DIPLOMA OF REMEDIAL THERAPIES

RESEARCH PROJECT

Bowen Therapy as an alternate treatment for Carpal Tunnel Syndrome"

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30 October 2000

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Introduction:

The subject of the research project is the use of Bowen Therapy to treat carpal tunnel syndrome as an alternative to carpal tunnel release surgery.

A manufacturing company located in Gisborne, employs 250 people. 188 of these employees are involved in the assembly and manufacture of various automotive components. Most of the work is carried out using a 'flow line' process, where each Operator follows a product down the process line, adding parts to it as they progress through the line.

Over the period from 1991 to August 2000, this company has had WorkCover claims for 45 employees diagnosed with Carpal Tunnel Syndrome (CTS). Eleven of these employees had the carpal tunnel release surgery performed (see Attachment 1). The cost for these claims has been approximately $528,000, which does not include the premium affecting factor. This cost includes surgery and lost time. The surgery success rate has not been very high. Six of the employees who had the surgery still complained of pain/restricted range of movement some time after the surgery (six to twelve months after surgery).

With this in mind, this study will discuss the outcomes of Bowen Therapy an six employees of this company. Three of these employees have had the release surgery, and continue to have symptoms, and the other three have not. It is anticipated that the Bowen treatments will give these people relief from the symptoms they have been experiencing. The six employees will be given a minimum of three treatments over a three-week period. If needed, extra treatments will be given, until such time as an outcome is achieved.

It is anticipated that these treatments will resolve the symptoms of CTS in the three employees who have not had the surgery and that some relief will be provided to those who have had the surgery and still feel some discomfort after the procedure.

Literature Review:

What is Carpal Tunnel?

The carpal tunnel is a passageway in which the nine flexor tendons, median nerve, arteries, and lymphatic vessels pass through in order to supply function and movement to the fingers and wrist.

The carpal tunnel is lined by the carpal bones on the posterior surface (backside) of the wrist, and the transverse carpal ligament is positioned on the anterior (front side) of the wrist. The size of the carpal tunnel is about the size of the index finger in diameter, and the flexor tendons, arteries and nerves are expected to glide past each other with ease within the carpal tunnel. However, in such a small, confined space, there is little room for error. If the tendon size increases from inflammation or hypertrophy (growth), or if the carpal tunnel size decreases because the weak extensor muscles cannot withstand the tremendous pull from the flexor muscles, the carpal bones will shift downward and into the carpal tunnel.

What is Carpal Tunnel Syndrome

The flexor tendons allow us to move the hand, such as when we grasp objects. The tendons are covered by a material called tenosynovium. The tenosynovium is very slippery, and allows the tendons to glide against each other as the hand is used to grasp objects. Any condition which causes irritation or inflammation of the tendons can result in swelling and thickening of the tenosynovium. As all of the tendons begin to swell and thicken, the pressure begins to increase in the carpal tunnel because the bones and ligaments that make up the tunnel are not able to stretch in response to the swelling. Increased pressure in the carpal tunnel begins to squeeze the median nerve against the transverse carpal ligament. Eventually, the pressure reaches a point when the nerve can no longer function normally. Pain and numbness in the hand begins.

Once the carpal bones have shifted downward and into the carpal tunnel, any form of repetitive flexion will cause friction of the flexor tendons against the carpal bones causing inflammation and irritation to the structures within the carpal tunnel. This domino effect causes the symptoms to continually increase until the pain and dysfunction of the hand becomes unbearable (carpal tunnel syndrome or a repetitive strain injury).

Symptoms of Carpal Tunnel Syndrome

One of the first symptoms of CTS is numbness in the distribution of the median nerve. This is quickly followed by pain in the same distribution. The pain may also radiate up the arm to the shoulder, and, sometimes the neck. If the condition is allowed to progress, weakness of the thenar muscles can occur. This results in an inability to bring the thumb into opposition with **the other fingers and hindern one's grasp**

CTS is most common in middle age and tend to affect women märe than men, especially if .the women are overweight, pregnant, or menopausal. CTS is easily prevented and entirely correctable if recognised early. **It is** vitally important for injuries involving repetitive stress that the person stops or changes the activity that brings an the problem. Failure to do so can result in permanent, irreversible damage tö the nerves and muscles in the hand, wrist, or other parts of the body. Repetitive stress injuries can happen to anyone whose work calls for long periods of steady hand movement, from musicians to meat cutters.

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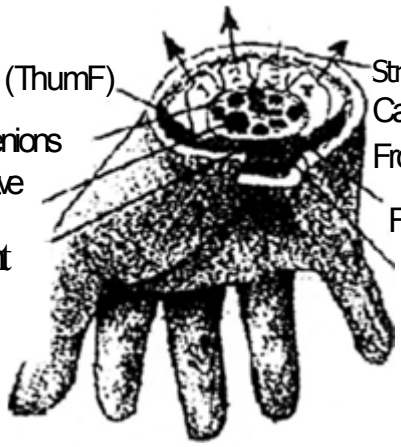

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Traditional Treatments

In the eariy stages of CTS, a splint will sometimes decrease the symptoms, especially the numbness and pain occurring at night. It may also help control the swelling of the tenosynovium and reduce the symptoms of CTS. If this falls to control the symptoms a cortisone injection into the carpal tunnel may be suggested. This medication will decrease the swelling of the tenosynovium and may give temporary relief of symptoms. Other forms of treatment include applying ointments, using magnetic aids, taking a course of Vitamins (E, C, B6 or B complex) or massaging the affected muscles **(MRF;** DIP; Tr. Frict).

Ointment

Wrist Brace

Magnetic Wrist support

If all of the previous treatments fall to control the Symptoms of Carpal Tunnel Syndrome, surgery is usually prescribed to reduce the pressure an the Median Nerve.

Basic Steps in Carpal Tunnel Release

A small incision, usually less than 5 cms, is made in the palm of the hand. In some severe cases, the incision needs to be extended into the forearm another 1 cm or so. After the incision is made through the skin, a structure called the palmar fascia is visible. An incision is made through this material as well, so that the constricting element, the transverse carpal ligament, can be seen.

Once the transverse carpal ligament is visible, it is cut with either a scalpel or scissors, while making sure that the median nerve is out of the way and protected.

Once the transverse carpal ligament is cut, the pressure is relieved an the median nerve.

Finally, the skin incision is sutured. At the end of the procedure, only the skin incision is repaired. The transverse carpal ligament remains open and the gap is slowly filled by scar tissue.

Whenever surgery is performed, a certain amount of scar tissue forms. Scar tissue is dead tissue. Scarring shortens or tightens surrounding tissue. Nearby skin feels as if it's being pulled. Movement in the immediate area feels restricted. Sometimes an elbow, wrist, finger or hand is not able to flex or bend the way it could before surgery. Range of motion becomes narrower. Nearby tissue sometimes has the sensation of feeling cool, numb or painful. All these are indicators of a loss of space in the tissue.

Methodology

The six employees selected to take part in this project were aged from 36 to 54 years of age (all females). The average length of service is 13 years. They all work in the production areas, assembling product eight hours per day, five days per week. (Refer Attachment 2)

The company's medical practitioner and physiotherapist are of the belief that, if relief is not found by using a hand brace or a course of cortisone injections, then surgery is the next preferred solution. The medical practitioner, while tolerant in giving the employees the option of having a Bowen treatment, was skeptical of its ability to resolve the condition in the long term.

The company encourages its employees to participate in the Pause Gymnastics program (five minutes, twice a day) and all employees are rotated to different workstations every two hours. The pause gymnastics program is voluntary, rotation of work is a work procedure.

The treatments began on 14 August. Discussion with each employee revealed that they all experienced pain in the neck and shoulders as well as their arm and wrist. The pain in the neck and shoulders varied from mild to extreme. However, the pain and numbness in the wrist was their main concem. Most only sought medical attention when they began to experience a loss of sensation in their hands. They all accepted that, in their opinion, shoulder and neck pain was part of the normal aches and pains of working on a production line, and had learned to live with the discomfort.

With this in mind, it was decided that the selected Bowen treatments would include the shoulder moves as a part of the overall treatment plan. The North, South, East and West moves would be performed, as required, after the second treatment. The reasoning behind this decision was that it was fett that the initial problem with the neck and shoulder could have been the underlying cause of the CTS. By addressing these areas of concem as well as the arm and wrist, a holistic approach will be taken in the treatment program.

First treatment plan for all six was as follows:-

Basic Relaxation Moves (BRMs) upper back procedure; neck & shoulder procedure; Frozen shoulder procedure and ElbowNVrist procedure. They will also be instructed to perform the 'Bowen' shoulder exercises (arm circles and shoulder

Second treatment (7 days after first treatment)

BRM's upper back procedure; neck & shoulder procedure; Frozen shoulder procedure and Elbow/VVrist procedure.

Third treatment (7 days after second treatment)

BRM's upper back procedure; neck & shoulder procedure; Frozen shoulder procedure and ElbowNVrist procedure. If the client had not feit any improvement in the condition, the North, South, East and West shoulder moves would be performed as required.

If a fourth treatment is considered to be required the treatment plan will be as per the third visit, with consideration given to the pelvic procedure. The reasoning for including the pelvic procedure is that, in some instances, a shoulder problem could be contributed to the opposite pelvic joint.

Prior to the treatment commencing, all candidates were interviewed and the plan for treatments discussed. All were asked to forego any other form of treatment for the duration of the study (ie, physiotherapy, massage). An information sheet was provided that explained the Bowen technique and what was expected of them after the treatment. (Refer attachments 3 & 4)

Candidate 1 — 36 year old female who had Carpal Tunnel Release surgery in August 1997 to the right hand. This person continued to experience pain in the wrist and thumb from time to time. Length of service —11 years.

They had received treatment by the Company's visiting Physiotherapist for shoulder pain (right) in May, 1996. This treatment was ongoing over a period of several months.

Candidate 2 — 53 year old female who had Carpal Tunnel Release surgery in 1998 to both hands. They have muscle atrophy of left hand, and occasional pain experienced in this hand. Length of service — 15 years

This person had received treatment by the Company's visiting Medical Practitioner for shoulder pain (right) in October, 1995.

Candidate 3 — 49 year old female who had Carpal Tunnel Release surgery to both hands in August 1999. They have restricted movement in left handiforearm. Length of service —11 years.

This person had been receiving ongoing first aid treatment *(Dencom* rub) for shoulder pain since 1989.

Candidate 4 — 52 year old female who was diagnosed with CTS in February 2000. Was initially treated by a physiotherapist, declined surgery. They were waking every moming with the 3rd Metatarsal an the left hand curled into the palm of her hand. It was taking up to % hour to straighten the finger out, and feeling extreme pain while attempting to straighten the affected finger. Length of service — 12 years.

This person had received ongoing treatment for a sore shoulder (left) since July 1999.

Candidate 5 — 49 year old female who was diagnosed with CTS (Right hand) in July 2000. They advised their treating medical practitioner that they wished to participate in this research project. Length of service — 17 years.

This person received first aid treatment for pain in the right thumb, wrist and shoulder in February 1999.

Candidate 6 — 54 year old female who was diagnosed with CTS (Left hand) in August 2000. They wanted to participate in this research project before having any other treatment. They had the support of their treating GP to have the Bowen treatment. Length of service — 16 years.

This person has no record of reporting any injuries or pain to their shoulders, arms or hands until August, 2000, when they visited the Company's Medical Centre, complaining of pain in the left hand.

All of these candidates' work areas and practices have been reviewed for possible causes for the CTS at the time of reporting the injury to the Company. Engineers reviewed the work stations for possible improvements and the Company Physiotherapist reviewed the person's work practices, and made recommendations for improvements in either the work station set up or the person's posture and method of work.

Treatment

Candidate 1 — diagnosed in July 1997 with CTS of the right wrist. Had CT Release surgery performed in August, 1997. Retumed to work late October 1997 an a graduated retum to work program, performing light duties and gradually building up to their normal duties over four months. It was noticed from reading this person's medical file that they had been treated for right shoulder pain over the two years before the CTS was diagnosed.

They explained that they experienced some degree of pain and tingling in the right hand from time to time.

This person underwent four treatments over a four week period. After the initial treatment they noticed a decrease in the level of pain. After the second and third treatments, they continued to notice a decrease in the pain being experienced. However, a fourth treatment was performed on this candidate as they were experiencing a restriction of movement in their neck and shoulders (right side). The 'north' move was performed. At the conclusion of this treatment the range of movement was greatly improved.

Candidate 2 — diagnosed with CTS in 1997 and had CT Release surgery performed in April 1998 to both hands.. Retumed to work in June 1998 on a graduated return to work program, performing light duties and gradually building up to their normal duties over four months.

This person experienced pain and, from time to time some loss of sensation in the left hand. They underwent three treatments over a three week period. No improvement was noticed in the atrophy of the muscles, however after the first treatment they noticed a decrease in the pain. At the conclusion of the third treatment, the loss of sensation had not been experienced for two weeks and they had no pain.

Candidate 3 — diagnosed in July 1999 to have CTS in both hands. Had the CT Release Surgery performed an both hands in August 1999. Retumed to work in October 1999, on a retum to work program, which saw this employee commencing work on a gradual retum, performing very light duties. Over the months since their retum to full time, normal duties they had experienced pain and swelling in their left hand. When this person's method of working was studied, it was found that they were protecting their dominant (right) hand from doing many of the day to day actions and using their left hand. This could explain the swelling and pain being experienced in this hand, as it was carrying out more work than it was used to.

This person had one treatment. They declined to participate any further, due to the level of discomfort experienced after the first treatment. This person stated that they felt nauseous and exhausted. Despite being advised that they could feel unwell after the treatment and that they would probably not feel that again, they were adamant It should also be noted that this person does not drink water.

Candidate 4 — diagnosed with CTS (left hand) in February 2000. Treatment was initially received from a Physiotherapist, and recommended that they use a brace. This person found the physiotherapist's treatment to be very painful, and not be able to sleep after a treatment. Surgery was recommended, but they declined. They found that upon waking the 3rd metacarpal of the left hand was bent and the process of straightening the finger took up to half an hour and was a painful process. This person underwent three treatments over a three week period. They were amazed when, on the moming after the first treatment they discovered that their finger was mobile. It actually took them about an hour to realise that it was not bent over! This person also described a 'popping' noise in their neck and a sensation of warmth under both scapulas after the neck/shoulder procedure. The treatments were concluded after the third visit, as they were feeling no discomfort or pain in the hands at all. During the treatments, this candidate was placed on lighter duties and gradually increased to their normal duties at the conclusion of the treatments.

Candidate 5 — diagnosed with CTS (right hand) in July 2000. They had started doing a new process in their work area which they felt caused the condition. They underwent four treatments over a four week period. This person was also placed on lighter duties. However, after the first treatment noticed no improvement. When questioned about their activities, both at work and at home, stated that they had been working in the garden all weekend and doing the housework. They were advised to do as little work as possible around the house while the treatments were being given, to avoid aggravating the injury while the healing process was taking place. After the second treatment they noticed a marked improvement. At the conclusion of the third treatment they were gradually returned to their normal duties.

However, a further treatment was requested one month after the fourth treatment, as they were experiencing pain in their right wrist. When asked about their work and home activities, they stated that they had spent the weekend in the garden and washing windows, as they fett so good.

Candidate 6 - diagnosed with CTS in the left hand in August 2000. The sause of this injury was investigated by the Company's Physiotherapist and found to be contributed by the work station set up. This was subsequently improved. They underwent four treatments over a four week period. During the course of their treatments they were given altemate, lighter duties to perform. This candidate had been recently widowed and had a lot of emotional problems to contend with. They noticed an improvement in their hands from the first treatment, but asked for the fourth treatment to be carried out. Over the course of the treatments their emotional state improved. During the first treatment they were very emotional and discussed their anxiety about their husband's death. By the fourth treatment they were projecting a more positive approach to their work and home life. At the conclusion of the treatments, they retumed to their normal duties, at the improved work station.

CONCLUSION

The six employees who took part in this study continue to work as part of the production team. Candidates 1 and 2 have not required any follow up treatment. They have found that the series of Bowen treatments have eased the pain and tingling sensations they were experiencing. They are able to visit for ongoing treatments if they feel that it is required. Candidate 3 continues to perform her normal duties, although they are wearing a brace an the left hand, as recommended by the Company's Physiotherapist.

Candidates 4 and 6 are also performing their normal duties and Candidate 5 occasionally retums for a follow up visit. During discussion with Candidate 5 about their activities and the need for further treatments, they admit to washing windows and weeding the garden (all in the same day). They have been advised to take things slowly and continue with their stretching exercises (pause gymnastics program and 'Bowen' shoulder exercises).

These three candidates have been amazed with the results they have had with the Bowen treatments. Bowen Therapy has been a successful altemate treatment for CTS for these three candidates. With the ongoing support of the Company and the availability for further treatments if required, the Company will save on the costs of medical expenses and surgery costs as well as increased WorkCover premium costs (see Attachment 5). The employees continue to be productive in their work areas and are examples to their work team of the success that the altemate treatment can have on treating CTS. Interestingly Candidate 3, who had only one treatment, has since encouraged one of their team members to have Bowen therapy on his sore forearms, despite her feelings after her treatment.

Recommendations

As the Bowen Therapy was able to assist five of these candidates, it is recommended that this method of treatment be encouraged for all employees who are diagnosed with CTS. A study of these candidates' medical records and discussions prior to treatment revealed that they had experienced shoulder pain at some time prior to CTS being diagnosed. As a consequence a recommendation has been put to the Company that any person who presents with shoulder pain be offered a Bowen treatment All First Aid attendants be requested to advise the Occupational Health & Safety Co-ordinator of any instances, who will then follow up with the person concemed and explain the Bowen treatment plan. Further, that these people be encouraged to partiCipate in the 'voluntary' pause gymnastics program and offered an assessment and program by the Company's Physiotherapist to use the Company's gymnasium. It is anticipated that these recommendations will break the cycle of CTS. By encouraging treatment of initial shoulder pain, pause gymnastic exercises and a program at the Company's gymnasium, the muscles will be used and strengthened. At present, employees cany their injuries, adjusting the way they do the work, to protect their injured muscles. This leads to other muscles being over worked and the muscles that are sore, being under utilised. If an injury is reported a reactive plan is put in place to manage the injury. Continued reporting of injuries is also recommended to ensure that investigations into the cause of the injury can be undertaken and rectified as required.

It is feit that the connection between shoulder injuries and CTS is an area that lends itself to further study and evaluation to discover if the proactive treatment of shoulder injuries has the affect of reducing the incidence of CTS in this work place.

References & Bibliography

Wendy Grae - WorkCover Co-ordinator, Flexdrive Industries Limited

Alianz Insurance

Rentsch, Oswald H, & Rentsch, Elaine (1997) "Bowtech The Bowen Technique -A Training & Instruction Manual" Pp 11, 15, 53 and "Level 2 Additional Moves" Pp 4.

www.onlinepharmacy.com.au/AilmentsandDiseases/carpal_tunnel_syndrome.htm

www.westmead.nsw.00v.au/s_ae_ic/blastics/hands.htm

vvww.medicineau.net.au/clincial/surgerv/CarpTunnel.html

www.loreto.nsw.edu.au/qs/11cs/basic/Eraonimics/Physical_Trauma._html

www.ctcream.com

www.silcom.com/-sblc/carpal.html

www.plasticsurgery4u.com/procedure.folder/carpal_tunnel

www.evesherbs.com/health/Librarv/illsvmP

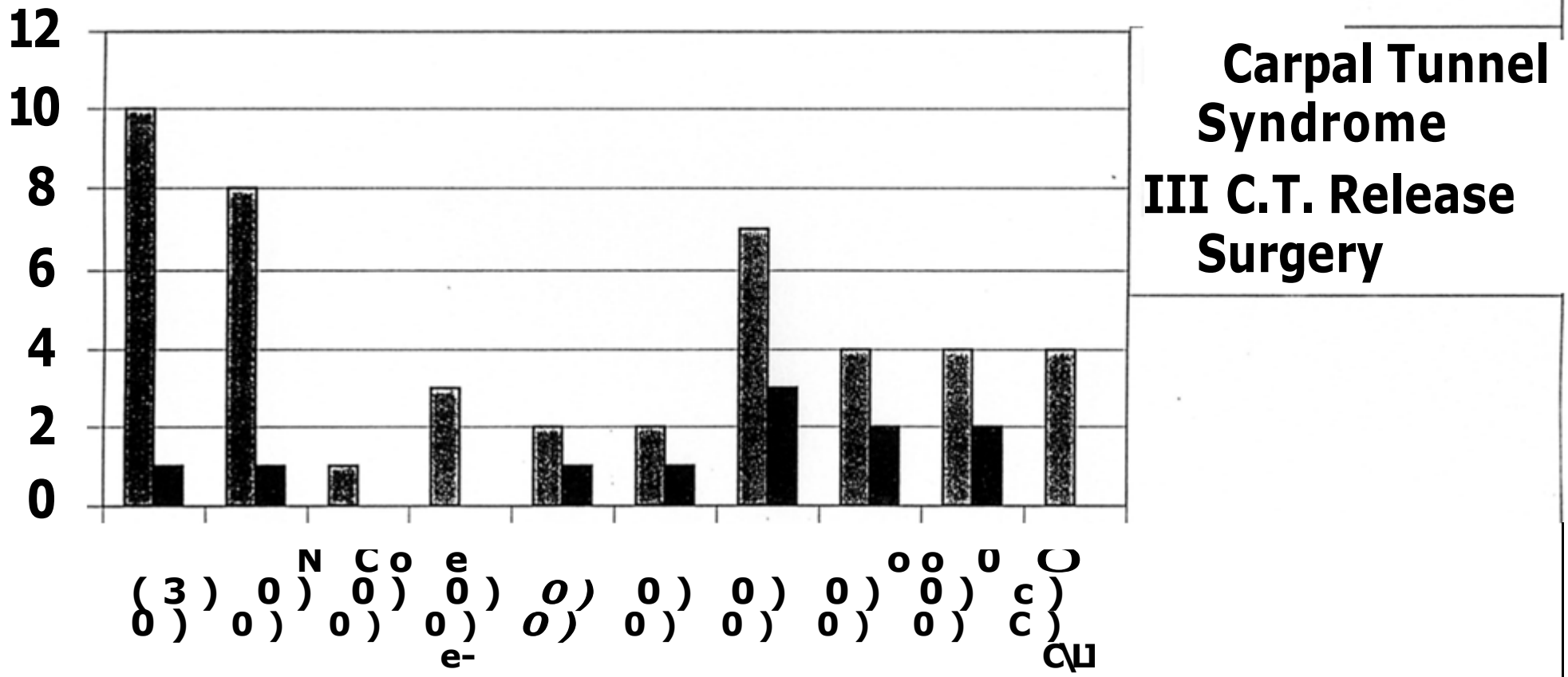
www.carpaltunnelmassage.com

www.rossiter.c,om/howitwqrks

www.onhealth.com/conditions/resource/conditions/item%2C47424

www.femsnutrition.com/carpaltunnel

INCIDENCE OF CARPAL TUNNEL SYNDROME - 1991 - 2000



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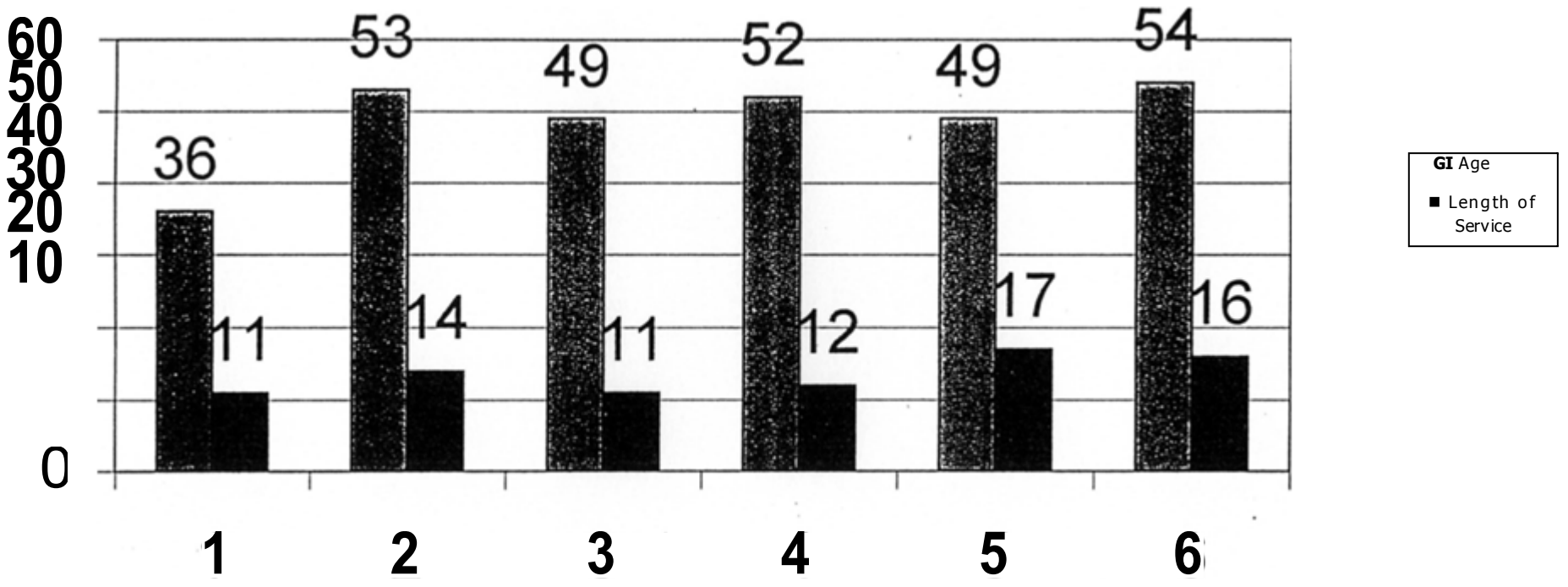


1,2 & 3 HAD SURGERY, 4,5 & 6 DID NOT

BOWEN THERAPY INFORMATION SHEET

During the week before treatment:

No massage or treatment involving adjustment, chiropractic, physical therapy, acupuncture.

On the day of the treatment:

Do not sit for more than 30 minutes at a time without getting up for a short walk.

If driving, stop every 30 minutes and walk around the car.

No hot baths, hot tubs, sauna, heating pads or ice packs. A, brief shower is acceptable.

Strenuous exercise should be avoided. Gentle exercise, such as walking is acceptable.

Upon standing, weight should be evenly distributed on both feet, as opposed to one foot at a time. This helps to maintain the balanced effect of the treatment on the body.

Drink plenty of water to heip the body expel toxins.

During the following week:

No massage or treatment involving the modalities stated above.

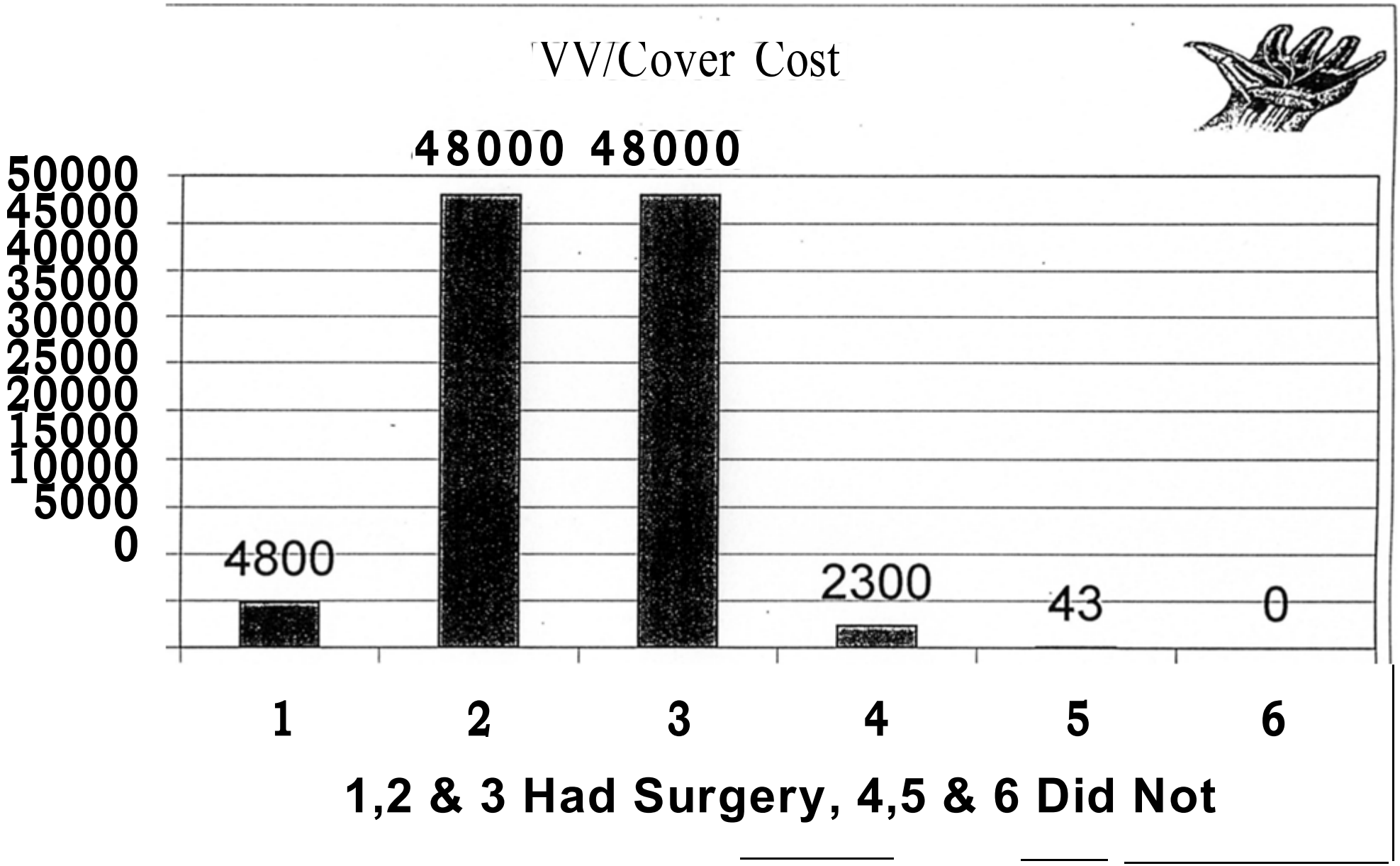
Continue to drink lots of water.

Walk as much as possible.

Afterwards

Drink at least a litre of water in the 24 hour period following any Bowen treatment, and generally increase your water intake, and lower coffee, tea, alcohol etc etc.. This is designed to minimise any adverse reactions that can occasionally arise. As the treatment is designed to promote the body to correct problems for itself, this will often involve a detoxification process. This puts pressure on the kidneys, which in tum can lead to headaches, general lethargy and tiredness, spots, or other miscellaneous symptoms. Generally, any such reaction will only last for 3-4 days, and can always be helped by increasing water intake, taking gentle exercise and getting as much rest and sleep as the body demands. Rest assured, that reactions such as these are a positive sign that the body is getting to work on battling any problems.

Keep active, at least every half an hour, during the rest of the day of treatment until you have managed to sleep for a period of time in a bed or otherwise horizontal. This enables the body's muscles to completely relax and this is often the opportunity for problems to rectify themselves.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1,2 & 3 Had Surgery, 4,5 & 6 Did Not

RESEARCH PROJECT:

Treatment Sheets

Candidate 1.

Pre-treatment consultation — 4 August 2000.

Discussion regarding the purpose of the Bowen Treatments in relation to Carpal Tunnel Syndrome and what is required from the candidate. That is, no other treatments to be undertaken during the course of these treatments (physiotherapy, massage etc.). A minimum of three treatments with the option of further treatments if required. Bowen Therapy information sheet provided to candidate to read so they had an understanding of "Bowtech.n (Attachment 3) They were also provided with an information sheet on what was required of them after a treatment (Attachment 4).

This candidate is 36 years of age, with 11 years service at Flexdrive. She had Carpal Tunnel Release surgery performed in August 1997 to the right hand. She continues to experience pain and tingling in the right wrist and thumb from time to time. Her range of movement in her shoulders, forearms and wrists are normal, with no restrictions or pain. She occasionally seeks treatment from the Company's physiotherapist for some relief. She also has occasional pain in her right shoulder and elbow. This pain has been ongoing since 1996.

14 August 2000 Treatment 1. BRMs — upper back, neck & shoulders, frozen shoulder and elbow/wrist procedures performed. Instruction given on how to do the two shoulder exercises and when (ie arm circles and shoulder 'walk').

21 August 2000 Treätment 2 — discussion of resuits from first treatment revealed that she had noticed as decrease in the level of pain being experienced in her wrist and thumb. BRMs — upper back, neck & shoulders, frozen shoulder and elbow/wrist procedures performed.

28 August 2000 Treatment 3 — discussion of resuits from second treatment revealed that she had further decrease in the level of pain being experienced in her wrist and thumb. BRMs — upper back, neck. & shoulders, frozen shoulder and elbow/wrist procedures performed. She was asked to retum on 4 September for a review.

4 September 2000 Review of program to date — had no pain in wrist and thumb during the week, however, she had a sore right shoulder and neck. Restricted movement of neck when tuming to the right and arm elevation. BRMs upper back, neck & shoulders, frozen shoulder and elbow/wrist procedures performed together with the Advanced Procedure — North. At the completion of this advanced move, the neck and shoulder movement had improved. Follow up treatments are available if required. The Bowen treatments have been successful in treating the symptoms associates with her post CT Release surgery.

Candidate 2.

Pre-treatment consultation — 4 August 2000.

Discussion regarding the purpose of the Bowen Treatments in relation to Carpal Tunnel Syndrome and what is required from the candidate. That is, no other treatments to be undertaken during the course of these treatments (physiotherapy, massage etc.). A minimum of three treatments with the option of further treatments if required. Bowen Therapy information sheet provided to candidate to read so they had an understanding of aBowtech.p (Attachment 3) They were also provided with an information sheet on what was required of them after a treatment (Attachment 4).

This candidate is a 53 year old female who has 15 years service with Flexdrive. She had Carpal Tunnel Release surgery on both hands, performed in 1998. She continues to experience pain and tingling in her left hand. She has normal range of movement in her left hand and wrist. It is also noted that there is atrophy of the thenar muscle of the left hand. She has the occasional visit to the Company's physiotherapist to have treatment on a painful left shoulder.

14 August 200	**Treatment 1. BRMs — upper back, neck & shoulders, frozen shoulder and elbowlwrist procedures performed. Instruction given on how to do the two shoulder exercises and when (ie arm circles and shoulder `walk').**
21 August 2000	**Treatment 2 - discussion of the results since the first treatment revealed that she noticed a decrease in the pain being fett in her left hand. BRMs — upper back, neck & shoulders, frozen shoulder and elbow/wrist procedures performed.**
28 August 2000	**Treatment 3 — discussion of results from the second treatment revealed that she was pain free and that the tingling in her left hand had ceased. BRMs — upper back, neck & shoulders, frozen shoulder and elbow/wrist procedures performed. Follow up treatments are available if required. The Bowen treatments haue been successful in treating the symptoms associates with her post CT Release surgery. However, there has been no change in the atrophy of the thenar muscle.**

Candidate 3

Pre-treatment consultation — 4 August 2000.

Discussion regarding the purpose of the Bowen Treatments in relation to Carpal Tunnel Syndrome and what is required from the candidate. That is, no other treatments to be undertaken during the course of these treatments (physiotherapy, massage etc.). A minimum of three treatments with the option of further treatments if required. Bowen Therapy information sheet provided to candidate to read so they had an understanding of "Bowtech." (Attachment 3) They were also provided with an information sheet on what was required of them after a treatment (Attachment 4).

This candidate is a 49 year oid female with 11 years service at Flexdrive. She had the **Carpal Tunnel Release surgery on both hands performed in August 1999. She has restricted movement in her left hand and forearm. She is unable to take her hand into full supination and pronation. She has not sought any other form of treatment since retuming to work from her surgery.**

14 August 2000 — **Treatment 1. BRMs — upper back, neck & shoulders, frozen shoulder and elbow/wrist procedures performed. Instruction given onhow to do the two shoulder exercises and when (ie arm circles and shoulder 'walkt).**

21 August 2000 — **Treatment 2 — did not take place. She came to see me two days after her first treatment to teil me that she had never feit so sick in her life — she feit like she 'had been hit by a bus — twice!' 1 explained that this feeling was not abnormal and reminded her that I had explained that she should increase her intake of water. She then stated that she did not drink water at all. 1 feel that this would explain her extreme reaction to the Bowen treatment. I was unable to convince her to continue with the treatments (or to try and drink water).**

Consequently this candidate continues to have restricted movement in her left hand and is now wearing a wrist brace, as recommended by the Company's physiotherapist.

Candldate 4.

Pre-treatment consultation — 4 August 2000.

Discussion regarding the purpose of the Bowen Treatments in relation to Carpal Tunnel Syndrome and what is required from the candidate. That is, no other treatments to be undertaken during the course of these treatments (physiotherapy, massage etc.). A minimum of three treatments with the option of further treatments if required. Bowen Therapy information sheet provided to candidate to read so they had an understanding of uBowtech." (Attachment 3) They were also provided with an information sheet on what was required of them after a treatment (Attachment 4).

This candidate is a 52 year old female who has 12 years service with Flexdrive. She was diagnosed with CTS of the left hand, in February 2000, receiving physiotherapy treatment for the condition for the first five months. lt was recommended that she have the Carpal Tunnel Release surgery. She was determined not to have the surgery, as she had spoken to some of her work colleagues who had had the procedure and they did not recommend it as a permanent fix. She explained that in addition to feeling extreme pain in her left hand, when she woke every moming her 3r^{d} phalange was bent over and it took up to half and hour to straighten it out, and was a very painful process to undertake. She also feit very sore after every physiotherapist visit, and was unable to get muck sleep due to the pain she was in.

14 August 200 Treatment 1. BRMs — upper back, neck & shoulders, frozen shoulder and elbow/wrist procedures performed. During the neck and shoulder procedures she noticed a popping sound in her neck and sensation of warmth under both scapulas. Instruction given on how to do the two shoulder exercises and when (ie arm circies and shoulder `walk').

21 August 2000 Treatment 2 - discussion of the results since the first treatment revealed that she noticed a decrease in the pain being felt in her left hand. She was really excited — she noticed the moming after her first Bowen treatment that her finger was not bent over. She also got a good night's sleep after the treatment, which she didn't expect. BRMs — upper back, neck & shoulders, frozen shoulder and elbowlwrist procedures performed.

28 August 2000 Treatment 3 — discussion of results from second treatment revealed that she had further decrease in the level of pain being experienced. BRMs — upper back, neck & shoulders, frozen shoulder and elbow/wrist procedures performed. She was asked to retum on 4 September for a review.

4 September 2000 This candidate was happy with the results from the three treatments and was able to retum to her normal duties. She **was advised that further treatments are available if she feit she needed them. A successful outcome.**

Candidate 5.

Pre-treatment consultation — 4 August 2000.

Discussion regarding the purpose of the Bowen Treatments in relation to Carpal Tunnel Syndrome and what is required from the candidate. That is, nä other treatments to be undertaken during the course of these treatments, (physiotherapy, massage etc.). A minimum of three treatments with the option of further treatrnents if required. Bowen Therapy information sheet provided to candidate to read so they had an•understanding of "Bowtech. (Attachment 3) They were also provided with an infOrmation sheet on what was required of them after a treatment (Attachment 4)...

This candidate **is a** 49 year old female with 17 years of service at Flexdrive, who was diagnosed with CTS of the right hand in 'July 2000.She wäs advised of the Bowen therapy case study prograrii and decided to take part. She tdok ä Bowtech pamphlet to show her Doctor, who subsequently supported her decisidri., She is exi5erfencing pain in her nght shoulder, forearm 'and wrisi. Her ROM of bOth shoulders cannot put her nght thumb and fifth phalange into OppOiition, her forearrn is painful and the muscles very tight ,and she.haS loss of "sensatioii in the .right hand 2' and 3rd phalange.

14 August 200 Treatment 1..UBRMs"-7;,,üpper,back„ neck_ & shoulders, frozen shoulder and: :;elbow/Wrist Protidüres..:performedi:. • At the conciusiOn of tiAlbow/\;vriSi'pitäeduWtiie nght händ,Was a nice warm pink colour.': Instaktion given on ho■ii to do the two shoulder exercises and Wheri:

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21 August 2000 Treatment 2 - discussion.of aesultsisinOe the first treatment revealed that she had nö irriproy_emerit inthe pain being felt in her nght hark!. When questioned abbürfiefactivities during the past week, bäth ät work and at home, sheievealed that she had been doing a·lot ott,gardening and housework. Shä had been on altemate,"lighte(duties at work, so the aggra vation would have come from whatStie 'was doing at höMe.• BRMs — upper back, neck & shoulders; shoulder and . elbow/wrist procedures performed. AttheCOnddi'ion of the treatment she was advised to take things easiat home where'possible; to give the body time to heal. She was tö continue **on** har light duties program.

28 August 2000 Treatment 3 -cliscussion of results from second treatment revealed that she had no pain or tingling in her nght hand. Her forearm muscles were supple and she is able to oppose her thumb and frfth phalange. BRMs upper back, neck & shoulders, frozen shoulder and elbow/wrist pro' cedures performed. She was asked to retum on 4 September for **a** review.

4 September 2000 This candidate was happy with the results from the three treatments and will gradually retum to her normal duties. She was advised that further treatments are available if she felt she needed them. She will continue with the shoulder exercises and the pause gymnastics program in her work area.

3 October 2000 Visited for a follow up treatment. She was experiencing pain in her right wrist. When questioned about her work and home activities, she said that, because she was feeling so good, she spent the weekend in the garden and washing the windows. BRMs — upper back, neck & shoulders, ,frozen shoulder and elbow/wrist procedures performed. Advised to take things easy at home and if she feels any pain or restriction in her arm, to return for another treatment. She will continue with the shoulder exercises and pause gymnastics program. To date a successful outcome. However this candidate needs to be followed up to ensure that she continues to look alter herself, both at work and at home.

Candidate 6.

Pre-treatment consultation -11 August 2000.

Discussion regarding the purpose of the Bowen Treatments in relation to Carpal Tunnel Syndrome and what is required from the candidate. That is, hö. other treatments to be undertaken during the course of these treatmentj(physiotheragiy, massage etc.). A minimum of three treatments with the optiim of further treatments if required. Bowen Therapy information sheet provided to candidate to read so they, had an understanding of "Bowtech.* (Attachment 3) They were also provided with an information sheet on what was required of them after a treatment (Attachment 4): .
This candidate is a 54 year old female who has 16 years service with hexdrive. She was diagnosed with CTS of the left hand, in August 2000. She had heard about the program and wanted to take part. She had spoken to her treating GP, who supported her decision. Thisperson has no record of repoitihg arisoft tissue injuiles during her 16 years with the company. VVhen questioried about this; she stated that she has had shoulder and arm pain.over the years, but did not seek 'ahy treatment as, in her opinion, it was to be expected with the 'work she does.- She had only reported this injury as she has found itdebilitating.

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15 August 200	**Treatrrient BRMs.4::*uliper. bäck, neck & shbulders,:- frozen shoulder and elbow/Wrisf:prodedüres .performed. This ,lady had been recently widowed7:and ,.cliiring the treatment. , Instniötiongiveh:g:ähb&Ä to two. shoulder eZerciges'and When(ie arm cncles and shäiirdet7walk').**
22 August 2000	**Treatment 2 - discusSiqh,bf theÄresults since the first treatment revealed that she no pain in:tiei.dötit hand. She had been on altemate, lighter duties at work arid foUhd that to help. BRMs - upper bäck, neck & shoulders, frozen shoulder and elbow/wrist procedtires peorrned.**
29 August 2000	**Treatment 3 . discüssion of resuits from ,second treatment revealed that she',cäntin.ued to be pairi free..- She was increasing her work load 'gra141y änd having nö problems with that. She stated that her äVerall attitude towards her work and personal life was improving. BRMs - upper bäck, 'neck & shoulders, frozen shoulder and elböw/wrist proCedures performed. She was asked to return on 5 September for a review.**
5 September 2000	**'Treatment 4 - a further treatment was requested from this candidate, who, despite feeling no'symptoms or pain, felt that one more treatment would make her feel better. She had retumed to her normal full time duties. BRMs - upper back, neck & shoulders, frozen shoulder and elbow/wrist procedures performed. She was advised that further treatments were available if she felt the need. A successful outcome.**