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**THE EFFICACY OF TREATMENT OF  
CHRONIC NON-MALIGNANT PAIN (CNP)  
BY THE USE OF NERVE BLOCKS**

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**Introduction:**

Chronic Non-malignant Pain (CNP) has been recognized as common for back pain alone. For low back pain (LBP), 60-year-old patients report an incidence of 45% having back pain in the previous year (Haldeman, *et al*, 2002). Moreover, in Canada with a population of 35 million there were 170,627 motor vehicle accidents in 2010, thus there is a continual supply of nerve CNP patients post-motor vehicle accidents (MVA). The use of palliative nerve blocks has been recommended or alluded to in the following papers: Wilson, *et al* 1997; Moulin, *et al* 2007; Gale, *et al* 2011; Rothbart, *et al* 2001; Gale, *et al* 2002; Rothbart and Gale 2001; Gale GD 2009; Bogduk and Fraifeld 2010.

**Treatment of CNP:**

Medications are widely used to treat CNP, but have problems with side effects. Non-steroidal anti-inflammatory drugs (NSAIDs) cause gastric problems and opiates cause constipation and impaired cognition, and depressed respiration. Attention has therefore focused on the use of repeated nerve blocks (palliative NBs), since their efficacy was demonstrated by Arner, *et al* (1990) and other authors.

Consequently, the use of palliative NBs has become a frequent practice because of the poor response of other methods of controlling CNP.

### **Method:**

It was decided to assess patient satisfaction with the use of palliative NBs for the treatment of CNP. One-hundred and five (105) consecutive patients were asked to enrol in the study. Details of patients' treatment and their satisfaction with the use of palliative NBs for the treatment of CNP was surveyed using a form developed by Dr. H. Jacobs (Figure 1). An independent observer was obtained to collect the data and patient consent was obtained.

### **Results:**

Data was obtained for 105 patients on pre-treatment condition, diagnoses and length of pain relief after treatment.

### **Diagnosis:**

The treatment was being given for headache, neck pain, back pain and other conditions, usually face for peripheral limb pain. The sample of 105 patients contained pain conditions as follows:

1) Back pain	72
2) Neck pain	66
3) Headache	61
4) Other pains	<u>22</u>
TOTAL	<b>221</b>

There were therefore 221 pain conditions in 105 patients with an average of 2.2 conditions per patient.

1. The data was analysed to determine the maximum pain relief obtained in each patient. The result is shown in Figure 2, for example 2 patients got no relief, 22 patients got 50% pain relief and 25 patients got 70% relief. Overall 80% of patients got 50-80% pain relief.
2. The data was analysed to determine how long the pain relief lasted (Figure 3). In 31 patients relief lasted less than one week, in 79 patients it lasted 5-7 days, in 19 patients it lasted two weeks and in 6 patients it lasted three weeks and in 4 patients it lasted four weeks or more.

In summary, therefore in 80% of patients, relief lasted one week.

Pain relief was then analysed by region of head (Figure 4). This produced a biphasic graph with peaks at 30-50% relief and at 80%, which may be due to the aetiology of the headache, which was migraine and cervicogenic or both. Analysis of neck pain results produced a bell-shaped curve, which peaked at 80% relief (Figure 4). Analysis of back pain relief produced peaks at 40% and 60% relief (Figure 5). Analysis of other areas of pain relief usually peripheral limb condition showed less pain relief with peaks at 40% and 70% relief (Figure 6).

### **Summary:**

Pain relief by patient report was assessed by an independent observer using a questionnaire. Consent was obtained and ethics committee approval was obtained. Results indicated that 80% of patients obtained 80% pain relief using palliative nerve blocks for musculoskeletal pain and headache, which on average lasted one week. In summary, this is a valuable therapy for pain relief when other methods of therapy fail to do so. (Other methods include NSAIDs, opiates, physiotherapy and exercise).

### **Conclusion:**

It is concluded that palliative nerve blocks produce significant pain relief in chronic musculoskeletal pain conditions and headache, when other methods of treatment fail to do so.

I wish to thank Dr. Howard Jacobs for the use of his questionnaire and Ms. Gillian Joseph for collecting the data.

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Nerve Block Survey – 2014

Name: \_\_\_\_\_ Date: \_\_\_\_\_

(For staff) Initial consultation date: \_\_\_\_\_

Dear Patients,

We are currently conducting a survey on our patients. Please answer the following questions (circle or check most appropriate answer only – please no extra comments).

1. Are you presently taking ANY medications for pain management? YES NO  
2. Are medications alone sufficient to control your pain? YES NO  
3. Do you receive nerve blocks regularly? (if "no", skip to #10) YES NO

4. Where is your pain that is treated with nerve blocks? (circle all that apply)

HEAD NECK BACK FACE OTHER legs, knees

5. You find nerve blocks:

VERY EFFECTIVE EFFECTIVE MINIMALLY EFFECTIVE NOT EFFECTIVE

6. Following nerve blocks, your pain improves by : (please circle)

HEAD	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
NECK	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
BACK	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
FACE	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Other	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

7. For how long do you feel the effects of the nerve blocks before your pain returns to previous levels?

Less than 3 days 1 Week 2 Weeks 3 Weeks 1 Month Longer than 1 Month

8. On average, how often do you receive nerve blocks?

Weekly every 2 weeks every 3 weeks Monthly every 4-6 weeks Other

9. I find the benefit(s) of nerve blocks is/are (circle all that apply):

Pain relief Improved function Better moods None

10. I also use or have used in the past the following treatment modalities for my chronic pain:

Physiotherapy Massage therapy Chiropractic Acupuncture Other \_\_\_\_\_

11. Are you satisfied to have your pain treated with injection therapy? YES NO

Signature: \_\_\_\_\_

FIC 1. DR H. JACOBS QUESTIONNAIRE

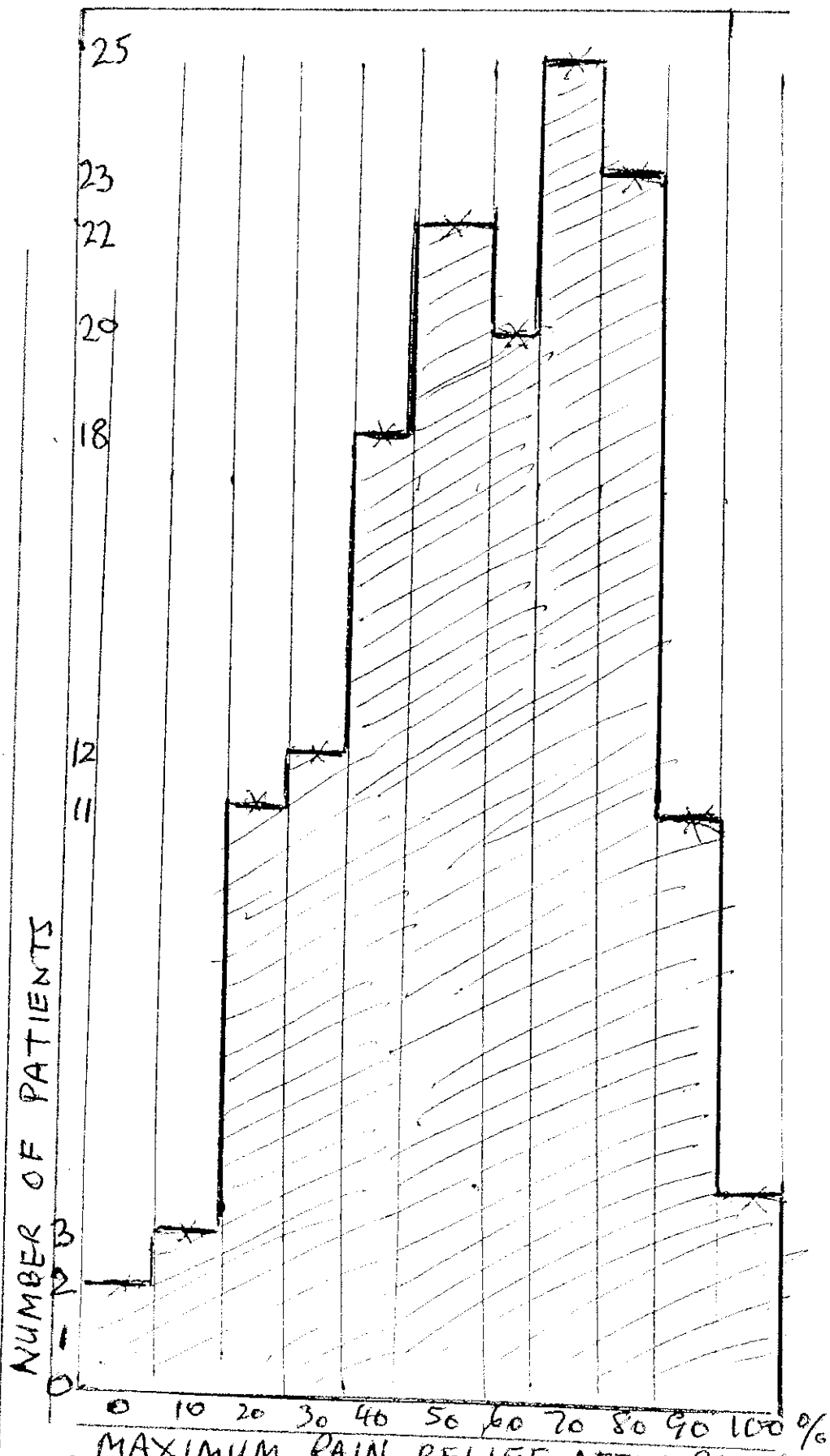
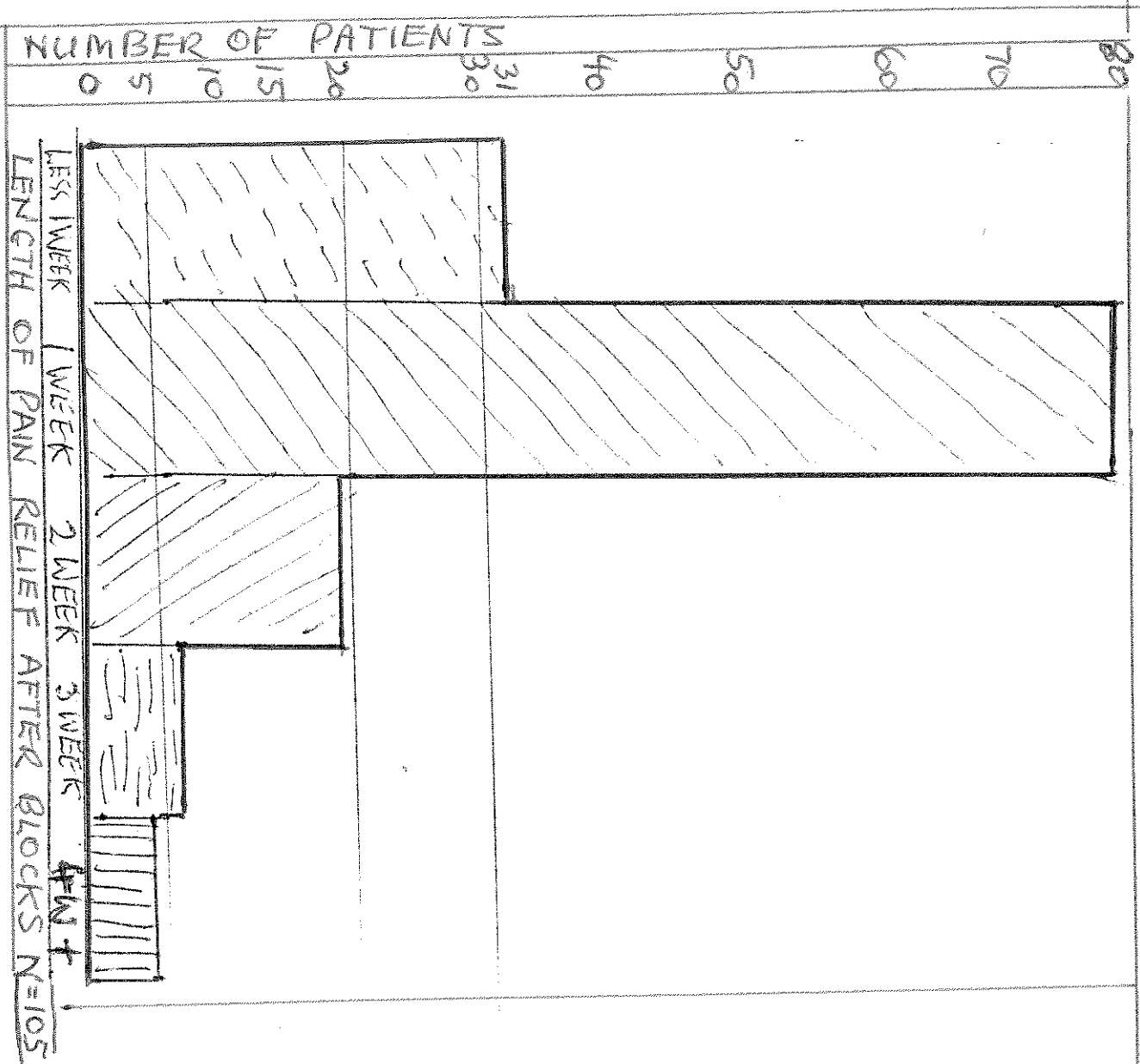
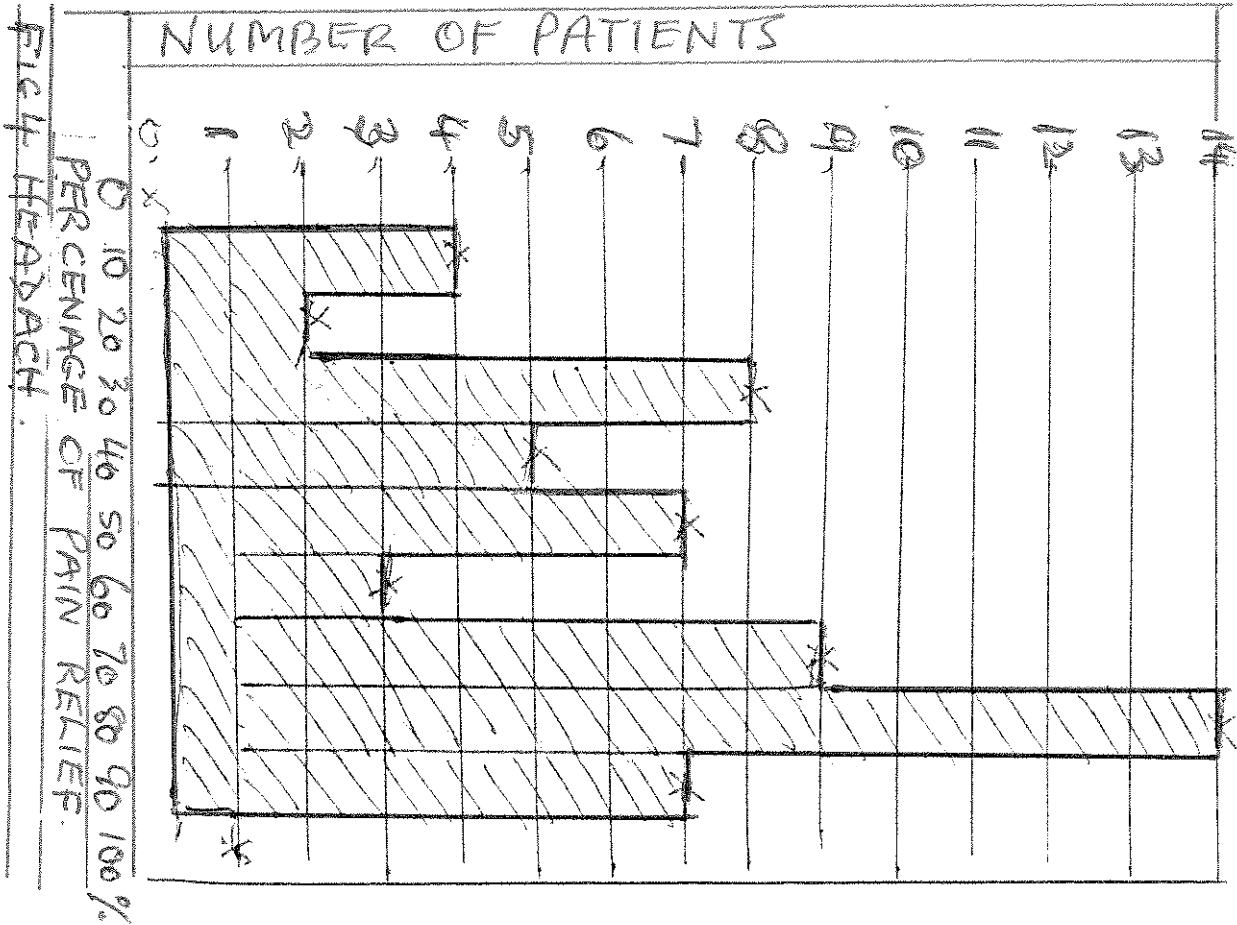


Fig 2. TOTAL PATIENTS N = 105.

FIG 3.







# NUMBER OF BACK PATIENTS

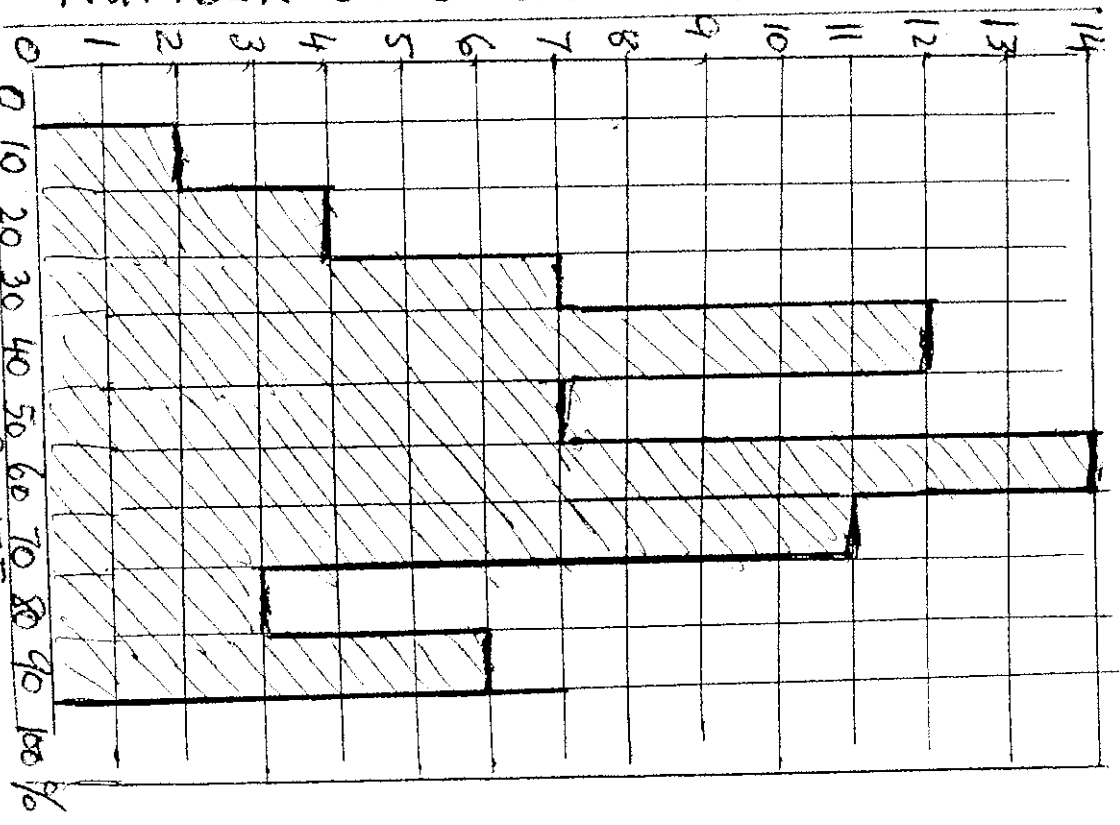


FIG. 5. BACK PAIN

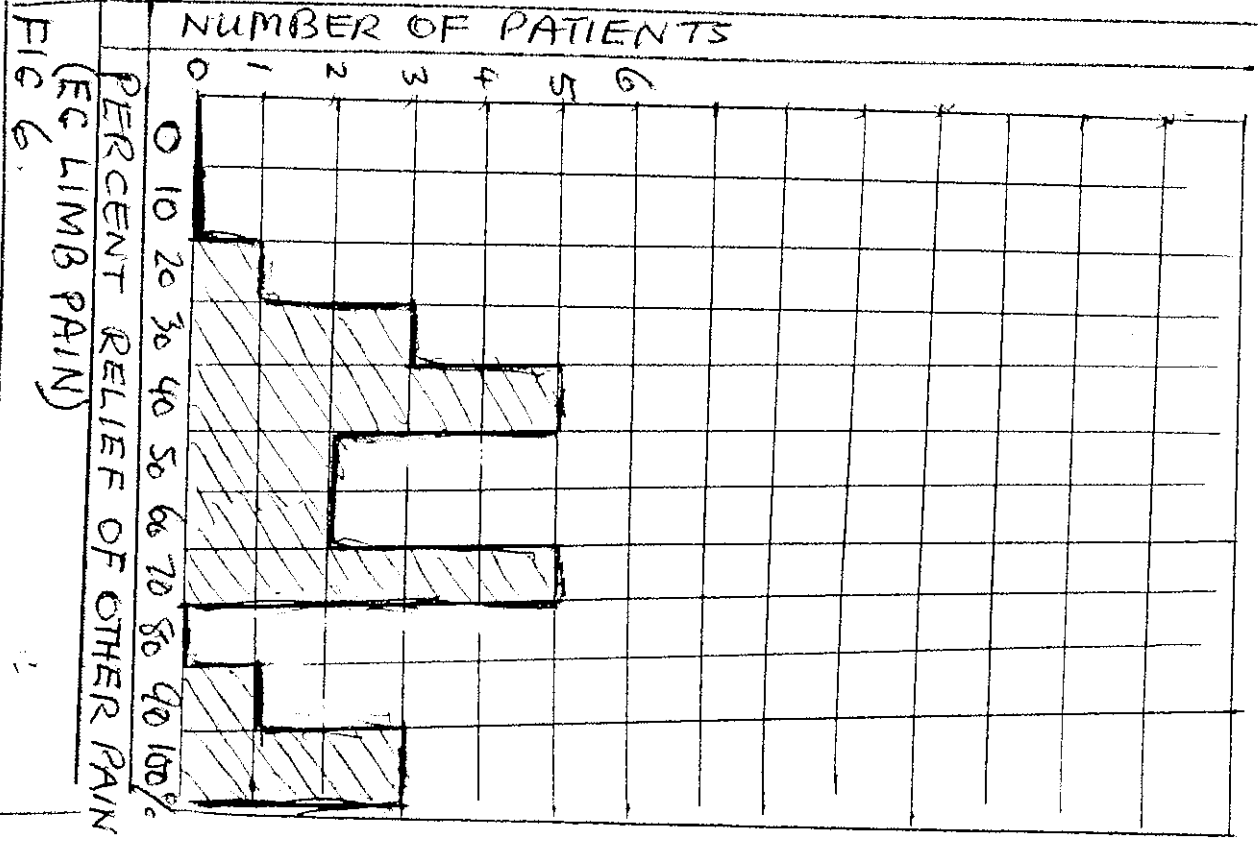


FIG 6.  
 (EG LIMB PAIN)