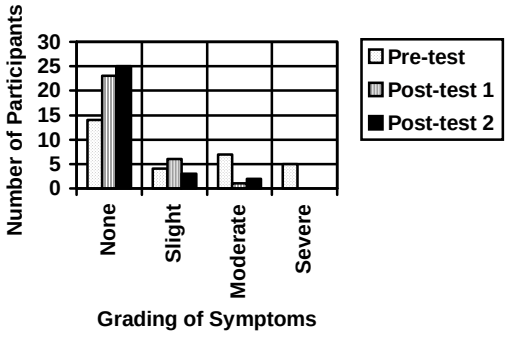

Figure 4.18.
Comparison of erythema of lateral nail fold between pre-test, post-test 1 and post-test 2

Hypothesis tests are then performed using Chi-square tests in order to decide whether or not effects are present (Stockburger, 1996).

4.2.1. Interpretation of Chi-square tests

Non-significant results in the Chi-square tests mean that the null hypothesis (H_0) is accepted. The null hypothesis states that group membership was independent to the severity of the symptom. This implies there is no relationship between which sample group the participant is in and how they grade their symptoms, and that any differences can be explained by chance i.e. there is no significant improvement in symptoms (Stockburger, 1996).

Significant results in the Chi-square tests mean that the null hypothesis is rejected and therefore we accept the alternative hypothesis (H_a). The alternative hypothesis states that group membership is dependent to the severity of the symptom. This implies the sample group the participant is in will determine their grading of the symptoms, and that interpretation of the result is warranted i.e. there does seem to be some improvement in the symptoms (Stockburger, 1996).

The value used to determine whether to accept or reject the null hypothesis is the Pearson Chi-square or p-value. If the p-value is less than 0.05 then we reject the null hypothesis, however if the p-value is more than 0.05 we accept the null hypothesis.

With some of the Chi-square tables we find that some p-values have the superscript "[a]" next to it. This states that three cells have an expected count less than 5, which means it is not correct to interpret the p-value to a certainty. This occurred because the number of participants used in this research was too small and therefore the values being worked with in each sample group was also too small to be accurately analyzed. Therefore in the group analyses the p-values are tentatively interpreted to accept or reject the null hypothesis.

4.2.2. Pre-test analysis versus Post-test 1 and Post-test 2 analysis

4.2.2.1. Pain in the hallux

Figure 4.19. compares the sample groups in terms of the grading of pain in the hallux by each participant within the pre-test. These are compared to Figure 4.20. and Figure 4.21. which represent the grading of pain in the hallux within post-test 1 and post-test 2 respectively.

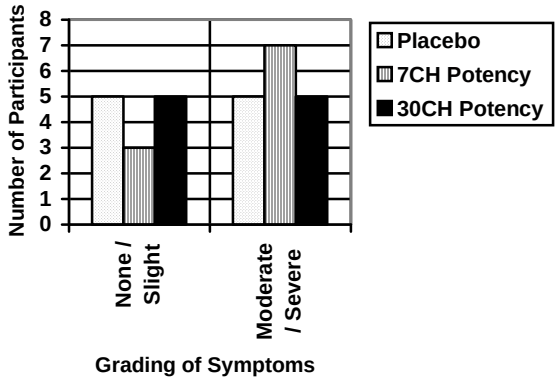

Figure 4.19.
Grading for pain in the hallux in the pre-test by sample groups

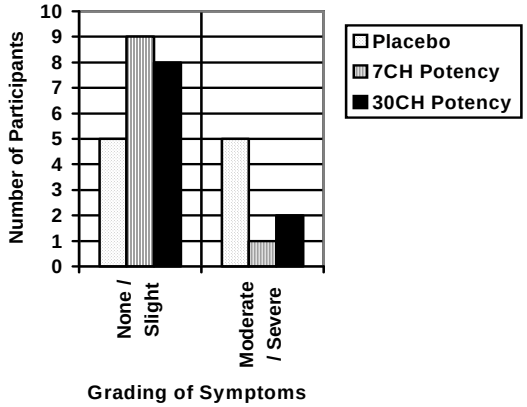

Figure 4.20.
Grading for pain in the hallux in the post-test 1 by sample groups

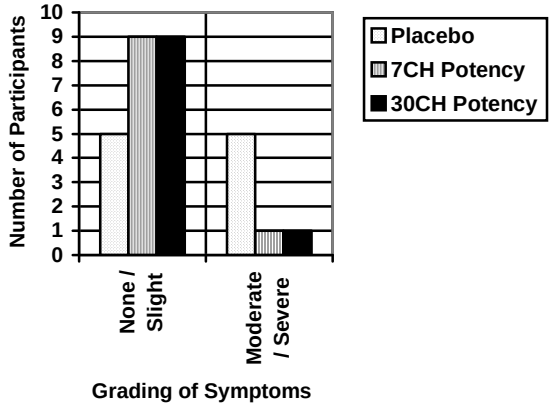

Figure 4.21.
Grading for pain in the hallux in the post-test 2 by sample groups

When comparing the figures above there seems to be a general tendency for the grading for pain in the hallux to move towards the “None/Slight“ column for both the 7CH and 30CH potencies within post-test 1 and post-test 2. By using the Chi-square tests for pre-test, post-test1 and post-test 2 respectively (Table 4.9., Table 4.10. and Table 4.11. in Appendix G), these observations can be statistically verified .

In Table 4.9. and Table 4.10. the p-value is > 0.05, therefore we accept the null hypothesis. In Table 4.11. the p-value is > 0.05, therefore we would normally accept the null hypothesis. However because three cells have an expected count less than 5 and the p-value is < 0.100, there does seem to be an indication that there is reason to accept the alternative hypothesis.

4.2.2.2. Tenderness to pressure on the hallux

Figure 4.22. compares the sample groups in terms of the grading of tenderness to pressure on the hallux by each participant within the pre-test. These are compared to Figure 4.23. and Figure 4.24. which represent the grading of tenderness to pressure on the hallux within post-test 1 and post-test 2 respectively.

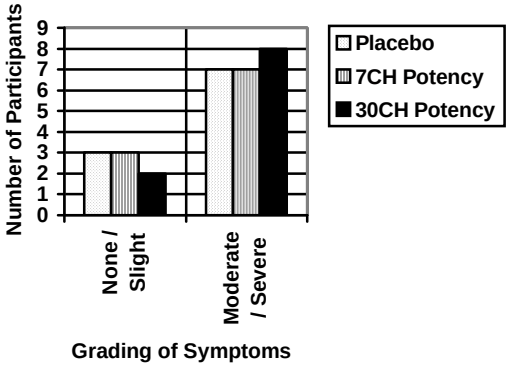

Figure 4.22.
Grading for tenderness to pressure in the pre-test by sample groups

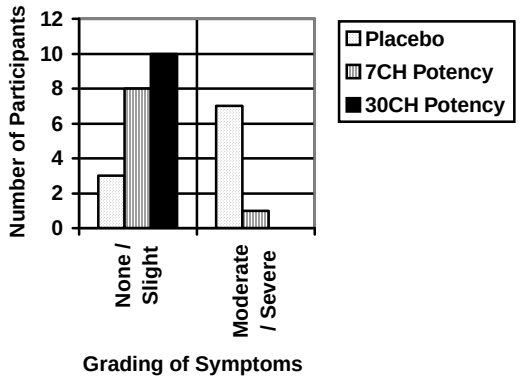

Figure 4.23.
Grading for tenderness to pressure in the post-test 1 by sample groups

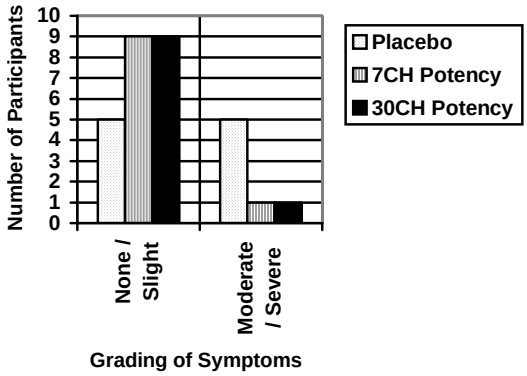

Figure 4.24.
Grading for tenderness to pressure in the post-test 2 by sample groups

When comparing the figures above there seems to be a general tendency for the grading for tenderness to pressure on the hallux to move towards the "None / Slight" column for both the 7CH and 30CH potencies within post-test 1 and post-test 2. By using the Chi-square tests for pre-test, post-test1 and post-test 2 respectively (Table 4.12., Table 4.13. and Table 4.14. in Appendix G), these observations can be statistically verified.

In Table 4.12. the p-value is > 0.05, therefore we accept the null hypothesis. In Table 4.13. the p-value is < 0.05, therefore we reject the null hypothesis, and warrant the interpretation of the result as dependent on which group the participant is in, which will determine the grading of their symptoms. In Table 4.14. the p-value is > 0.05, therefore we would normally accept the null hypothesis. However because three cells have an expected count less than 5 and the p-value is < 0.100, there does seem to be an indication that there is reason to accept the alternative hypothesis.

4.2.2.3. Oedema of the lateral nail fold

Figure 4.25. compares the sample groups in terms of the grading of oedema of the lateral nail fold by each participant within the pre-test. These are compared to Figure 4.26. and Figure 4.27. which represent the grading of oedema of the lateral nail fold within post-test 1 and post-test 2 respectively.

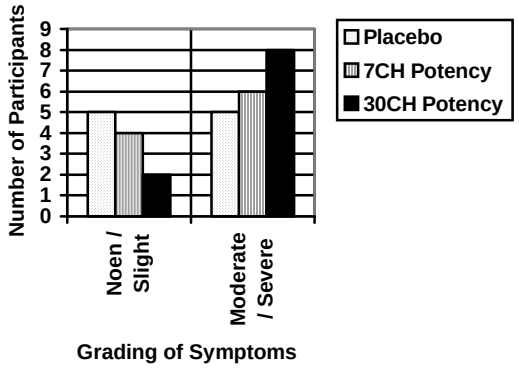

Figure 4.25.
Grading for oedema of the lateral nail fold in the pre-test by sample groups

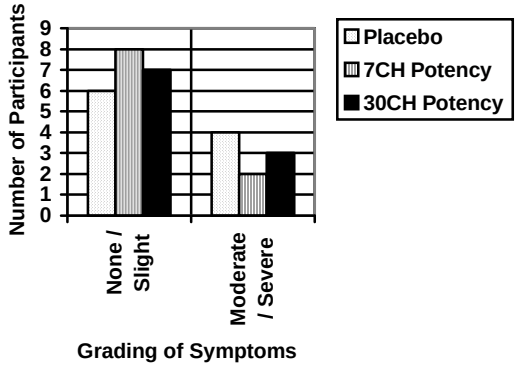

Figure 4.26.
Grading for oedema of the lateral nail fold in the post-test 1 by sample groups

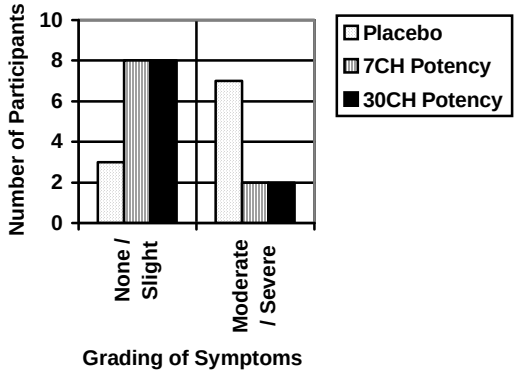

Figure 4.27.
Grading for oedema of the lateral nail fold in the post-test 2 by sample groups

When comparing the figures above there seems to be a general tendency for the grading for oedema of the lateral nail fold to move towards the "None / Slight" column for both the 7CH and 30CH potencies within post-test 1 and post-test 2. By using the Chi-square tests for pre-test, post-test1 and post-test 2 respectively (Table 4.15., Table 4.16. and Table 4.17. in Appendix G), these observations can be statistically verified.

In Table 4.15. and Table 4.16. the p-value is > 0.05, therefore we accept the null hypothesis. In Table 4.17. the p-value is > 0.05, therefore we would normally accept the null hypothesis. However because three cells have an expected count less than 5 and the p-value is < 0.100, there does seem to be an indication that there is reason to accept the alternative hypothesis.

4.2.2.4. Erythema of the lateral nail fold

Figure 4.28. compares the sample groups in terms of the grading of erythema of the lateral nail fold by each participant within the pre-test. These are compared to Figure 4.29. and Figure 4.30. which represent the grading of erythema of the lateral nail fold within post-test 1 and post-test 2 respectively.

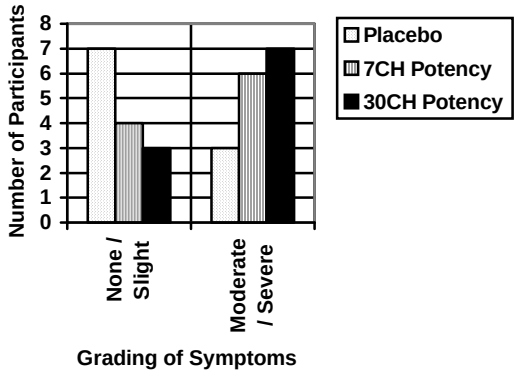

Figure 4.28.
Grading for erythema of the lateral nail fold in the pre-test by sample groups

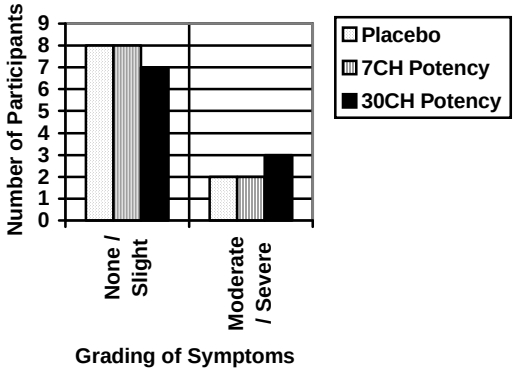

Figure 4.29.
Grading for erythema of the lateral nail fold in the post-test 1 by sample groups

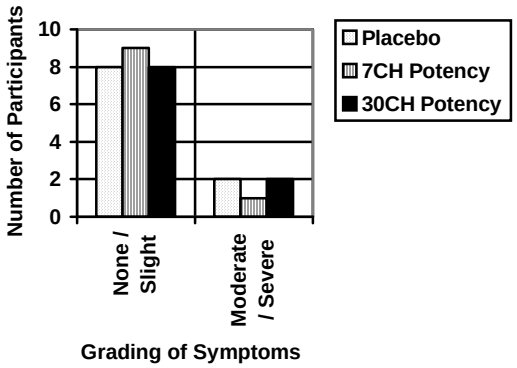

Figure 4.30.
Grading for erythema of the lateral nail fold in the post-test 2 by sample groups

When comparing the figures above there seems to be a general tendency for the grading for erythema of the lateral nail fold to move towards the "None / Slight" column for both the 7CH and 30CH potencies within post-test 1 and post-test 2. By using the Chi-square tests for pre-test, post-test1 and post-test 2 respectively (Table 4.18., Table 4.19. and Table 4.20. in Appendix G), these observations can be statistically verified.

In Table 4.18., Table 4.19. and Table 4.20. the p-value is > 0.05, therefore we accept the null hypothesis.

4.3. Comparison between Treatments

The results obtained for each symptom were compared in terms of improvement and no improvement, for the intervals between pre-test and post-test 1, pre-test and post-test 2 and post-test 1 and post-test2 respectively.

Improvement referred to any positive change occurring with regard to the participant's symptoms i.e. was graded with a lower value. No improvement referred to no change or any deterioration occurring with regard to participant's symptoms i.e. was graded the same or with a higher value.

Chi-square tests were once again performed to determine whether the null hypothesis can be accepted or rejected.

4.3.1. Pain in the Hallux

4.3.1.1. Pre-test versus Post-test 1 analysis

Figure 4.31. compares the sample groups between pre-test and post-test 1, in terms of improvement and non-improvement with regard to their grading of pain in the hallux.

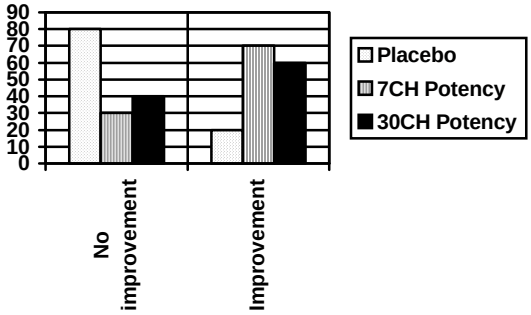

Figure 4.31.
Improvement versus no improvement for pain in the hallux in pre-test versus post-test1 for the sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.21. in Appendix G).

In Table 4.21. the p-value is > 0.05, therefore we would normally accept the null hypothesis. However because the p-value is close to 0.05, there does seem to be an indication that there is reason to accept the alternative hypothesis, as there does seem to be a slight improvement in symptoms.

4.3.1.2. Pre-test versus Post-test 2 analysis

Figure 4.32. compares the sample groups between pre-test and post-test 2, in terms of improvement and non-improvement with regard to their grading of pain in the hallux.

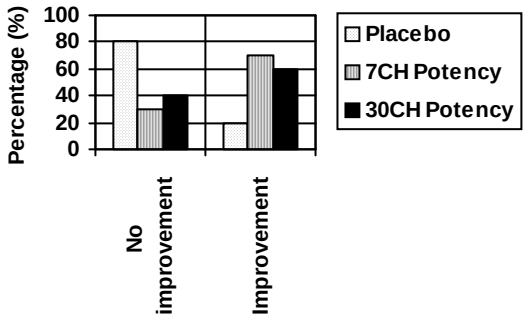

Figure 4.32.
Improvement versus no improvement for pain in the hallux in pre-test versus post-test 2 for the sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.22. in Appendix G).

In Table 4.22. the p-value is < 0.05, therefore we reject the null hypothesis, and warrant the interpretation of the result as dependent on which group the participant is in, which will determine whether there was improvement or no improvement. In this case there was definite improvement noted.

4.3.1.3. Post-test 1 versus Post-test 2 analysis

Figure 4.33. compares the sample groups between post-test 1 and post-test 2, in terms of improvement and non-improvement with regard to their grading of pain in the hallux.

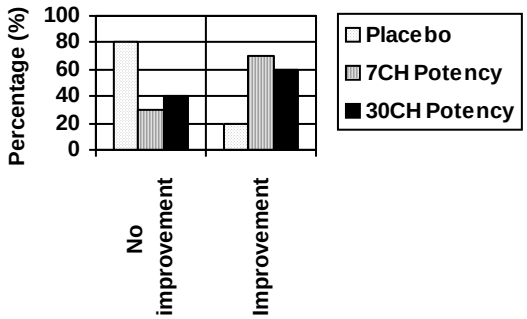

Figure 4.33.
Improvement versus no improvement for pain in the hallux in post-test 1 versus post-test 2 for sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.23. in Appendix G).

In Table 4.23. the p-value is > 0.05, therefore we accept the null hypothesis and understand that there is no relationship between which sample group the participant is in and whether there was improvement or no improvement in their symptoms. In this case there was no improvement.

4.3.2. Tenderness to Pressure on the Hallux

4.3.2.1. Pre-test versus Post-test 1 analysis

Figure 4.34. compares the sample groups between pre-test and post-test 1, in terms of improvement and non-improvement with regard to their grading of tenderness to pressure on the hallux.

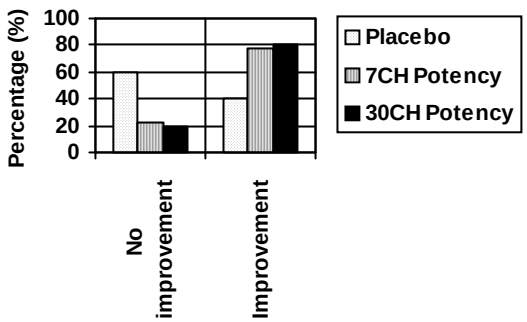

Figure 4.34.
Improvement versus no improvement for tenderness to pressure on the hallux in pre-test versus post-test 1 for sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.24. in Appendix G).

In Table 4.24. the p-value is > 0.05, therefore we accept the null hypothesis and understand that there is no relationship between which sample group the participant is in and whether there was improvement or not, though there does seem to be some improvement in symptoms.

4.3.2.2. Pre-test versus Post-test 2 analysis

Figure 4.35. compares the sample groups between pre-test and post-test 2, in terms of improvement and non-improvement with regard to their grading of tenderness to pressure on the hallux.

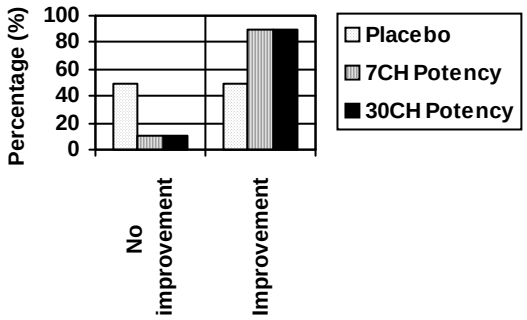

Figure 4.35.
Improvement versus no improvement for tenderness to pressure on the hallux in pre-test versus post-test 2 for sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.25. in Appendix G).

In Table 4.25. the p-value is > 0.05, therefore we would normally accept the null hypothesis. However because three cells have an expected count less than 5 and the p-value is close to 0.05, there does seem to be an indication that there is reason to accept the alternative hypothesis, as there does seem to be some improvement in symptoms.

4.3.2.3. Post-test 1 versus Post-test 2 analysis

Figure 4.36. compares the sample groups between post-test 1 and post-test 2, in terms of improvement and non-improvement with regard to their grading of tenderness to pressure on the hallux.

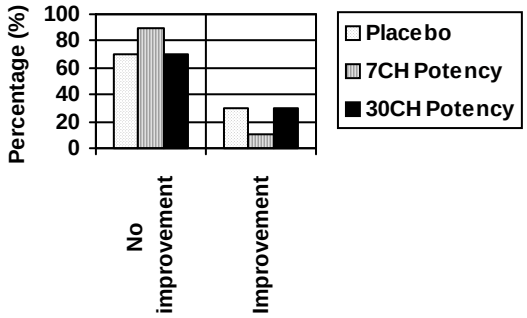

Figure 4.36.
Improvement versus no improvement for tenderness to pressure on the hallux in post-test 1 versus post-test 2 for sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.26. in Appendix G).

In Table 4.26. the p-value is > 0.05, therefore we accept the null hypothesis and understand that there is no relationship between which sample group the participant is in and whether there was improvement or no improvement in their symptoms. In this case there was no improvement.

4.3.3. Oedema of the Lateral Nail Fold

4.3.3.1. Pre-test versus Post-test 1

Figure 4.37. compares the sample groups between pre-test and post-test 1, in terms of improvement and non-improvement with regard to their grading of oedema of the lateral nail fold.

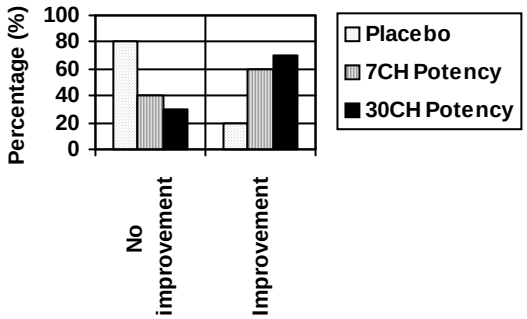

Figure 4.37.
Improvement versus no improvement for oedema of lateral nail fold on the hallux in pre-test versus post-test 1 for sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.27. in Appendix G).

In Table 4.27. the p-value is > 0.05, therefore we would normally accept the null hypothesis. However because the p-value is close to 0.05, there does seem to be an indication that there is reason to accept the alternative hypothesis, as there does seem to be some improvement in symptoms.

4.3.3.2. Pre-test versus Post-test 2 analysis

Figure 4.38. compares the sample groups between pre-test and post-test 2, in terms of improvement and non-improvement with regard to their grading of oedema of the lateral nail fold.

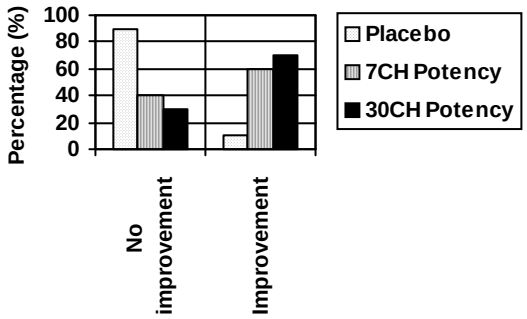

Figure 4.38.
Improvement versus no improvement for oedema of lateral nail fold on the hallux in pre-test versus post-test 2 for sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.28. in Appendix G).

In Table 4.28. the p-value is < 0.05, therefore we reject the null hypothesis, and warrant the interpretation of the result as dependent on which group the participant is in, which will determine whether there was improvement or no improvement. In this case there was definite improvement noted.

4.3.3.4. Post-test 1 versus Post-test 2 analysis

Figure 4.39. compares the sample groups between post-test 1 and post-test 2, in terms of improvement and non-improvement with regard to their grading of oedema of the lateral nail fold.

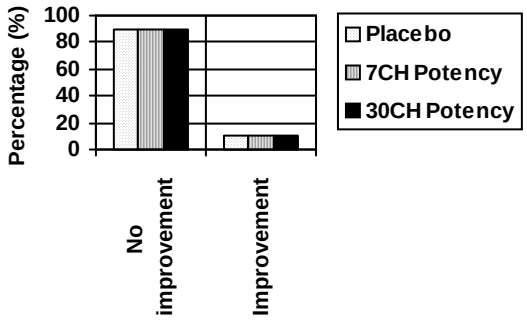

Figure 4.39.
Improvement versus no improvement for oedema of lateral nail fold on the hallux in post-test 1 versus post-test 2 for sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.29 in Appendix G.).

In Table 4.29. the p-value is > 0.05, therefore we accept the null hypothesis and understand that there is no relationship between which sample group the participant is in and whether there was improvement or no improvement in their symptoms. In this case there was no improvement.

4.3.4. Erythema of the Lateral Nail Fold

4.3.4.1. Pre-test versus Post-test 1 analysis

Figure 4.40. compares the sample groups between pre-test and post-test 1, in terms of improvement and non-improvement with regard to their grading of erythema of the lateral nail fold.

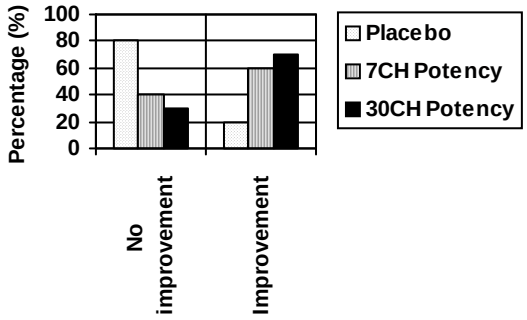

Figure 4.40.
Improvement versus no improvement for erythema of lateral nail fold on the hallux in pre-test versus post-test 1 for sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.30. in Appendix G).

In Table 4.30. the p-value is > 0.05, therefore we would normally accept the null hypothesis. However because the p-value is close to 0.05, there does seem to be an indication that there is reason to accept the alternative hypothesis, as there does seem to be some improvement in symptoms.

4.3.4.2. Pre-test versus Post-test 2 analysis

Figure 4.41. compares the sample groups between pre-test and post-test 2, in terms of improvement and non-improvement with regard to their grading of erythema of the lateral nail fold.

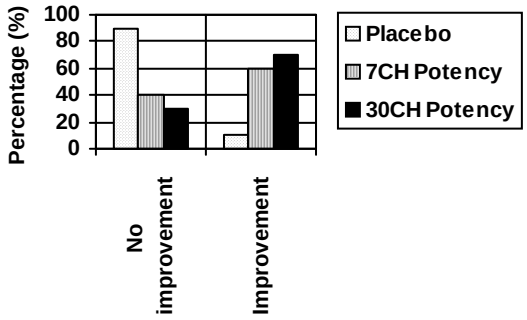

Figure 4.41.
Improvement versus no improvement for erythema of lateral nail fold on the hallux in pre-test versus post-test 2 for sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.31. in Appendix G).

In Table 4.31. the p-value is < 0.05, therefore we reject the null hypothesis, and warrant the interpretation of the result as dependent on which group the participant is in, which will determine whether there was improvement or no improvement. In this case there was definite improvement noted.

4.3.4.3. Post-test 1 versus Post-test 2 analysis

Figure 4.42. compares the sample groups between post-test 1 and post-test 2, in terms of improvement and non-improvement with regard to their grading of erythema of the lateral nail fold.

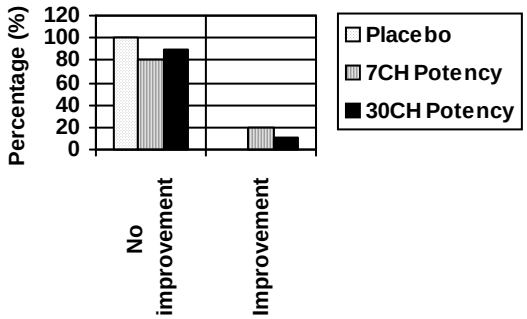

Figure 4.42.
Improvement versus no improvement for erythema of lateral nail fold on the hallux in post-test 1 versus post-test 2 for sample groups

Chi-square tests are used to determine whether the null hypothesis is accepted or rejected (Table 4.32. in Appendix G).

In Table 4.32. the p-value is > 0.05, therefore we accept the null hypothesis and understand that there is no relationship between which sample group the participant is in and whether there was improvement or no improvement in their symptoms. In this case there was no improvement.

5. Discussion

The results obtained from the research suggest that an overall improvement in the symptoms of onychocryptosis is noted by the sample groups who were given the *Magnetis Polus Australis* in 7^{th} and 30^{th} centesimal potencies.

5.1. 7CH Potency

5.1.1. Post-test 1

The 7CH sample group showed a trend of improvement for the symptoms pain in the hallux (Figure 4.19.), tenderness to pressure (Figure 4.23.), oedema of the lateral nail fold (Figure 4.26.) and erythema of the lateral nail fold (Figure 4.29.) when comparing the bar graphs of the post-test 1 to those from the pre-test.

However only in the symptom of tenderness to pressure (Table 4.14. in Appendix G) is there a significant improvement.

5.1.2. Post-test 2

The 7CH sample group showed a trend of improvement for the symptoms pain in the hallux (Figure 4.20.), tenderness to pressure (Figure 4.24.), oedema of the lateral nail fold (Figure 4.27.) and erythema of the lateral nail fold (Figure 4.30.) when comparing the bar graphs of the post-test 2 to those from the pre-test.

Statistically significant improvement was found in the following symptoms: pain in the hallux (Table 4.12. in Appendix G), tenderness to pressure (Table 4.15. in Appendix G) and oedema of the lateral nail fold (Table 4.18. in Appendix G).

5.2. 30CH Potency

5.2.1. Post-test 1

The 30CH sample group showed a trend of improvement for the symptoms pain in the hallux (Figure 4.19.), tenderness to pressure (Figure 4.23.), oedema of the lateral nail fold (Figure 4.26.) and erythema of the lateral nail fold (Figure 4.29.) when comparing the bar graphs of the post-test 1 to those from the pre-test.

However only in the symptom of tenderness to pressure (Table 4.14. in Appendix G) is there a significant improvement.

5.2.2. Post-test 2

The 30CH sample group showed a trend of improvement for the symptoms pain in the hallux (Figure 4.20.), tenderness to pressure (Figure 4.24.), oedema of the lateral nail fold (Figure 4.27.) and erythema of the lateral nail fold (Figure 4.30.) when comparing the bar graphs of the post-test 2 to those from the pre-test.

Statistically significant improvement was found in the following symptoms: pain in the hallux (Table 4.12. in Appendix G), tenderness to pressure (Table 4.15. in Appendix G) and oedema of the lateral nail fold (Table 4.18. in Appendix G).

5.3. Comparison between treatments

The comparison between treatments shows an overall improvement in the symptoms of onychocryptosis, when comparing the grading of symptoms in the pre-test to post-test 1 and the pre-test to post-test 2. No improvement is noted when comparing post-test 1 to post-test 2. This shows that the improvement occurred gradually over the period in which the research was conducted, and therefore the bulk of the improvement cannot be seen statistically between post-test 1 and post-test 2.

5.4. Overall results

Overall the 30th centesimal potency showed the highest percentage of improvement in the symptoms of onychocryptosis though the percentages between the two experimental groups were very close.

5.5. Additional findings

During the four-week research period none of the participants noted any change with regard to the curvature of their toenails diminishing.

Anecdotally the researcher has observed some participants (Appendix H, Control numbers 1002 and 1019) who have continued taking *Magnetis Polus Australis* 30CH after the research was completed and have reported that after using the remedy continuously twice daily for three months that the curvature of their toenail seems to lessen, and the nail plate seems to stop growing into the lateral nail fold. They have also not experienced any more inflammation associated with the onychocryptosis. This suggests that research over a longer period is warranted.

A relationship between the duration of the complaint and the rapidity of alleviation of the symptoms was also found i.e. the participants who suffered from onychocryptosis for the least number of years felt an improvement in a shorter amount of time than those suffering from chronic onychocryptosis (Appendix H, Control numbers 1001, 1006, 1007, 1008, 1017, 1019 and 1028).

5.6. The relationship between conventional magnet therapy and *Magnetis Polus Australis*

Magnets have been used as a therapeutic tool for thousands of years. It is believed that magnet therapy works due to the human body, like its primary constituent water, being diamagnetic (weakly repelled by magnetic fields). Therefore in response to an applied magnetic field, the electrons in the water molecules make "slight adjustments in their motions, producing a net magnetic field in the opposing direction about one hundred thousand times smaller than the applied field" (Livingstone, 1998).

This small "adjustment" is very similar to the homoeopathic doses used to treat illnesses. Perhaps this remedy is so successful because it mimics the electromagnetic fields found naturally in the body and allows the disharmony, which is found within the body when suffering from any illness, and in this study onychocryptosis of the hallux, to be corrected. This is similar to the effect of homoeopathic remedies on the body.

The south pole of the magnet is specifically used to reduce muscle pain but increase other pain, increase inflammation and infection and stimulate tissue regeneration (Badat, 2002). It can therefore be suggested that since homoeopathy treats symptoms with a remedy that can cause them in a healthy individual, that the south pole of the magnet prepared homoeopathically can be used to alleviate pain, inflammation and reduce excess tissue granulation that is associated with onychocryptosis.

5.7. *Magnetis Polus Australis* as the specific remedy

Homoeopathy is a system of healing which utilizes the body's innate ability to correct and heal itself. Although it usually requires a complex procedure of matching the remedy with the patient's symptoms, sometimes specific remedies can be used to treat specific conditions.

Magnetis Polus Australis has been documented as being indicated for the symptom of onychocryptosis of the hallux (Vermeulen, 1997) and this research scientifically verifies this statement.

Since it is also a cost-effective (the average price of the over-the-counter preparation of *Magnetis Polus Australis* by Natura is R 26,83 for a 25mℓ bottle directly from the company (Bekker, 2003), compared to R 180 to R 300 for a nail wedge resection with phenolization matricectomy of one sulcus of one nail (Zipfel, 2003) in podiatric consultation rooms) and non-invasive treatment, it has the potential of being an alternative or complementary form of treatment for some forms of onychocryptosis of the hallux.

6. Conclusions and Recommendations

6.1. Conclusions

In conclusion, though the sample size of this research is too small to draw definitive conclusions, initial findings indicate that *Magnetis Polus Australis* has a positive effect in the treatment of onychocryptosis of the hallux and is effective in reducing the inflammation associated with it. It is also a cost-effective and non-invasive form of treatment for the symptoms of onychocryptosis.

Overall the 30^{th} centesimal potency shows the highest percentage of improvement in the symptoms of onychocryptosis, though the percentages between the two experimental groups are very close.

Further research is required using a larger sample size over a longer study period in order to further evaluate these initial findings.

6.2. Recommendations

The following are recommendations for any further studies to be conducted in the field of treating onychocryptosis of the hallux with *Magnetis Polus Australis*:

- The use of higher potencies of *Magnetis Polus Australis* (especially 2M as advised by Clarke (1994) in his Dictionary of Practical Materia Medica).

- Changing the frequency of taking *Magnetis Polus Australis* to either once a day or three times a day.

- Applying *Magnetis Polus Australis* as a topical application on the site of the onychocryptosis.

- Increasing number of participants in the research to make it more viable statistically.

- Conducting the research over a longer period of time to determine whether *Magnetis Polus Australis* has an effect on the curvature of the toenail of the hallux (through measuring the curvature of the toenail), and can therefore prevent further growth of the nail plate into the lateral nail fold.

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Appendices

Appendix A – Correspondence

Hotmail®

From: Helios Homoeopathic Pharmacy <pharmacy@helios.co.uk>
To: Angelika Rohl
Subject: Magnetis Polus Australis
Date: Fri, 23 August 2002 15:21:45 +0100

Dear Angelika,

You might like to know that Magnetis Polus Australis in a 2M potency is a specific for ingrowing toenails. We have a member of staff here who used it and prevented her patient from having to have her toenail removed! This is the only remedy we carry in a 2M potency for this reason.

Regards
Vanessa

Hotmail®

From: Helios Homoeopathy Ltd. <bob.lawrence@helios.co.uk>
To: Angelika Rohl
Subject: Magnetis Polus Australis
Date: Tue, 28 May 2002 12:21:39 +0100

Dear Angelika Rohl,

Thank you for your query regarding Magnetis Polus Australis. Unfortunately there aren't any pharmacopoeias which document its production. The only reference that I am aware of is in Clarke's Materia Medica where he states that it is "attenuations of media saturated with emanations of the pole."

We made ours from both solid and liquid media. We strapped 3 vials (one of water, one of alcohol and one of lactose) to the south pole of a strong audio speaker magnet. The pole was determined with a compass. This was left for 24 hours before attenuating the 3 media. We triturated the lactose to 3C and succussed and diluted the other 2 to 3C. At 4C we combined the 3 into one remedy and then took this to higher potencies in 90% alcohol.

The reason for using 3 vehicles and combining them was that it isn't obvious which medium was the best for taking up the effects of the magnetic force field.

I hope this helps to answer your question.

Best regards,
Bob Lawrence
Technical Director

Appendix B – Potentization calculations

CH = 1:99
(25ml in total)
∴ need 0.25ml 6CH

90% alcohol is ± 36 drops / ml
36 : 1
x : 0.25
∴ *x* = 0.25 x 36
= 9 drops of 6CH

∴ 24.75ml of 20% alcohol
90% *x* : 24.75 x 20
x = 495 / 90
= 5.5ml 90% alcohol
& ∴19.25ml distilled H□O

Appendix C – Control Numbers and Corresponding Potencies

Control Number	Placebo	7CH	30CH
1001		✓	
1002			✓
1003	✓		
1004	✓		
1005		✓	
1006			✓
1007		✓	
1008			✓
1009	✓		
1010			✓
1011	✓		
1012		✓	
1013		✓	
1014			✓
1015	✓		
1016		✓	
1017		✓	
1018			✓
1019		✓	
1020			✓
1021	✓		
1022		✓	
1023	✓		
1024	✓		
1025			✓
1026		✓	
1027	✓		
1028			✓
1029	✓		
1030			✓

Appendix D

Consent Form

The Efficacy of *Magnetis Polus Australis* 7CH and 30CH in the treatment of Onychocryptosis of the Hallux

Dear Participant

The purpose of this study is to determine how effective *Magnetis Polus Australis* 7CH and 30CH are in treating ingrown nails of the big toe.

You will be placed randomly in one of three groups of ten, consisting of two experimental and one control group. The experimental groups will receive the remedy, while the control group will receive a placebo. Neither the participants nor the researcher will know who will receive the remedy. Questionnaires will be issued to participants at each follow-up, which will occur at intervals of two weeks.

You will be requested to take 5 drops of the homoeopathic or placebo medication twice daily for a period of three weeks. You will also be required to avoid any other allopathic, alternative or over-the-counter treatment for your ingrown toenail for the duration of the study.

The potential benefits for those who receive the study medicine will be an improvement in their condition. Irrespective of the treatment assigned, all participants will contribute to medical knowledge, resulting in an alternative option open to patients with regard to the treatment of ingrowing toenails.

Participation in this study is voluntary and you are free to participate or to withdraw your consent and to discontinue participation at any time. Such refusal or discontinuance will not effect your regular treatments or medical care in any way. A signed copy of this consent form will be made available to you.

I have fully explained the procedures, identifying those, which are investigative, and have explained their purpose. I have asked whether any questions have arisen regarding the procedures and have answered these questions to the best of my ability.

Date:_____ Researcher:_____

I have been fully informed as to the procedures to be followed, including those which are investigative and have been given a description of the attendant discomforts, risks, and benefits to be expected and the appropriate alternative podiatric procedures. In signing this consent form I agree to this method of treatment and I understand that I am free to withdraw my consent and discontinue my participation in this study at any time. I also understand that if I have any questions at any time, they will be answered.

Date:_____ Participant:_____

Appendix E

Personal data

Control Number: _____

PERSONAL DETAILS:

Name:_____

Date of Birth:_____

Physical address:_____

_____

Postal address:_____

_____

Telephone number: _____

PAST MEDICAL HISTORY:

Do you suffer from any of the following:

- Arthritis YES Î NO Î
- Diabetes Mellitus YES Î NO Î
- Immune system deficiencies YES Î NO Î

Any other medical conditions: _____

How long have you suffered from ingrown toenails? _____

_____

Have you had any previous treatment for ingrown toenails? YES Î NO Î

If yes, please specify: _____

_____

COMMENTS:

_____

_____

Appendix F

Progress form

Name: _____ Date: _____

Control number: _____

Please grade the following symptoms according to their intensity:

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				
Tenderness to pressure				
Swelling				
Redness				
Infection				
Formation of granulation tissue				

COMMENTS BY PODIATRIST:

_____

_____

_____

_____

_____

_____

_____

Podiatrist: _____ _____

Name Signature

Appendix G – Results obtained

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.086 [a]	2	0.581
Continuity Correction Likelihood Ratio	1.111	2	0.574
Linear-by-Linear Association	0.000	1	1.000
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 4.33.

Table 4.9. Chi-square test in pre-test for pain in the hallux

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.432 [a]	2	0.109
Continuity Correction Likelihood Ratio	4.422	2	0.110
Linear-by-Linear Association	2.224	1	0.136
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.67.

Table 4.10. Chi-square test for post-test 1 for pain in the hallux

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.963 [a]	2	0.051
Continuity Correction Likelihood Ratio	5.730	2	0.057
Linear-by-Linear Association	4.323	1	0.038
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.33.

Table 4.11. Chi-square test for post-test 2 for pain in the hallux

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.341 [a]	2	0.843
Continuity Correction Likelihood Ratio	0.352	2	0.838
Linear-by-Linear Association	0.247	1	0.619
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.67.

Table 4.12. Chi-square test in pre-test for tenderness to pressure on the hallux

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.038 [a]	2	0.001
Continuity Correction Likelihood Ratio	15.666	2	0.000
Linear-by-Linear Association	11.842	1	0.001
N of Valid Cases	29		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.48.

Table 4.13. Chi-square test for post-test 1 for tenderness to pressure on the hallux

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.963 [a]	2	0.051
Continuity Correction Likelihood Ratio	5.730	2	0.057
Linear-by-Linear Association	4.323	1	0.038
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.33.

Table 4.14. Chi-square test for post-test 2 for tenderness to pressure on the hallux

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.010 [a]	2	0.366
Continuity Correction Likelihood Ratio	2.3098	2	0.350
Linear-by-Linear Association	1.873	1	0.171
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 3.67.

Table 4.15. Chi-square test in pre-test for oedema of the lateral nail fold

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.952 [a]	2	0.621
Continuity Correction Likelihood Ratio	0.966	2	0.617
Linear-by-Linear Association	0.230	1	0.631
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 3.00.

Table 4.16. Chi-square test for post-test 1 for oedema of the lateral nail fold

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.177 [a]	2	0.028
Continuity Correction Likelihood Ratio	7.196	2	0.027
Linear-by-Linear Association	5.203	1	0.023
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 3.67.

Table 4.17. Chi-square test for post-test 2 for oedema of the lateral nail fold

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.482 [a]	2	0.175
Continuity Correction Likelihood Ratio	3.561	2	0.169
Linear-by-Linear Association	3.107	1	0.078
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 4.67.

Table 4.18. Chi-square test in pre-test for erythema of the lateral nail fold

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.373 [a]	2	0.830
Continuity Correction Likelihood Ratio	0.363	2	0.834
Linear-by-Linear Association	0.270	1	0.603
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.33.

Table 4.19. Chi-square test for post-test 1 for erythema of the lateral nail fold

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.480 [a]	2	0.787
Continuity Correction Likelihood Ratio	0.516	2	0.773
Linear-by-Linear Association	0.000	1	1.000
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.67.

Table 4.20. Chi-square test for post-test 2 for erythema of the lateral nail fold

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	5.600 [a]	2	0.061
Continuity Correction Likelihood Ratio	5.903	2	0.052
Linear-by-linear Association	3.093	1	0.079
N of Valid Cases	30		

[a] 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.00.

Table 4.21. Chi-square test in the pre-test versus post-test 1 analysis for pain in the hallux

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	13.309 [a]	2	0.001
Continuity Correction Likelihood Ratio	14.536	2	0.001
Linear-by-linear Association	9.645	1	0.002
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 4.33.

Table 4.22. Chi-square test in the pre-test versus post-test 2 analysis for pain in the hallux

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	0.341 [a]	2	0.843
Continuity Correction Likelihood Ratio	0.352	2	0.838
Linear-by-linear Association	0.247	1	0.619
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.67.

Table 4.23. Chi-square test in the post-test 1 versus post-test 2 analysis for pain in the hallux

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	4.409 [a]	2	0.110
Continuity Correction Likelihood Ratio	4.360	2	0.113
Linear-by-linear Association	3.419	1	0.064
N of Valid Cases	29		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 3.10.

Table 4.24. Chi-square test in the pre-test versus post-test 1 analysis for tenderness to pressure on the hallux

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	5.963 [a]	2	0.051
Continuity Correction Likelihood Ratio	5.730	2	0.057
Linear-by-linear Association	4.323	1	0.038
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.33.

Table 4.25. Chi-square test in the pre-test versus post-test 2 analysis for tenderness to pressure on the hallux

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	1.209 [a]	2	0.546
Continuity Correction Likelihood Ratio	1.341	2	0.511
Linear-by-linear Association	0.000	1	1.000
N of Valid Cases	29		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.17.

Table 4.26. Chi-square test in the post-test 1 versus post-test 2 analysis for tenderness to pressure on the hallux

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	5.600 [a]	2	0.061
Continuity Correction Likelihood Ratio	5.903	2	0.052
Linear-by-linear Association	4.833	1	0.028
N of Valid Cases	30		

[a] 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.00.

Table 4.27. Chi-square test in the pre-test versus post-test 1 analysis for oedema of the lateral nail fold

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	8.304 [a]	2	0.016
Continuity Correction Likelihood Ratio	9.273	2	0.010
Linear-by-linear Association	6.991	1	0.008
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 4.67.

Table 4.28. Chi-square test in the pre-test versus post-test 2 analysis for oedema of the lateral nail fold

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	0.000 [a]	2	1.000
Continuity Correction Likelihood Ratio	0.000	2	1.000
Linear-by-linear Association	0.000	1	1.000
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.00.

Table 4.29. Chi-square test in the post-test 1 versus post-test 2 analysis for oedema of the lateral nail fold

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	5.600 [a]	2	0.061
Continuity Correction Likelihood Ratio	5.903	2	0.052
Linear-by-linear Association	4.833	1	0.028
N of Valid Cases	30		

[a] 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.00.

Table 4.30. Chi-square test in the pre-test versus post-test 1 analysis for erythema of the lateral nail fold

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	8.304 [a]	2	0.016
Continuity Correction Likelihood Ratio	9.273	2	0.010
Linear-by-linear Association	6.991	1	0.008
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 4.67.

Table 4.31. Chi-square test in the pre-test versus post-test 2 analysis for erythema of the lateral nail fold

	Value	df	Asympt. Sig. (2-sided)
Pearson Chi-Square	2.222 [a]	2	0.329
Continuity Correction Likelihood Ratio	2.995	2	0.224
Linear-by-linear Association	0,537	1	0.464
N of Valid Cases	30		

[a] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.00.

Table 4.32. Chi-square test in the post-test 1 versus post-test 2 analysis for erythema of the lateral nail fold

Appendix H

7th CENTESIMAL POTENCY:

Control number: 1001
Date of Birth: 5 / 4 / 1982
Gender: Male
How long have you suffered from ingrown toenails? 1 year
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 12 / 9 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

Date: 3 / 10 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

Date: 17 / 10 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

30th CENTESIMAL POTENCY:

Control number: 1002
Date of Birth: 9 / 1 / 1946
Gender: Male
How long have you suffered from ingrown toenails? 35 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: OTC medication

Date: 3 / 10 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		✓		
Tenderness to pressure			✓	
Swelling	✓			
Redness		✓		
Infection	✓			

Date: 17 / 10 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		✓		
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

Date: 31 / 10 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		✓		
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

PLACEBO

Control number: 1003
Date of Birth: 23/3/1979
Gender: Female
How long have you suffered from ingrown toenails? 10 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 15 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

Date: 29 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure			[	
Swelling	[			
Redness	[			
Infection	[			

Date:13 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure			[	
Swelling	[			
Redness	[			
Infection	[			

PLACEBO

Control number: 1004
Date of Birth: 5/5/1966
Gender: Male
How long have you suffered from ingrown toenails? More than 10 years
Have you had any previous treatment for ingrown toenails? YES
If yes, please specify: GP treatment – non-surgical

Date:13 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				[
Tenderness to pressure				[
Swelling				[
Redness	[			
Infection	[			

Date: 27 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				[
Tenderness to pressure			[	
Swelling				[
Redness	[			
Infection	[			

Date:11 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure				[
Swelling			[	
Redness	[			
Infection	[			

7th CENTESIMAL POTENCY:

Control number: 1005

Date of Birth: 30 / 4 / 1982

Gender: Female

How long have you suffered from ingrown toenails? 6 years

Have you had any previous treatment for ingrown toenails? NO

If yes, please specify: N/A

Date: 5 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure				[
Swelling			[	
Redness			[	
Infection	[			

Date: 19 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure			[	
Swelling		[		
Redness	[			
Infection	[			

Date: 3 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure			[	
Swelling		[		
Redness	[			
Infection	[			

30th CENTESIMAL POTENCY:

Control number: 1006
Date of Birth: 23 / 3 / 1980
Gender: Female
How long have you suffered from ingrown toenails? 2 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 15 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		✓		
Tenderness to pressure			✓	
Swelling			✓	
Redness			✓	
Infection	✓			

Date: 29 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		✓		
Tenderness to pressure		✓		
Swelling		✓		
Redness		✓		
Infection	✓			

Date: 13 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

7th CENTESIMAL POTENCY:

Control number: 1007
Date of Birth: 5 / 2 / 1951
Gender: Male
How long have you suffered from ingrown toenails? 39 years, but on and off
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 29 / 10 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				[
Tenderness to pressure				[
Swelling		[		
Redness			[	
Infection	[			

Date: 12 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

Date: 26 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

30th CENTESIMAL POTENCY:

Control number: 1008
Date of Birth: 26 / 10 / 1949
Gender: Female
How long have you suffered from ingrown toenails? 6 years
Have you had any previous treatment for ingrown toenails? YES
If yes, please specify: Podiatry – non-surgical

Date: 2 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				✓
Tenderness to pressure			✓	
Swelling		✓		
Redness	✓			
Infection	✓			

Date: 16 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure	✓			
Swelling	✓			
Redness	✓			
Infection	✓			

Date: 30 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure	✓			
Swelling	✓			
Redness	✓			
Infection	✓			

PLACEBO

Control number: 1009
Date of Birth: 24 / 3 / 1928
Gender: Female
How long have you suffered from ingrown toenails? More than 20 years
Have you had any previous treatment for ingrown toenails? YES
If yes, please specify: Podiatrist, surgical

Date: 2 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure			[	
Swelling	[			
Redness	[			
Infection	[			

Date: 16 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

Date: 30 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling		[		
Redness	[			
Infection	[			

30th CENTESIMAL POTENCY:

Control number: 1010
Date of Birth: 22 / 7 / 1962
Gender: Female
How long have you suffered from ingrown toenails? 24 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 3 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		✓		
Tenderness to pressure			✓	
Swelling		✓		
Redness		✓		
Infection	✓			

Date: 17 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

Date: 30 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure	✓			
Swelling	✓			
Redness	✓			
Infection	✓			

PLACEBO

Control number: 1011

Date of Birth: 12 / 9 / 1933

Gender: Female

How long have you suffered from ingrown toenails? 50 years

Have you had any previous treatment for ingrown toenails? NO

If yes, please specify: N/A

Date: 3 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure				[
Swelling		[		
Redness		[		
Infection	[			

Date: 17 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure			[	
Swelling		[		
Redness		[		
Infection	[			

Date: 30 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure				[
Swelling		[		
Redness		[		
Infection	[			

7th CENTESIMAL POTENCY:

Control number: 1012
Date of Birth: 15 / 8 / 1946
Gender: Male
How long have you suffered from ingrown toenails? 50 years
Have you had any previous treatment for ingrown toenails? YES
If yes, please specify: Podiatrist, non-surgical

Date:13 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure				[
Swelling				[
Redness				[
Infection	[			

Date: 27 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				[
Tenderness to pressure				[
Swelling			[	
Redness	[			
Infection	[			

Date: 11 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling		[		
Redness		[		
Infection	[			

7th CENTESIMAL POTENCY:

Control number: 1013
Date of Birth: 1 / 5 / 1980
Gender: Male
How long have you suffered from ingrown toenails? 21 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 23 / 11 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure				[
Swelling			[	
Redness			[	
Infection	[			

Date: 7 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness		[		
Infection	[			

Date: 21 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

30th CENTESIMAL POTENCY:

Control number: 1014
Date of Birth: 10 / 1 / 1974
Gender: Female
How long have you suffered from ingrown toenails? 9 months
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 5 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				✓
Tenderness to pressure				✓
Swelling			✓	
Redness		✓		
Infection	✓			

Date: 19 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

Date: 2 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		✓		
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

PLACEBO

Control number: 1015
Date of Birth: 15 / 2 / 1964
Gender: Male
How long have you suffered from ingrown toenails? 10 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 19 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				[
Tenderness to pressure				[
Swelling	[			
Redness				[
Infection	[			

Date: 2 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure			[	
Swelling	[			
Redness	[			
Infection	[			

Date: 16 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				[
Tenderness to pressure			[	
Swelling		[		
Redness	[			
Infection	[			

7th CENTESIMAL POTENCY:

Control number: 1016
Date of Birth: 26 / 4 / 1954
Gender: Male
How long have you suffered from ingrown toenails? 31 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 5 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

Date: 19 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

Date: 2 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

7th CENTESIMAL POTENCY:

Control number: 1017
Date of Birth: 27 / 7 / 1963
Gender: Male
How long have you suffered from ingrown toenails? 10 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 10 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				[
Tenderness to pressure				[
Swelling			[	
Redness				[
Infection	[			

Date: 24 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

Date: 7 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

30th CENTESIMAL POTENCY:

Control number: 1018
Date of Birth: 22 / 10 / 1958
Gender: Male
How long have you suffered from ingrown toenails? 20 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 19 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			✓	
Tenderness to pressure			✓	
Swelling			✓	
Redness				✓
Infection	✓			

Date: 2 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

Date: 16 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure	✓			
Swelling	✓			
Redness	✓			
Infection	✓			

7th CENTESIMAL POTENCY:

Control number: 1019
Date of Birth: 4 / 10 / 1940
Gender: Female
How long have you suffered from ingrown toenails? 7 years
Have you had any previous treatment for ingrown toenails? YES
If yes, please specify: Podiatry, non-surgical

Date: 12 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure				[
Swelling	[			
Redness			[	
Infection	[			

Date: 26 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

Date: 9 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

30th CENTESIMAL POTENCY:

Control number: 1020
Date of Birth: 19 / 8 / 1982
Gender: Female
How long have you suffered from ingrown toenails? 18 months
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 10 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				✓
Tenderness to pressure				✓
Swelling				✓
Redness				✓
Infection	✓			

Date: 24 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			✓	
Tenderness to pressure		✓		
Swelling			✓	
Redness			✓	
Infection	✓			

Date: 7 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			✓	
Tenderness to pressure			✓	
Swelling			✓	
Redness			✓	
Infection	✓			

PLACEBO

Control number: 1021

Date of Birth: 13 / 7 / 1942

Gender: Female

How long have you suffered from ingrown toenails? 15 years

Have you had any previous treatment for ingrown toenails? YES

If yes, please specify: Podiatry, non-surgical

Date: 6 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure				[
Swelling			[	
Redness			[	
Infection	[			

Date: 20 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe				[
Tenderness to pressure				[
Swelling		[		
Redness		[		
Infection	[			

Date: 3 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure			[	
Swelling			[	
Redness			[	
Infection	[			

7th CENTESIMAL POTENCY:

Control number: 1022
Date of Birth: 25 / 9 / 1939
Gender: Female
How long have you suffered from ingrown toenails? 3 years
Have you had any previous treatment for ingrown toenails? YES
If yes, please specify: OTC medication

Date: 10 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

Date: 24 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling	[			
Redness		[		
Infection	[			

Date: 7 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

PLACEBO

Control number: 1023
Date of Birth: 2 / 5 / 1945
Gender: Female
How long have you suffered from ingrown toenails? 10 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 17 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure			[	
Swelling	[			
Redness	[			
Infection	[			

Date: 31 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure			[	
Swelling	[			
Redness	[			
Infection	[			

Date: 14 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

PLACEBO

Control number: 1024
Date of Birth: 27 / 10 / 1951
Gender: Female
How long have you suffered from ingrown toenails? 1 year
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 17 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling		[		
Redness	[			
Infection	[			

Date: 31 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

Date: 14 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling		[		
Redness	[			
Infection	[			

30th CENTESIMAL POTENCY:

Control number: 1025
Date of Birth: 30 / 4 / 1950
Gender: Female
How long have you suffered from ingrown toenails? 20 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 14 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		✓		
Tenderness to pressure		✓		
Swelling		✓		
Redness	✓			
Infection	✓			

Date: 28 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

Date: 11 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

7th CENTESIMAL POTENCY:

Control number: 1026

Date of Birth: 2 / 12 / 1962

Gender: Female

How long have you suffered from ingrown toenails? 20 years

Have you had any previous treatment for ingrown toenails? NO

If yes, please specify: N/A

Date: 14 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure				[
Swelling			[	
Redness	[			
Infection	[			

Date: 28 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure	[			
Swelling	[			
Redness	[			
Infection	[			

Date: 11 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

PLACEBO

Control number: 1027

Date of Birth: 19 / 12 / 1926

Gender: Male

How long have you suffered from ingrown toenails? 2 years

Have you had any previous treatment for ingrown toenails? NO

If yes, please specify: N/A

Date: 20 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

Date: 3 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	[			
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

Date: 17 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling	[			
Redness	[			
Infection	[			

30th CENTESIMAL POTENCY:

Control number: 1028
Date of Birth: 7 / 11 / 1950
Gender: Male
How long have you suffered from ingrown toenails? 9 years
Have you had any previous treatment for ingrown toenails? NO
If yes, please specify: N/A

Date: 19 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

Date: 2 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure		✓		
Swelling	✓			
Redness	✓			
Infection	✓			

Date: 16 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe	✓			
Tenderness to pressure	✓			
Swelling	✓			
Redness	✓			
Infection	✓			

PLACEBO

Control number: 1029
Date of Birth: 18 / 5 / 1953
Gender: Male
How long have you suffered from ingrown toenails? 6 years
Have you had any previous treatment for ingrown toenails? YES
If yes, please specify: GP, non-surgical

Date: 19 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure			[	
Swelling		[		
Redness	[			
Infection	[			

Date: 2 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			[	
Tenderness to pressure			[	
Swelling		[		
Redness	[			
Infection	[			

Date: 16 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		[		
Tenderness to pressure		[		
Swelling		[		
Redness	[			
Infection	[			

30th CENTESIMAL POTENCY:

Control number: 1030
Date of Birth: 6 / 3 / 1987
Gender: Female
How long have you suffered from ingrown toenails? 3 years
Have you had any previous treatment for ingrown toenails? YES
If yes, please specify: Homoeopathic treatment

Date: 17 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			✓	
Tenderness to pressure			✓	
Swelling		✓		
Redness			✓	
Infection	✓			

Date: 31 / 12 / 2002

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe			✓	
Tenderness to pressure		✓		
Swelling		✓		
Redness		✓		
Infection	✓			

Date: 14 / 1 / 2003

	None 0	Slight 1	Moderate 2	Severe 3
Pain in the big toe		✓		
Tenderness to pressure		✓		
Swelling		✓		
Redness		✓		
Infection	✓			