THE HOMEOPATHIC TREATMENT OF WARTS INVOLVING

THE USE OF

THUJA OCCIDENTALIS TINCTURE AND TABLETS.

by

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Dissertation submitted in partial compliance with the requirements for the Masters Diploma in Technology in the Department of Homeopathy at Technikon Natal.

I, Lance Giles, do hereby declare that this dissertation represents my own work both in conception and execution.

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ABSTRACT

The purpose of this study was to evaluate the efficacy of Thuja occidentalis tincture and Thuja occidentalis tablets in the treatment of warts.

The study design was double-blind, a sample group of thirty patients was selected, and then randomised into two groups by an independent pharmacist.

The first group of fifteen patients were administered Thuja occidentalis 9CH tablets, which were taken twice daily. The second group of fifteen patients were administered Thuja occidentalis 9CH tablets, which were taken twice daily as well as Thuja occidentalis tincture, which was applied twice daily to the warts.

On initial consultation, a colour photograph of the wart was taken. Every three weeks thereafter a questionnaire was completed by the patients on their perception of the treatment and colour photographs were again taken to evaluate whether, changes in the surface areas had occurred. The surface areas of the warts, as seen on the colour photographs, were measured using a scanner.

The trial was conducted over a three month period.

In order to investigate the correlation between treatment and clinical manifestations of the warts, the two groups were compared using the paired T test. The tablet group (p=0.008) and the tablet and tincture group (p=0.022), indicating there is no statistically significant difference between the two groups. The unpaired T test (p=0.078), also showed that there was no significant difference between the two groups.

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Subproblem two involved the measurement of the patients perception of the treatment. In order to test subproblem two, the two groups were compared using paired T tests.

The tablet group (p=0.147) and the tablet and tincture group (p=0.290), indicating that there was no significant difference between the patient's perception of the two treatments.

The unpaired T tests showed (p=0.27), indicating that there was no significant difference between the two groups.

Subproblem three involved the integration of subproblems one and two to evaluate which treatment was more effective in the treatment of warts. There was little difference in the correlations of the two treatments, the tablet group (p=0.479;r= -0.178) and the tablet and treatment groups(p=0.53;r=0.17).

It is concluded that there is no statistically significant difference between the use of Thuja tablets and the use of Thuja tablets and tincture in the treatment of warts, with regard to the clinical manifestations and the patients perception of the treatment.

OPSOMMING

Die doel van hierdie studie was om die effektiwiteit van Homeopatie in die behandeling van vratjies te evalueer.

Die behandeling het bestaan uit Thuja occidentalis tablette en Thuja occidentalis tinktuur.'n Monster groep van dertig pasiënte is gekies en is deur 'n onafhanklike apteker ewekansig verdeel.Vyftien pasiënte het Thuja occidentalis 9 CH tablette ontvang, wat twee maal daagliks geneem is. Die ander vyftien pasiënte het Thuja occidentalis 9CH tablette ontvang, wat twee maal daagliks geneem is, sowel as Thuja occidentalis tinktuur wat twee maal daagliks op die vratjies aangewend is.Die eksperiment het oor 'n drie maande periode gestrek, en 'n volkleur foto is by die eerste konsultasie geneem.

Elke drie weke daarna het die pasiënte 'n vraelys met betrekking tot hulle persepsie van die behandeling voltooi en kleur foto's is geneem om veranderinge in die grootte van die vratjies waar te neem. Die oppervlakte van die vratjies, soos gesien op die foto's, is gemeet deur middel van 'n aftaster.

Ten einde die korrelasie tussen die behandeling en die kliniese manifestasie van die vratjies te ondersoek is die twee groepe vergelyk deur middel van die gepaarde T toets. Die tablet groep (p=0.008) en die tablet en tinktuur groep (p=0.022), toon aan dat daar statisties geen betekenisvolle verskil tussen die twee groepe was nie.

Die ongepaarde T toets p=0.078 het weereens gewys dat daar geen betekenisvolle verskil tussen die twee groepe was nie.

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Die tweede subprobleem het die meting van die pasiënte se persepsie van die behandeling behels.Om subprobleem twee te toets, was die twee groepe vergelyk met die gepaarde

T toetse, vir die tablet groep (p=0.147) en vir die tablet en tinktuur groep (p=0.290), wat aandui dat daar geen betekenisvolle verskil tussen die pasiënte se persepsie van die twee behandelingsmetodes was nie.

Die ongepaarde T toets (p=0.27) het gewys dat daar geen betekenisvolle verskil tussen die twee groepe was nie.

Die derde subprobleem het die integrasie van die eerste twee subprobleme ingesluit om te sien watter een van die twee metodes die effektiefste was in die behandeling van vratjies. Daar was min verskil in die korrelasie van die twee groepe, met die tablet groep (p=0.479;r=-0.178) en die tablet en tinktuur groep (p=0.53;r=0.17).

Die gevolgtrekking word dus gemaak dat daar geen betekenisvolle statistiese verskil is tussen die gebruik van Thuja occidentalis tablette of Thuja occidentalis tablette en tinktuur met verwysing tot die kliniese manifestasie en die pasiënte se persepsie van die behandeling, in die behandeling van vratjies, is nie.

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1.1 STATEMENT OF THE SUBPROBLEM

The purpose of this investigation was to evaluate the efficacy of the Thuja occidentalis tablets, and Thuja occidentalis tablets plus the topical application of a Thuja occidentalis tincture in the treatment of warts, with reference to the clinical manifestations of the warts as well as the patient's perception of the treatment so as to ascertain which treatment protocol is more effective in the treatment of warts.

1.2 STATEMENT OF THE SUBPROBLEMS

The first subproblem:

To determine the most effective treatment protocol, with reference to the clinical manifestations of the warts .

The second subproblem:

To determine the most effective treatment protocol with reference to the patient's perception of the treatment.

The third subproblem:

To integrate the data concerning the changes in the clinical manifestations and the patient's perception of the treatment in order to identify the most effective treatment.

1.3 HYPOTHESES

The first hypothesis:

It is hypothesised that the patients under both treatment protocols will show a favourable correlation between their treatment and the clinical manifestations of the warts.

The second hypothesis:

It is hypothesised that the patients perception to their treatment protocol will be favourable.

The third hypothesis:

It is hypothesised that it will be possible to integrate the data obtained from the clinical manifestations of the warts and the patient's perception to their form of treatment to show which treatment is the most effective in the treatment of warts.

1.4 DELIMITATIONS

1. This study does not intend to propose a mechanism of action for Thuja occidentalis tincture or tablets in the treatment of warts.

2. This study proposes to treat all types of warts except those located in the anal and genital regions.

3. Persons undergoing any other wart treatment at the time of the initial consultation with the researcher will not be considered for the research group.

1.5 ASSUMPTIONS

1. It was assumed that the patients undergoing the treatment will apply or take the prescribed amount of medicine as prescribed by the researcher.

2. It is assumed that the patients partaking in the study will not resort to any other medication besides the one prescribed by the researcher.

3. It is assumed that the prescribed medicine has been prepared according to the correct Homeopathic principles by the pharmacist.

1.6 DEFINITION OF TERMS

TINCTURE:

Product obtained from the maceration of a fresh plant in alcohol at different titers.

TABLET:

Specific medicinal form used in the administration of a medicament to a patient.

CLINICAL MANIFESTATIONS:

This refers to an observable or measurable characteristic sign or symptom of a particular disease.

PATIENTS PERCEPTION:

This refers to the different sensations and changes experienced and their clinical manifestations during the treatment.

TREATMENT PROTOCOL:

This refers to the particular treatment administered to the patient eg. Application of Thuja occidentalis tincture or the administration of Thuja occidentalis tablets.

MODALITIES:

This describes a modification of a symptom, either towards improvement or aggravation.

1.7 IMPORTANCE OF THE STUDY

Warts are common contagious, epithelial tumours which are mostly benign but do have a risk of becoming malignant,this risk increases with exposure to sunlight and in immunosuppressed and transplant patients (Bercow 1987).

Warts are unsightly tumours and may cause embarrassment to some sufferers.Although many warts are symptomless, those located on the soles of the feet can be tender to pressure and are frequently painful on walking (Etoe 1992). Little homeopathic research has been done on warts, therefore there is a great need for research to be carried out in this field so as to ascertain whether Homeopathy is successful in the treatment of warts.

Present methods of homoeopathic treatment involve the use of tablets, a tincture, or a combination of the two. No study so far has been conducted to evaluate which method of treatment is most effective.

This project will attempt to show which treatment protocol will be able to achieve an effective treatment, for warts.

The benefits will involve a safe and economical approach to the treatment of warts and will also possibly show that Homeopathy does indeed have a role to play in the treatment of warts.

Another major benefit will be the addition of further scientific research data to the Homeopathic treatment of warts.

The Homeopathic treatment is a feasible approach to the treatment of warts as a cure is possible without anti-viral drug treatment (Romer 1991).

The medication is easily available and easy to take or apply and the means of measurement of the changes in the clinical manifestations and patients perception is relatively inexpensive and easily available.

CHAPTER TWO.

2.0 REVIEW OF THE RELATED LITERATURE.

2.1 INTRODUCTION

Warts are benign, circumscribed epithelial growths. They comprise a firm growth of epithelial cells induced by the Human Papilloma virus. This virus can be passed from person to person and warts are therefore contagious.

Warts can occur at any age, but they are most common in late childhood and adolescence. The peak incidence is thought to be a result of higher exposure to the virus at sport and school facilities. Warts are uncommon in infants and the elderly.

Warts were documented many thousands of years ago, the term verruca was introduced by Sennertus meaning "steep place", as warts appeared to him "like eminences of little hills"(Bunney 1982).

Levine,(1981)states, "If your patient's warts continue to resist treatment, any of the following techniques may be assayed with little risk."

1.Rub the warts with rancid bacon rind, then bury the rind.(When it decays, the warts will disappear.)

2. While watching a waxing moon, rub the wart with your hand and repeat the following incantation nine times:"What I'm looking at is a growing, What I'm rubbing is a going."

3. Pay the patient a penny for each wart,then spit on the warts with tobacco juice.

Kordel(1974) claims that the juice from a dandelion leaf or flower must be applied to the wart for two to three days, then the wart will gradually turn black and fall off, leaving the skin smooth and unblemished.

Although these traditional treatments may seem bizarre they may have provided some relief and even a cure for some.

2.2 THE AETIOLOGICAL AGENT

The Human Papilloma virus(HPV), is a member of the A genus of the family Papovaviridae, which are non-enveloped viruses, 50-55 nm in diameter, with icosahedral capsids composed of 72 capsomeres. They contain a double-stranded circular DNA genome of about 7900 base pairs.

Papillomaviruses are species specific, and researchers have not been able to propagate HPV in tissue culture or in experimental animals (Reichman 1993).

Until the mid-1970's it was generally thought that a single virus was responsible, and that clinical and pathological differences among warts were a function of the nature of the squamous epithelium at the sight of infection.

It is now known that there are at least seven major types of HPV involved and over sixty subtypes have been identified(Etoe 1992). Each type is indicated by a number and in general causes certain clinical lesions.

The clinical manifestations of the HPV infection depend on location of the lesion and the virus type(Reichman, 1993). Although most HPV types are benign, type 16 is the main sub-type which is associated with mucosal epithelial tumours, that can progress to invasive carcinoma (Roberts et al, 1993).

CORRELATION OF HUMAN PAPILLOMAVIRUS(HPV) TYPE WITH DISEASE

(Reichman 1993)

DISEASE	ASSOCIATED HPV TYPES
Deep plantar warts	1,2,4
Common warts	1,2,4,26,27,29,41,57
Warts of meat handlers	7
Flat warts	2,10,27,28,41,49
Intermediate warts	10,26,28
Epidermodysplasia verruciformis	5,8,9,12,14,15,17,19-25,36,46,47,50
Condylomata acuminata	6,11,30,42-45,51,54
Intraepithelial neoplasia's (unspecified)	30,33-35,39,40,42-45,51-53,56-59,66
Bowens disease	16,31,34
Bowenoid papulosis	16,24,39,42,55
High grade dysplasias	16,18
Low grade dysplasias	6,11,31,42,45,51
Cervical carcinoma	16,18,31,33,35,39,45,51,52, 56,58
Laryngeal papilloma's	6,11,30
Conjunctival papilloma's	6,11
Others	36-38,41,46,48,60

2.3 DIFFERENTIAL DIAGNOSIS OF WARTS

The most important factor when treating warts is to make a correct diagnosis and differentiate them from their "look alikes".

1. On paring the surface of a wart, one will observe flecks of dried haemorrhage and small bleeding points can be observed when the paring reaches the elongated tips of the dermal papillae. In the case of a corn or callous there will not be similar evidence of increased blood supply.

2. Epidermal ridges tend to deviate around a plantar wart, whereas they extend straight over the surface of other lesions (Herndon 1979).

LESIONS TO EXCLUDE WHEN DIAGNOSING WARTS.

2.3.1.MOLLUSCUM CONTAGIOSUM

The causative organism is the Pox Virus, which causes flesh coloured waxy papules commonly on the trunk or extremities, but never on the palms and soles.

2.3.2. ACTINIC KERATOSIS

These are scaly, horny lesions which occur on sun exposed skin. These lesions develop irregularly rounded and polygonal outlines as opposed to the wart which develops a circular outline. Actinic dysplasia excites an inflammatory reaction around the lesion. The area around the wart is rarely inflamed unless it is traumatised.

2.3.3. SEBORRHOEIC KERATOSES

These are benign, often pigmented, acanthotic papules which are located on sun exposed areas in people over 40 years and closely resemble flat warts.

The lesion has a " stuck on " appearance as opposed to the wart which has a "stuck in" appearance which originate from the epidermis.

2.2.4. KERATOACANTHOMA

These are solitary, rapidly growing, lesions of exposed hairy skin, which usually regress in 2 to 6 months.

2.4. TYPES OF WARTS

2.4.1.PLANTAR WART[verruca plantaris]

These types of warts cause more economic loss,than any other type of wart. This is due to the pain they inflict on walking or standing (Herndon 1974). As a result of the constant mass of the body on the plantar surface, these warts grow inwards rather than outwards.In two-thirds of sufferers, a single verruca is accompanied by clusters of satellite warts.As with other warts, the duration of plantar lesions varies. Such warts tend to disappear in a few months but in adults they can persist for years(Levine, 1981).

2.4.2.COMMON WART[verruca vulgaris]

These types are almost universal in the population and most do not become malignant. They are sharply demarcated, rough surfaced, round or irregular tumours which are usually 2 to 10 cm in diameter. They vary in colour from normal skin colour to a yellowish, or even a black appearance.The deeper the colour, usually the longer the development(Allen 1959). There is little or no surrounding inflammation, unless the wart has been irritated. They appear most frequently on sites subject to trauma(Levine, 1981).

Another common site for these warts is the periungual area, this manifestation is common in nail biters and the underlying nail matrix may become disturbed, leading to a distorted nail(Levine, 1981).

2.4.3. FLAT WART [verruca plana]

These are troublesome lesions that occur mainly in young children. They appear as a few, or up to several hundred small,flat topped,flesh coloured papules, that most commonly occur on the face and hands.

These warts have a highly variable life cycle, they may disappear spontaneously or they may multiply and persist for many years(Levine, 1981).

2.4.4 FILIFORM WARTS

These occur as delicate pointed projections, 1 to 3 mm long and usually occur on the eyelids, face, neck, lips or nose(Herndon, 1979).

2.4.5. VENEREAL WART[condylomata acuminata]

These are also known as mucosal or moist warts. They affect the anogenital region, urethra, vagina, rectal mucosa, mouth, larynx and rarely the bronchi. Warts in the larynx may pose a serious problem in infants who contract them during delivery in an infected birth canal. Death may be caused by suffocation, due to the enlargement of the wart in the airway.The lesions are soft, pink and elongated and have a marked tendency toward grouping into cauliflower-like masses(Herndon, 1979).

2.5 NATURAL HISTORY OF WARTS

Warts are common and it is estimated that they affect 10% of the population (Benton 1988). This percentage was also estimated by Massing and Epstein(1963), who conducted a study involving the monitoring of the natural history of the warts in 1000 institutionalised mentally defective children. They found that two - thirds of warts will completely involute within two years, this was also found by Benton (1988).

In the study conducted by Massing and Epstein(1963), it was noted that involution occurred almost twice as often in boys than girls. Age and mental development of the patient and the incidence of warts in the immediate environment did not influence the rate of disappearance. It was also found that the frequency of single and multiple warts was equal and that both types involuted at the same rate. The very large warts (>1cm) were more likely to disappear than the smaller ones.

There are conflicting ideas as to when spontaneous regression occurs. Colebrook(1993) states that this can occur within three months to three years. Bercow(1987) states that the natural resolution can occur within several months of the initial infection.

The natural resolution arises from the production of antibodies to the virus.Because of the relative isolation of the virus in the epidermis, the stimulation of antibody production and penetration are slow to take effect (Colebrook,1993).During this spontaneous resolution phase, the lesions may become red, painful and haemorrhagic and may actually turn necrotic.

2.6 TRANSMISSION OF WARTS

The presence of a stable protein coat allows the human papilloma virus to remain infectious outside the host cell. Plantar warts are known to produce a large number of virus particles and according to Androphy (1989), this explains the high rate of infected persons. Microabrasions and maceration potentiate virus penetration of the epithelial barrier and presumably infect the replicating basal cells(Grussendorf, 1993).

The virus is transmitted by direct contact such as sexual transmission, and indirect contact such as in showers and change rooms. This can be seen by the appearance of warts on contiguous areas of the digits and the high rate of warts in school children. Rather an unusual mode of spread was noted by McLaughlin and Edington (1937), where a single pot of bone glue was the source of infection in 9 out of 11 women using it. This showed that bone glue appeared to be an excellent culture medium for the wart virus(HPV).

Cosmetic electrolysis has also been noted to accelerate the development of warts and the author suggests the warts be treated prior to cosmetic electrolysis to avoid further spread (Petrozzi 1980).

Birth control pills also appear to stimulate the growth and extension of genital warts (Herndon 1979).

Certain occupational groups are particularly prone to hand warts. In butchers and fishmongers, the combination of trauma and maceration of the skin provides a suitable environment for the growth of warts (Benton 1988).

2.7 SUSCEPTIBILITY TO HPV INFECTION

Patients with defects in cell-mediated immunity appear to be more susceptible than normal individuals to HPV infection. Immunosuppressed patients, particularly those undergoing organ transplantation, are very susceptible to HPV infection(Benton 1988). This is possibly due to the administration of immunosuppressive drugs. The warts that infect these patients are not banal, mundane or trivial but are multiple, painful and frequently extremely resistant to therapy (Lancet editorial 1987).

Patients infected with the human immunodeficiency virus(HIV) have more severe clinical manifestations of HPV infection and appear to be at higher risk of developing cervical and anal malignancies(Reichman 1993).

Epidermodysplasia verruciformis is a rare, autosomal recessive disease characterised by the inability to control HPV infection. The patients involved are often infected with unusual HPV types and frequently develop cutaneous squamous malignancies, particularly in
sun-exposed areas(Reichman 1993).

Patients suffering from systemic lupus erythromatosis(SLE) have also been found to have a high prevalence of cutaneous warts. The presence of the warts was not linked with the taking of immunosuppressive drugs. This observation suggests that there is a primary immunological defect among patients with SLE (Yell and Burger 1993).

2.8. CONVENTIONAL MEDICAL TREATMENT OF WARTS

The medical treatment of warts is very vast and it has developed over hundreds of years. There are many conflicting views about what approach should be taken or even if any treatment should be offered to the patient. Colebrook(1993) suggests the essence of management is to "amuse" the patient while nature does the healing. This results in little discomfort to the patient and no scarring. Others insist on a more dramatic approach to the problem, which in some cases is necessary where discomfort and disfiguration is being caused by the wart and resulting in social distress to the patient.

In this section an overview of the common medical treatments will be given.

2.8.1. SALICYLIC ACID

Salicylic acid is a weak corrosive and irritant, that remains the single most useful chemical agent in wart treatment. Pharmacists have incorporated above substance into ointments, plasters and gels, for easy application. This form of treatment is estimated to result in cure rates of 60% to 80% in 12 weeks (Parish,Monroe and Rex 1988).

2.8.2. PODOPHYLUM RESIN

Podophylum has an antimitotic action that prevents cell division and is most commonly used for the treatment of anogenital warts. The resin is also combined with salicylic acid to form ointments or paints and is used for the treatment of verrucae.

2.8.3. FORMALIN

Formalin is commonly used for the treatment of verrucae, but it often has unpredictable results and is only really suitable for the treatment of areas where the skin is thick.

2.8.4. CANTHARIDIN

Cantharidin is a vesicating agent which can be substituted for liquid nitrogen, especially if the patient has numerous lesions. The liquid is applied every 2 to 3 weeks until the warts resolve.

2.8.5. TRICHLOROACETIC ACID

Trichloroacetic acid is usually applied in a 50% solution, which is irritating to the surrounding skin, but it is affective when applied every 2 to 3 weeks for up to 16 weeks.

2.8.6. BLEOMYCIN SULPHATE

Bleomycin sulphate is administered in a 0,1% solution of saline and is injected into several sites directly into the base of the wart. This form of treatment has achieved very good results in the clinical trials. Shumack and Haddock(1979) achieved a 99.23% success rate after 12 weeks.

2.8.7. DINITROCHLOROBENZENE

Dinitrochlorobenzene is an allergic sensitizer which, when applied to warts, causes the body's immunologic system to reject the lesions.

2.8.8. CRYOTHERAPY(LIQUID NITROGEN, CARBON DIOXIDE SNOW)

Cryotherapy is regarded as a radical treatment of warts. Both liquid nitrogen (-196 C) and carbon dioxide
snow (-79 C) are easily available and are often used. Disadvantages of this treatment include post operative pain and temporary loss of function of the affected part. Scarring and blistering of the skin are also common (Logan and Zachary 1989).

The physician must avoid freezing over areas where the nerves lie superficially, such as the ulnar groove, as nerve palsies have been reported after the procedure.

Concerns of operator safety in CO_2 treatment have been raised as papilloma virus DNA has recently been detected in the vapour derived from warts treated with CO_2 laser. A surgical mask was found to be capable of removing virtually all the virus particles. This strongly suggests the operator should use protection from potential inhalation exposure to the papilloma virus(Sawchuk et al, 1989).

2.8.9. SURGICAL EXCISION

Under local or regional anaesthesia, warts can be quickly scooped out with a sharp surgical curet. This treatment is relatively nontraumatic, but scarring usually results.

Surgical excision should only be used if:

1.Patient's warts have failed to respond to three months of regular topical treatment.

2.Topical treatment has caused persistent skin irritations.

3.Patients have facial or genital warts.

2.8.10. CIMETIDINE

This is an H2 receptor antagonist, which is mainly used to treat gastro-intestinal diseases. Recently this drug has been thought to reverse the effect of dinirtochlorobenzene(DNCB), an allergic sensitizer. A trial was conducted where six patients that showed no response to DNCB were administered Cimetidine. Four of the six showed a complete resolution of their verrucae plana in four weeks(Chio et al 1993).

2.8.11.ELECTRODESICCATION

During this procedure a local anaesthetic is applied and a electrodesiccating needle is placed in the centre of the wart. A current is then passed through the needle until a slight vesication or bubbling occurs. A sharp curette is used to remove the wart, then the base is cauterised and a sterile dressing is applied.

2.9. THE HOMOEOPATHIC TREATMENT OF WARTS.

The homoeopathic treatment of warts can be regarded as a very specific form of treatment.The type of wart, the location of the wart,the duration of suffering, whether it is pedunculated or sessile, smooth, rough or horny, should be taken into consideration also the colour, the type of pain experienced, odour (if any) produced by the wart and whether it itches or bleeds(Kent 1982).

Homoeopaths consider the occurrence of warts on the basis of a sycotic reactional mode or as it is more commonly termed a miasm(Chand 1986). A miasm is a chronic predisposition to disease. This predisposition does not only involve DNA but diseases that have been acquired during life that are transmitted from generation to generation. A miasm is not just a simple inheritance of a well defined pathological condition, but rather the inheritance of a particular syndrome which corresponds to the influence of the miasm. Warts are regarded as an influence of the sycotic miasm and Allen (1959) believed that warts cannot exist without the sycotic reactional mode.

Jouanny(1991) describes the sycotic reactional mode as:

1. A general water retention of the tissues.

2. Chronic catarrh of the mucous membranes.

3. The production of small cutaneous tumours(warts).

4. A slow insidious development of a disease process.

5. A general depressive state.

Chand (1986) put forward a reason as to why allopathic treatment in some cases is not successful in the treatment of warts, "The crude and gross nature of most ordinary drugs perhaps does not permit intracellular permeability, and as the viruses grow inside the cells or their nuclei, the drugs remain quite ineffective in viral conditions, including warts. The pharmacodynamic nature and fineness of homoeopathic doses on the other hand may achieve a particularly good response in viral conditions."

When treating warts homoeopathically the treatment according to Jouanny (1991) must include,

- Symptomatic remedies defined by the local appearance of the warts and their modalities.

- Basic remedies defined by the aetiology, the progress of the disease, and the patient's morphology and characterology.

Common symptomatic remedies used in the treatment of warts:

2.9.1 THUJA OCCIDENTALIS

This is a frequently used medicine which has a very powerful effect upon the skin. It is used for various types of warts over any part of the body. It is indicated where the warts are large, cauliflower-like, rough-edged, and sometimes ooze and bleed easily.

Thuja occidentalis tincture may also be applied twice daily to the affected wart (Horvillar 1986).

2.9.2 ANTIMONIUM CRUDUM

This medication is indicated where there are horny excrescences that have a rough surface and where ulcers break out around the wart. This medication is particularly suitable for plantar warts and for warts on the palms of the hands(Clarke 1987).

2.9.3 NITRICUM ACIDUM

Nitricum acidum is indicated where the warts are painful to touch and bleed on washing, they are large jaggered and pedunculated, and sometimes ooze moisture. These warts have a golden yellow tinge and painful cracks(Koppikar 1991).

2.9.4 CAUSTICUM

This remedy is specific for subungual warts and those located on the end of the nose, or on the face in the elderly. This remedy is also indicated for all flat, pediculate warts that bleed easily(Jouanny 1991).

2.9.5 GRAPHITES

A major skin remedy which is well indicated in horny periungual warts.

2.9.6 DULCAMARA

This remedy is suitable for flat transparent warts, localised on the back of the hands, or for large brown warts which are always soft and translucent.

2.9.7 RUTA GRAVEOLENS

This is indicated in verruca plantaris where the warts are flat, smooth and painful. It can be regarded as the medicine of first choice in verruca plantaris according to Gupta et al(1991) who obtained a 100% cure rate in their trial involving twelve cases.

2.9.8 SEPIA OFFICIONALIS

This medication is indicated for flat pruritic warts which occur on the hands, neck and face, or for large hard dark coloured seed warts which are painless(Koppikar 1991).

2.9.9 CALCAREA CARBONICA

This medication is indicated when there are many small, horny warts which itch, sting, weep and bleed easily(Koppikar 1991).

2.9.10.SULPHUR

This medication is indicated for warts that burn and throb which are normally found round the fingers. The skin around the wart itches which is relieved by scratching(Koppikar 1991).

2.9.11 FERRUM PICRICUM

This medication is indicated in verrucae plana, and verrucae plantaris which have a yellowish discoloration, and multiple warts which are found on the hands (Gaier 1991).

2.9.12 SABINA

This is indicated for warts found in the ano-genital region which cause intense burning and itching, and often bleed easily. The remedy is usually supplemented with Thuja or Nitricum acidum(Jouanny, 1991).

Other medications indicated in warts are (Boericke 1990):

Acetic acid, Ammonium carbonicum, Anacardium orientale, Anagallis, Antimonium tartaricum, Arsenicum bromatum, Aurum muriaticum natronatum, Baryta carb, Castor equi, Cinnabaris, Kali muriaticum, Lycopodium clavatum, Magnesia sulphurica, Natrum carbonicum, Natrum muriaticum, Natrum sulphuricum, Ranunculus bulbosis, Sempervivum tectorum, Silicae, Staphysagria, Sulphuricum acidum, X-ray.

CHAPTER THREE

MATERIALS AND METHODS

3.O. The Data, Their treatment and Their Interpretation

    3.1 THE DATA

    3.1.1 The primary data

- The patient's perception of the treatment, which was obtained by the use of a questionnaire.

- The clinical manifestations of the warts, which was obtained by the use of photographic techniques.

- The integration of the changes in the clinical manifestations of the warts, and the patient's perception to the treatment.

    3.1.2 The secondary data

- Medical textbooks and journal articles.

- Homoeopathic journal articles and materia medica's.

- Homoeopathic Pharmacopoeia`s.

3.2 CRITERIA GOVERNING THE ADMISSIBILITY OF THE PATIENTS.

Thirty patients that met the required delimitations were drawn from Durban and the surrounding areas, via advertisements that were placed in the local newspapers, at various schools and tertiary education centres.

3.3 CRITERIA GOVERNING THE ADMISSIBILITY OF THE DATA.

3.3.1   Only the data obtained by means of the questionnaires and the changes in the wart surface areas was used in the study.

3.3.2   The data regarding the changes in the sizes of the warts was obtained by means of colour photography.

3.3.3   The questionnaires were completed under the supervision of the researcher.

3.3.4   All photographs were taken personally by the researcher.

3.4 THE METHODOLOGY

The type of study used was the evaluation of two different treatment groups, so as to ascertain which treatment group was more effective in the treatment of warts. The method involved the monitoring of the influence of the Homeopathic treatment (independent variable) on the patient's perception of the treatment (dependent variable).

The change in the independent and the dependent variables were measured and interpreted to indicate the most effective treatment.

3.5 FORMAT OF THE STUDY

3.5.1   The first thirty patients that responded to the advertisements and met the delimitations wereentered into the study.

3.5.2   On initial consultation

-    The warts were evaluated by the researcher by means of a questionnaire (see Appendix B).

-    A colour photograph was taken of the wart using a Chinon CM 7 SLR camera, Kobol 252 flash, standard tripod, Fuji 100 ASA film and a standard magnification factor was used for all the warts.

-    The patients were given the treatment assigned to them during the randomisation technique performed by the pharmacist.

3.5.3 A follow up visit followed 21 days later, where a questionnaire was completed by the patient on their perception of the treatment (see Appendix A).

A second photograph was then taken to evaluate the changes of the clinical manifestations of the treatment. This procedure was carried out on six consecutive occasions ie. every three weeks.

3.5.4 All the data was then collected, analysed and the hypotheses were tested.

3.6 STATISTICAL METHODS

- Paired and unpaired T tests.

- Correlation analysis.

- Mean.

The statistical package used was the Stats Graphics Plus, version 6, supplied by Manugistics, Inc available at Technikon Natal.

3.7 MEASUREMENT OF THE CHANGES IN THE CLINICAL MANIFESTATIONS OF THE WARTS

On completion of the study, clear transparency paper was placed over the colour photographs where a standard magnification factor was used for all the warts. The outline of the warts was traced using a fine transparency pen. These transparency sheets were then placed in Microtek's ScanMaker II series flatbed image scanner which was linked to an IBM personal computer, which calculated the surface area of the warts in square centimetres, using the Image Star II image processing programme.

CHAPTER FOUR

THE RESULTS:

PATIENT DISTRIBUTION:

AGE RANGE: 15-66 years

RATIO   MALE:FEMALE

            14 : 16

Paired and unpaired T tests were used for the analysis of subproblem one, concerning the changes in the clinical manifestations of the warts and subproblem two concerning the patient's perception of the treatment via a questionnaire. Correlation analysis was used for subproblem three to analyse the changes in the surface area of the warts and the patient's perception of the treatment.

All results can be found in appendix C-F.

CHANGES IN THE MEANS OF THE WART SURFACE AREAS

GROUP	VISIT 1	VISIT 6	PERCENTAGE CHANGE
TABLET	0.3117	0.1635	52.45%
TABLET & TINCTURE	0.9766	0.582	59.59%

GRAPHICAL REPRESENTATION OF THE RESULTS BETWEEN VISIT ONE AND VISIT SIX FOR THE THUJA TABLET TREATMENT GROUP.
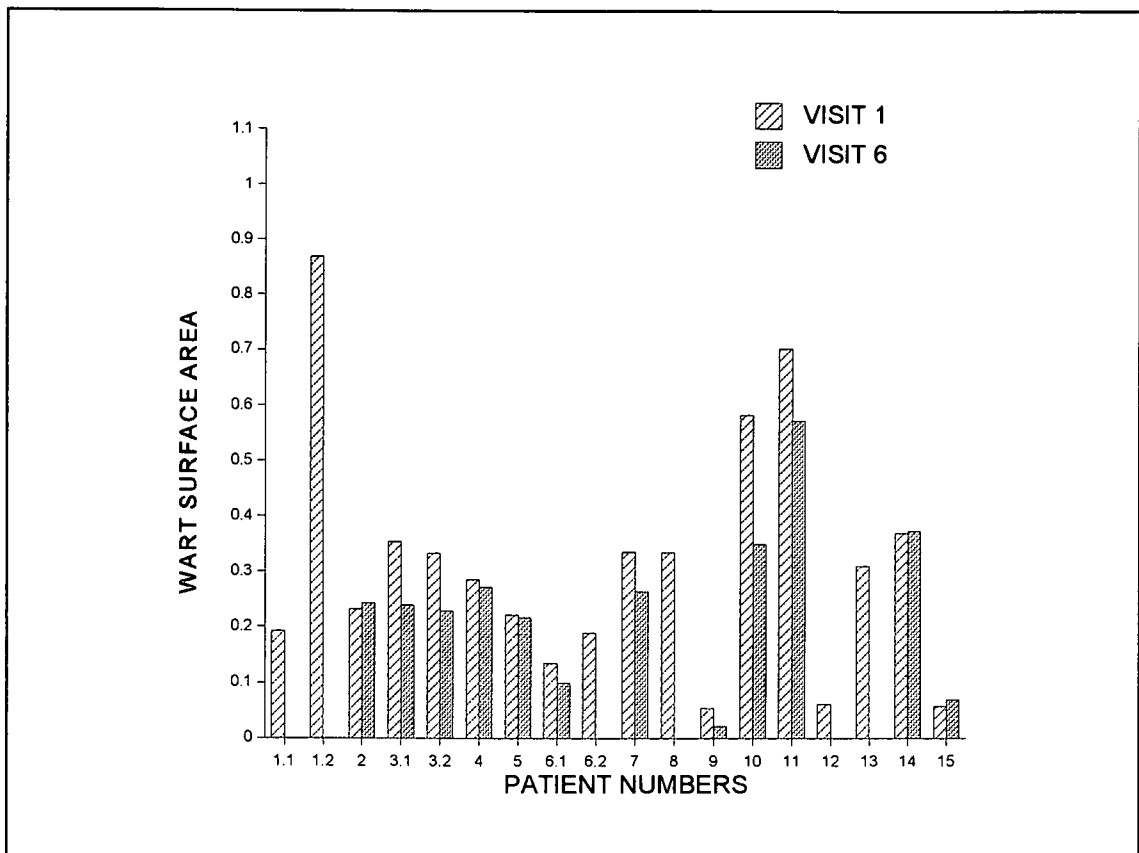
The blank areas for visit 6 indicate wart resolution.

GRAPHICAL REPRESENTATION OF THE RESULTS BETWEEN VISIT ONE AND VISIT SIX FOR THE THUJA TABLET AND TINCTURE GROUP
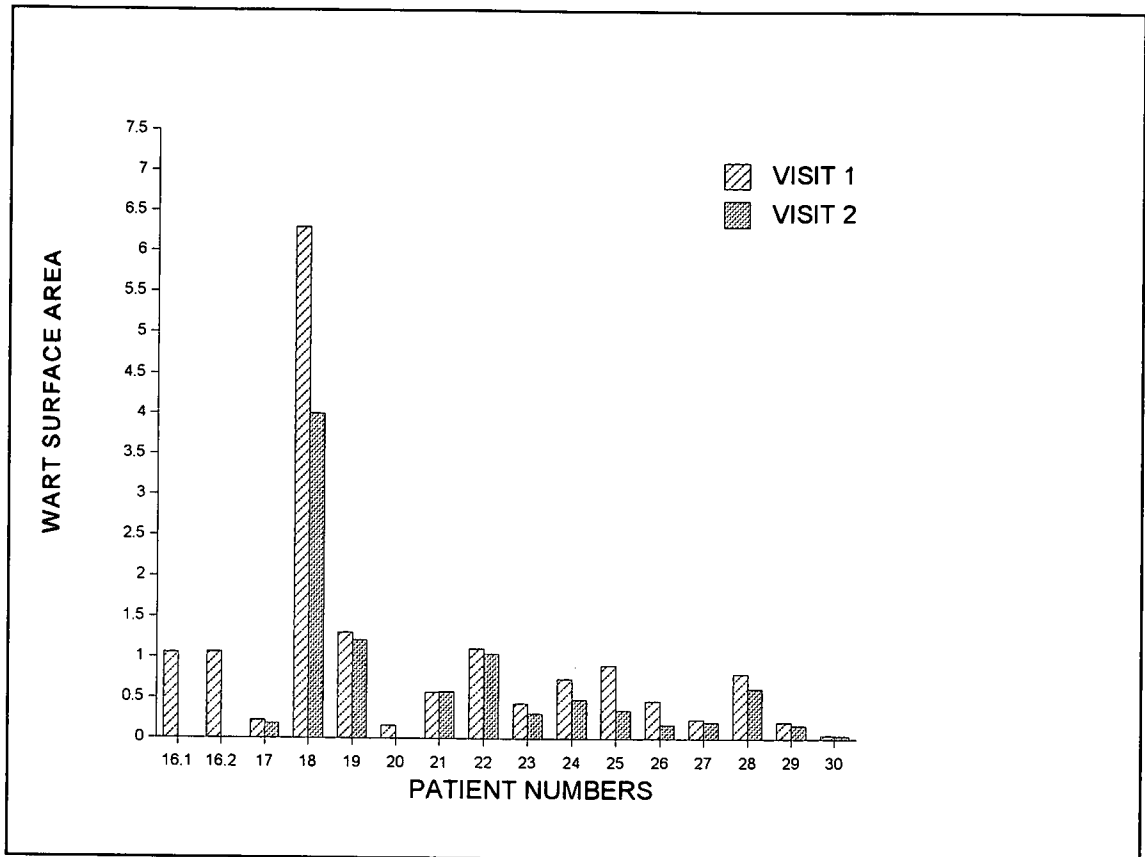
The blank areas for visit 6 indicate wart resolution.

4.1 THE TESTING FOR SUBPROBLEM ONE

PAIRED T TESTS RESULTS

CONFIDENCE INTERVALS FOR THE MEANS OF THE THUJA TABLET AND THE THUJA TABLET AND TINCTURE GROUPS.

TREATMENT GROUP	VISIT 1 & 3	VISIT 1 & 6	SAMPLE SIZE
TABLET	0.005;0.133	0.004;0.25	15
TABLET & TINCTURE	0.019;0.297	0.064;0.715	15

The p value for the Thuja tablet group for visit one and three was calculated at 0.034 and therefore the null-hypothesis was rejected, and the p value for visit one and six was calculated at 0.008 and therefore the null-hypothesis was also rejected.

The p value for the Thuja tablet and tincture group for visit one and three was calculated at 0.028 and therefore the null hypothesis was rejected, the p value for visit one and six was calculated at 0.022 and therefore the null hypothesis was also rejected.

UNPAIRED T TESTS

CONFIDENCE INTERVALS BETWEEN THE MEANS OF THE TABLET AND THE TABLET AND TINCTURE TREATMENT GROUPS.

	VISIT 1	VISIT 6	SIZE
COMPARISON	(-1,45;0.12)	(- 0.95;0.102)	30

The comparison between visit 1 of the tablet group and that of the tablet and tincture group showed a p value of 0.067 therefore the null hypothesis could not be rejected.

The comparison between visit 6 of the tablet group and that of the tablet and tincture group showed a p value of 0.078 therefore the null hypothesis could not be rejected.

4.2 THE TESTING OF SUBPROBLEM TWO

THE CHANGES IN THE MEANS OF THE QUESTIONNAIRE TOTALS

GROUP	VISIT 2	VISIT 6	CHANGE
TABLET	26.07	27.66	+1.59
TABLET & TINCTURE	23.6	24.86	+1.26

The above results show that the changes in the means of the patient's perception of the treatments are almost the same (ie.one treatment was not perceived to be better than the other) as the change in the overall mean of the tablet group was 1.59, and that of the tablet and tincture group was 1.26.

GRAPHICAL REPRESENTATION OF THE PATIENT'S PERCEPTION OF THE

TREATMENT FOR THE THUJA TABLET TREATMENT GROUP.
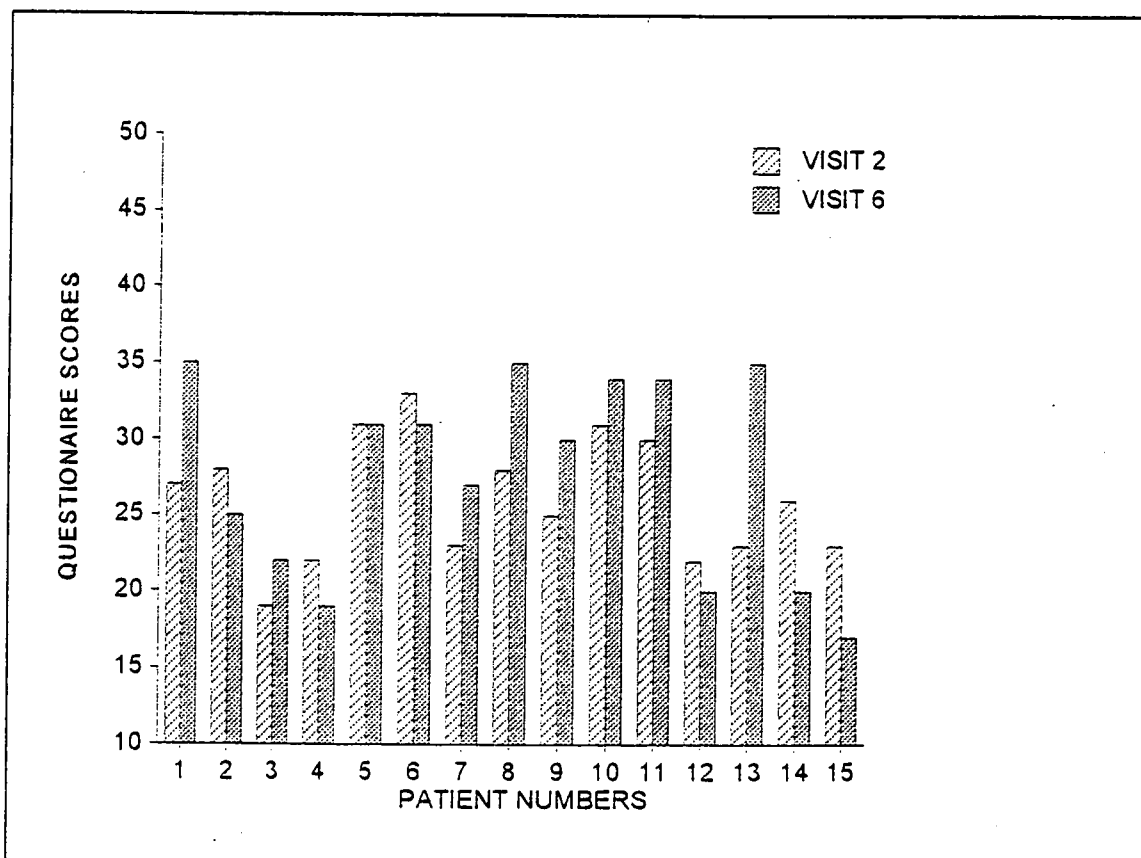
GRAPHICAL REPRESENTATION OF THE PATIENT'S PERCEPTION OF THE TREATMENT FOR THE THUJA TABLET AND TINCTURE GROUP.
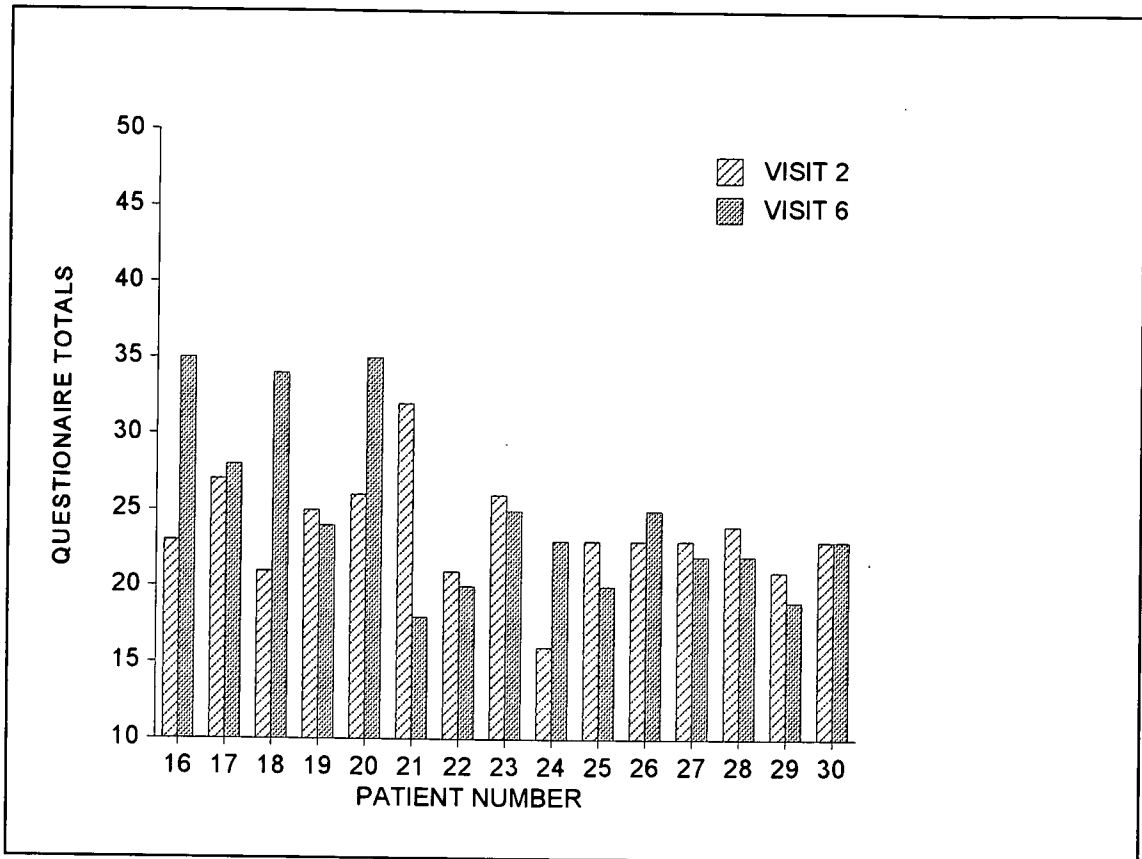
PAIRED T TESTS

CONFIDENCE INTERVALS OF THE MEAN FOR THE THUJA TABLET GROUP AND THE THUJA TABLET AND TINCTURE GROUP WITH REGARD TO THE PATIENTS PERCEPTION OF THE TREATMENT.

TREATMENT	VISIT 2 & 3	VISIT 2 & 6	SAMPLE SIZE
TABLET	-2.33;0.11	-4.38;0.72	15
TABLET & TINCTURE	-3.07;0.32	-5.7;1.83	15

The p value for the Thuja tablet group for visit two and three was calculated at 0.071 and therefore the null-hypothesis could not be rejected, and the p value for visit two and six was calculated at 0.147 and therefore the null-hypothesis was also not rejected.

The p value for the Thuja tablet and tincture group for visit two and three was calculated at 0.104 and therefore the null hypothesis could not be rejected, the p value for visit two and six was calculated at 0.29 and therefore the null hypothesis was also not rejected.

UNPAIRED T TESTS

CONFIDENCE INTERVALS BETWEEN THE MEANS OF THE TABLET TREATMENT GROUP AND THE TABLET AND TINCTURE TREATMENT GROUP REGARDING THE PATIENT PERCEPTION OF THE TREATMENT.

	VISIT 2	VISIT 6	SAMPLE SIZE
COMPARISON	-5.3;0.2	-1.93;6.82	30

The comparison between visit 2 of the tablet group and that of the tablet and tincture group showed a p value of 0.072 therefore the null hypothesis could not be rejected.

The comparison between visit 6 of the tablet group and that of the tablet and tincture group showed a p value of 0.27 therefore the null hypothesis could not be rejected.

This shows that there was no significant difference between the Thuja tablet group and the Thuja tablet and tincture group with regard to the patient's perception of the treatment.

4.3 THE TESTING OF SUBPROBLEM THREE

CORRELATION BETWEEN THE CHANGES IN THE SURFACE AREA OF THE WARTS AND THE PATIENTS PERCEPTION OF THE TREATMENT.

TABLET TREATMENT GROUP

	VISIT 2	VISIT 6
CORRELATION	0.141	-0.178
SIGNIFICANCE	0.577	0.479

With regard to the tablet treatment group the significance was better on visit 6 than on visit 2, thus there was a decrease in wart surface areas with an increase in patient's perception of the treatment.

TABLET AND TINCTURE GROUP

	VISIT 2	VISIT 6
CORRELATION	-0.234	0.17
SIGNIFICANCE	0.38	0.53

With regard to the tablet and tincture group the significance level was better on visit 2 than on visit 6, thus the relationship between the surface area and the patient's perception of the treatment became less favourable as the treatment progressed ie. the wart surface area decreased and the patients perception also decreased.

A possible reason for the above is that the decrease in the wart surface area was not significant enough for the patients to perceive the size decrease, and the decrease in the surface area could only be noted when the warts were scanned, which occurred after the questionnaire was completed.

CHAPTER FIVE:

DISCUSSION

5.1 SUBPROBLEM ONE

The paired T tests were used to compare the initial visit with the third visit and the initial visit with the sixth visit of the two treatment groups, in order to ascertain where the change was greater and when the change or improvement was occurring.

The p value for the tablet treatment group was more favourable between visit 1 & 3, than between visit 1 & 6, showing that the greatest change occurred in the surface areas between visit 1 & 3. Although this change was noted, it was not statistically significant.

The p value for the tablet and tincture treatment group was also more favourable between visit 1 & 3 than between visit 1 & 6, again showing that there was a greater change in the surface areas between visits 1 & 3. This change in p values was also noted, but it was also not significant and even less statistically significant than the tablet treatment group.

When the p values between the tablet and the tablet and tincture group are compared, it showed that there was no significant difference between the changes in the wart surface areas of the two groups.

Unpaired T tests were used to compare the surface areas of the warts on visit 1 of the tablet treatment group and visit 1 of the tablet and tincture treatment group to ascertain wether there was a difference between the two groups before treatment. The unpaired T tests were also carried out for visit 6 of both groups to ascertain whether there was any difference in the surface areas after treatment.

On comparing the values obtained in the above tests the values again showed that there was no significant difference in the wart surface areas before treatment ie. visit 1, and no significant difference after treatment ie. visit 6.

5.2 SUBPROBLEM TWO

The paired T tests were used to ascertain whether there was a difference in the patient's perception of the treatment between visit 2 and visit 3, and between visit 2 and visit 6 for both treatment groups.

For the tablet treatment group the p value was shown to be more favourable between visit 2 & 6 showing that there was a greater perception of the treatment, the patients perceived that the treatment was benefiting them and causing a reduction in the wart sizes. This perception of the treatment was greater between visits 2 & 6, than between visits 2 & 3.

For the tablet and tincture group the p value was also shown to be more favourable between visit 2 & 6 ie. the patients perceived that between visits 2 & 6 their warts had decreased more in size, than between visits 2 & 3.

For both the tablet and tablet and tincture groups the changes in the p values were slight but not significantly different.

The unpaired T tests were used to analyse the difference between the perception of the treatment for both treatment groups for visits 2 & 6. The p value for visits 2 & 6 showed that the perception of the treatment did change between visit 2 and visit 6 ie. the patient perceived that their warts did decrease in size.

SUBPROBLEM THREE

The tablet treatment group showed a slightly greater significance on visit 6, than visit 2. This means that the wart surface area decreased as the patients perception increased, again the changes in the values were not very significant.

The tablet and tincture treatment group showed a more favourable significance on visit 2 than on visit 6.

This indicates that between these two visits there was an increase in the surface area of the warts with an increase in the patient's perception of the treatment, or a decrease in the wart surface area with a decrease in the patient's perception of the treatment. The two variables were therefore proportional to each other, rather than being inversely proportional to each other in order to obtain a favourable result.

When one compares the two groups there was a slight difference in the significance values but the difference between the Thuja tablet group and the Thuja tablet and tincture group, was not statistically significant.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS.

The study proposed to evaluate the most effective treatment between the administration of Thuja occidentalis tablets and the administration of the tablets plus the application of a Thuja occidentalis tincture, with regard to the changes in the clinical manifestations of the warts and the patients perception of the treatment.

The results showed that there was no statistical or clinical significant difference between the two treatment protocols.

When one looks at the changes in the surface areas of the warts alone, the Thuja tablet and tincture group had a slightly higher overall surface area change, than the Thuja tablet group, but this change was again not profoundly significant.

The study showed that Thuja occidentalis tablets and a combination of Thuja occidentalis tablets and tincture do have a role to play in the treatment of warts, as there was a significant reduction in surface areas in both treatment groups.

When one looks at the graphs concerning the changes in the surface areas of the warts, it can be seen that cures did occur in both treatment groups, it can therefore be deduced that both treatments do have an effect on warts

In the Thuja tablet treatment group four warts increased in size during the study and in the Thuja tablet and Thuja tincture group only one wart increased in size.

This size increase was either due to the medicine having no effect on the warts or the patient did not take their medicine as prescribed by the researcher.

No warts were bleeding on the initial consultation and none bled during the trial.

It was noted that the warts treated with the Thuja occidentalis tincture did undergo a slight colour change to become darker, this was due to the green-brown colour of the tincture being applied.These were the only colour changes that did occur to the warts during the treatment.

The researcher felt that the three month trial period was of adequate duration for a study of this nature.

No swelling of the skin surrounding the warts was noted before, during or after the treatment.

No toxic side effects were noted during the three month trial.

6.2 RECOMMENDATIONS

All patients who enter into the study should sign a contract with the researcher, which clearly states that if they drop out of the trial they will be charged for their medication and the consultation time, this would ensure that no or very few drop outs occurred. This is recommended as a drop out rate of 30% occurred in this study.

For future studies on the efficacy of the Homeopathic treatment of warts, the following should be taken into consideration:

-       A larger sample size is needed, but in most cases financial constraint is a limiting factor.

-       Further studies should involve a the use of symptomatic remedies defined by the local appearance of the warts and their modalities, which should be prescribed twice daily, and chronic remedy should be prescribed on the patients morphology and characterology, which should be prescribed as a single dose weekly.

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APPENDICES

QUESTIONNAIRE ON PATIENTS PERCEPTION OF THE TREATMENT.

NAME:

ADDRESS:

TEL NO:

D.O.B:

OCCUPATION:

This questionnaire has been designed especially so that you, the patient, can give your perception of the treatment that you are receiving and to record any changes you have noticed while undergoing the treatment.

This questionnaire must be completed as honestly as possible, as your response will be a vital contributing factor in evaluating whether this type of Homoeopathic treatment is effective in the treatment of warts.

Your input to the questionnaire will not only be of benefit to you, but to the many others who will gain from this treatment, if it is indeed shown to be effective.

The questionnaire is based on the semantic differential scale.

A score of 1 or 2 indicates a less successful treatment, a score of 3 signifies no change and a score of 4 or 5 indicates a more favourable treatment.

To indicate your response to the treatment, please select one of the numbers between 1 and 5, by circling the number.

1. How have you perceived the treatment so far ?

Poor 1 2 3 4 5 Very good

2. Have the warts changed in size ?

Increased 1 2 3 4 5 Disappeared

3. Are you experiencing any pain at the site of the wart?

Much pain 1 2 3 4 5 No pain

4. How has the surface texture of the warts changed?

Become rougher 1 2 3 4 5 Become smoother

5. Have your warts been bleeding?

Excessive bleeding 1 2 3 4 5 No bleeding

6. Has the shape of the warts changed?

No change 1 2 3 4 5 Great change

7. How have your feelings towards your warts changed since the start of the treatment?

No change 1 2 3 4 5 Great change

APPENDIX B:

RESEARCHERS QUESTIONNAIRE FOR THE CLINICAL MANIFESTATIONS OF THE WARTS.

NAME:

ADDRESS:

TEL NO:

D.O.B:

OCCUPATION:

NUMBER OF WARTS:

1.   Anatomical site of wart(s).

        1.1 _____   1.5_____

        1.2 _____   1.6_____

        1.3 _____   1.7_____

        1.4 _____   1.8_____

2.   Size of wart(s).

        2.1 _____   2.5_____

        2.2 _____   2.6_____

        2.3 _____   2.7_____

        2.4 _____   2.8_____

3. Surface texture of the wart (s).

    3.1 _____ 3.5_____

    3.2 _____ 3.6_____

    3.3 _____ 3.7_____

    3.4 _____ 3.8_____

4. Outline of the wart (s).

    4.1 _____ 4.5_____

    4.2 _____ 4.6_____

    4.3 _____ 4.7_____

    4.4 _____ 4.8_____

5. Colour of the wart (s).

    5.1 _____ 5.5_____

    5.2 _____ 5.6_____

    5.3 _____ 5.7_____

    5.4 _____ 5.8_____

6. Swelling of surrounding tissue.

    6.1 _____ 6.5_____

    6.2 _____ 6.6_____

    6.3 _____ 6.7_____

    6.4 _____ 6.8_____

EXPLANATION OF APPENDICES C,D,E,F:

Appendix C and D, are the totals of the wart surface areas that were obtained using the digital scanner, and all values are given in square centimteres.

A patient number with a .1 or .2, indicated that the patient had two warts that were monitored and treated during the trial.

In the visits indicated by a 0 (zero), this showed that the patients warts disappeared.

No drop out patients were recorded in Appendix C & D.

Appendix E & F are the totals of the patients questionnaires concerning their perception of the treatment. The column represented by V1, contains no values as this represented the initial consultation when the patients received their first treatment. They could thus not complete the questionnaire concerning their perception of the treatment at this stage.

APPENDIX C: TOTALS OF WART SURFACE AREAS IN SQUARE CENTIMETRES FOR THE THUJA TABLET TREATMENT GROUP.

PATIENT	V 1	V 2	V 3	V 4	V 5	V 6
1.1	.1923	.1535	.049	.025	0	0
1.2	.8683	.5096	.4274	.2379	0	0
2	.2316	.2805	.2351	.2616	.2512	.2417
3.1	.3536	.1939	.2674	.1941	.2696	.2117
3.2	.3322	.32	.3743	.2216	.2496	.2287
4	.2854	.4357	.3936	.4916	.2968	.2977
5	.2209	.1982	.2237	.2327	.2052	.2163
6.1	.1345	.1136	.1014	.0983	.1082	.0993
6.2	.1892	.1161	.0264	0	0	0
7	.3348	.2972	.3115	.3262	.2754	.2632
8	.3333	.1424	.063	.0612	0	0
9	.054	.0701	.0284	.0215	.027	.0216
10	.5822	.4686	.5174	.3346	.3554	.3487
11	.7021	.7915	.6559	.5969	.5756	.5721
12	.0606	.0593	.0539	.0631	0	0
13	.3096	.3029	.3225	.2508	.1931	0
14	.3684	.402	.2312	.2965	.3309	.372
15	.058	.0546	.0831	.0492	.0654	.0692

APPENDIX D:TOTALS OF WART SURFACE AREAS IN SQUARE CENTIMETRES FOR THE THUJA TABLET AND TINCTURE GROUP.

PT	V1	V2	V3	V4	V5	V6
16.1	1.0525	1.2897	.7262	.7833	.8618	0
16.2	1.0594	.9322	.8168	.7188	.8819	0
17	.2219	.2568	.2354	.2456	.1911	.1839
18	6.2908	5.4419	5.3941	4.1645	4.0885	4.0013
19	1.3072	1.0729	1.2019	1.2732	1.4126	1.2135
20	.1598	.0647	.0424	0	0	0
21	.5757	.5315	.5948	.5869	.597	.5821
22	1.1082	1.0497	1.0436	1.0482	1.0487	1.0487
23	.4407	.3123	.3794	.2626	.3566	.3114
24	.735	.8969	.6622	.5277	.4916	.4877
25	.9074	.8553	.3426	.3885	.3521	.3561
26	.4697	.3403	.2056	.2999	.2299	.1735
27	.2437	.2215	.1886	.1995	.2143	.2048
28	.8022	.6764	.9385	.9169	.5605	.6215
29	.2049	.1929	.2732	.1718	.1473	.172
30	.0466	.04	.0427	.0498	.052	.0429

PT=PATIENT   V=VISIT

APPENDIX E:

TOTALS OF THE PATIENT QUESTIONNAIRES REGARDING THE PATIENTS

PERCEPTION OF THE THUJA TABLET TREATMENT.

PATIENT	V 1	V 2	V 3	V 4	V 5	V 6
1		27	32	30	35	35
2		28	30	27	26	25
3		19	19	24	23	22
4		22	22	21	23	19
5		31	32	32	31	31
6		33	34	32	31	31
7		23	27	28	28	27
8		28	30	33	34	35
9		25	29	30	31	30
10		31	32	34	35	34
11		30	31	29	29	34
12		22	22	21	20	20
13		23	21	27	29	35
14		26	21	22	20	20
15		23	23	20	19	17

APPENDIX F:

TOTALS OF THE PATIENT QUESTIONNAIRES REGARDING THE PATIENTS

PERCEPTION OF THE THUJA TABLET AND TINCTURE TREATMENT.

PATIENT	V 1	V 2	V 3	V 4	V 5	V 6
16		23	22	27	29	35
17		27	29	31	28	28
18		21	26	30	35	34
19		25	25	27	24	24
20		26	35	35	35	35
21		32	30	28	18	18
22		21	25	20	21	20
23		26	24	24	25	25
24		16	22	21	25	23
25		23	21	21	20	20
26		23	23	25	26	25
27		23	25	26	24	22
28		24	25	23	24	22
29		21	21	20	19	19
30		23	24	25	24	23