Ass. Univ. Bull. Environ. Res. Vol. 5 No. 2, October 2002

AUCES

COMPARATIVE STUDY OF THREE MODALITIES OF PAIN RELIEF DURING DRESSING OF BURNT PATIENTS

Abd EL-Rahim J.A.[1] , Abd El-Latif Z.[2],Kamel A.H.[3] and Abd El-Sayed S.A.[4]

1- Medical-Surgical Department. Faculty of Nursing. Minia University.
2- Medical-Surgical Department. Faculty of Nursing. Assiut University.
3- Plast. & Reconstr. Surg. & Burn Department. Assiut University Hosp.
4- Medical-Surgical Department. Faculty of Nursing.Cairo University.

ABSTRACT :

Pain in burnt patients has many causes either functional or organic. The maximum peak is during dressing and/or physiotherapy. This study comprises comparative study between four groups (15 patients in each group). Each group received one modality of pain control, the results were compared with fourth group, which was the control group, and they did not receive any method of pain relief as in the other groups. We used pain-rating scale, to assess patient's physiological and behavioral pain response.

INTRODUCTION :

Pain defined as whatever the experienced person says it is, existing whenever he or she says it does[1,2] .It is an elusive and complex phenomenon and despite its universality, its exact nature remains a mastery[3]. Mersky[4] defined pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage.

There are two types of pain in burnt patients[5]:

1-Organic pain which is sever and shorter in duration, it occurs in relation to procedures such as wound cleaning, debridement, physical therapy, and procedures necessary to critically ill patients.

2-Functional pain which is related to burn experience, prolonged hospitalization, helplessness, dependency and the resulted cosmetic disfigurement.

The effects of pain are[6-8]:

1-It shares in the development of hypermetabolic state.

2-Burn pain is destructive through decreasing the autonomic, somatic, and endocrine reflexes, these will result in: Protein breakdown, Platelets aggregation, and gastro-intestinal tract (G.I.T.) reflexes.

3-It suppress the immune system.

4-It produces Hypoxia, vasoconstriction and poor tissue perfusion leading to impaired wound healing.

5-loss of confidence between the medical staff and patient.

6-Development of psychiatric disorder and depressive syndromes.

The burn specialist is faced with a challenge to achieve proper analgesia without interference with awareness before, during or after the

pharmacological and the non-pharmacological strategy of pain relief. The fourth group was the control, They did not receive any previously mentioned methods of pain relief. Pain relief strategies started from the first to the tenth post burn day for all patients.

The tools used for collection of data were:

1-Demographic data including (Age, sex...etc.).

2- Drug monitoring sheet was done to record the dosage and possible side effect of the drugs used in the study.

3-Pain rating scale, it was described by Chambers and Price[15] to assess patient's pain response physiological and behavioral. It consists of nine variables (attention, anxiety, verbal response, restlessness, tense muscle, frowning and grimacing, perspiration, sounds, and nausea). Each variable was rated on a one-through- five scale. Thus the maximum pain score was 45 and minimum or no pain was 9.

RESULTS :

Statistical analysis of the demographic data, burn circumstances and burn wound for the four groups showed that there was insignificant difference.

The total pain score presented in (graphic No. J) showed that it was significantly (high) lower among the Mixed group, inwhom we used the pharmacological and non-pharmacological strategies of pain control, in comparison to the control group. The pharmacological strategy alone reduce the total pain score significantly in comparison to the control but the significance was moderate. Also, the education and distraction reduce the score significantly (slight). The total pain score in case of pharmacological and Mixed groups was significantly decreased when we compared its score from the first to the last day of the study, while it was unchanged in Education group and increased in the Control group.

Statistical analysis of the data of the nine items (the attention score, anxiety score, verbal score, skeletal muscle response (resting condition), skeletal muscle response (tense muscle), skeletal muscle response (frowning and grimacing), perspiration, pain sound score, nausea score) separately showed that it was the same as the finding of the total pain score were significantly lower in Mixed, Drug, and Education groups in comparison to the Control.

Using the length of stay as indication for wound healing showed that it was longer in control group than other groups but the difference was insignificant.

The study of drug monitoring sheet for the medications used showed that, there were no complications recorded.

DISCUSSION :

Why treat pain in burned patients? Of course pain should be treated for obvious humanitarian reasons, which no burn care specialist, can be unaware of, and also because it can be detrimental to burned patients[16]. That are why, although, we are not pain specialists, we trying to attack this problem in absence of share from the concerning specialties.

Byers[17] mentioned that burn pain and anxiety are multifactorial, and the procedural pain (e.g. during dressing) is significantly higher than resting pain. The classification of pain causes in burnt patients into psychological (functional) and organic, represented the basis of pain control in such patients.

This study was a trial to evaluate two different modalities, and the effect of its combination on the control of the two component of pain. We followed the recommendation in the literature[18] that pain

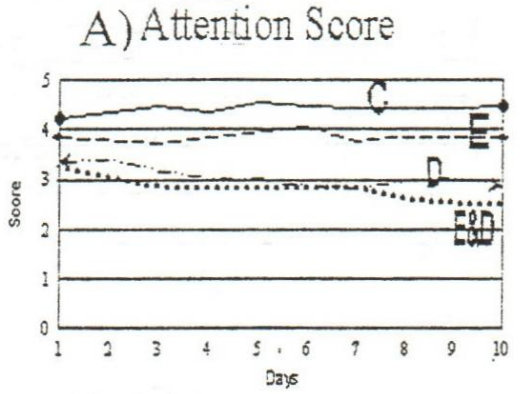
day of the trial. It may be the cause of absence of side effects of the drugs used because a combination of drugs allows the use of small dose of each one.

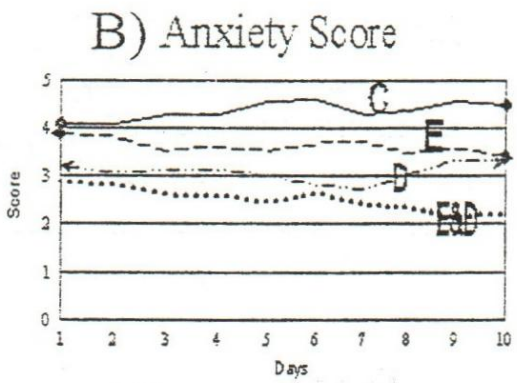
CONCLUSIONS :

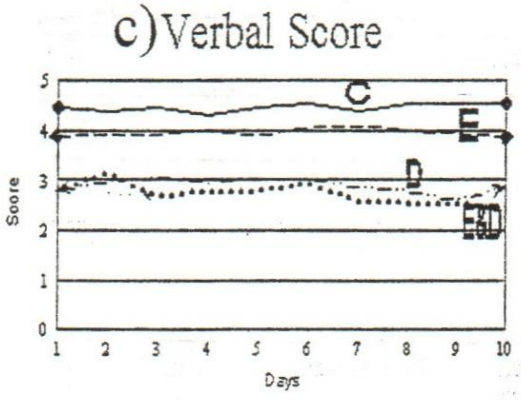
If the circumstances doesn't allow pain control for the burnt patients all-over the day, now we could offer it successfully for our patients during dressing and physiotherapy

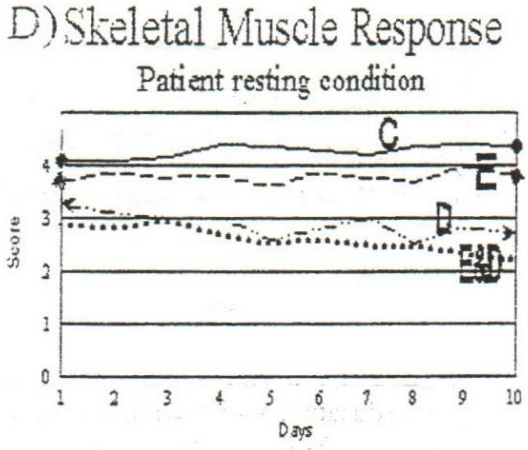
Pain control strategies makes the patients more cooperative during wound dressing and physio-therapy. It facilitates all steps of wound dressing

Effect of different pain relieving strategies on pain rating scale variables and total score in burnt patients during burn wound dressing.









REFERENCES:

1-Bergman S, Herrstrom P, Jacobsson LT, and Petersson IF: Chronic widespread Pain:" a three years follow-up of pain distribution and risk factors. J Rheumatol Apr; 29 (4): 818-25, 2002.

2-McCaffery M.: Nursing Management of the patient with pain (2nd ed.) Philadelphia: J.B. Lippincott .1979.

3-Talor, C., Lillis, C., and LeMone, P.: Fundamentals of Nursing. The art of science of nursing care, Comfort. (2nd ed.) Philadelphia: Lippincott Company, P. 747, 1993.

4-Mersky H.: Pain, learning and memory. J of Psychosomatic Research, 19, 319 - 324, 1975.

5-Tredde R.D., Meryer R.A., Raja S.N. and Campbell J.N.: Peripheral and central mechanisms of cutaneous hyperalgesia. Prog Neurobiol, 38: 397- 421, 1992.

6-Melzack R.: The tragedy of needless suffering. Sci Am 26(2): 27 -33, 1990.

7-Liebeskind J.C.: Pain can kill. Pain 44 (1): 3-4,1991.

8-Goodwin S.A.: A review of preemptive analgesia. J of Perianesth Nurs , 13 (2): 109 - 14, 1998.

9-Garrel D.R, Davignon J, and Lopez D.: Length of care in patients with sever burns with or without early enteral nutritional support. J Burn Care Rehabil; 11: 275 - 279, 1991.

10-Jaffe JH, and Martin R.: Opioid analgesics and antagonists. In: Goodman AG, Goodman LS, and Gilman A,eds. The pharmacological basis of therapeutics, 8 th ed. New York: McGraw Hill, (pp485- 521), 1993.

11-Labert DM, Vandevoorde S, Jonsson KO, and Fowler CJ. : The palmitoylethanolamide family: a new class of anti - inflammatory agents? Curr Med Chem Mar; 9 (6): 663- 74, 2002.

12-Danysz W, Parsons CG, Jirgensons A, Kauss V, and Tillner J.: Amino- Alkyl- Cyclohexanes as a Novel Class of Uncompetitive NMDA Receptor Antagonists. Curr Pharm Des; 8 (10): 835- 43,2002.

13-Martyn JA: Clinical pharmacology and therapeutics in burns. In: Martyn JA, ed. Acute management of the burned patient. Philadelphia: W.B. Saunders, (pp180-200), 1990.

14-Gillis JC, and Brogden RN: Ketorolac, A reappraisal of its pharmacodynamic and pharmacokinetic properties and therapeutic use in pain management. Drugs, 53(1): 139 – 88, 1997.

15-Chambers W. and Price G: Influence of nurse upon effects of analgesics administered. Nursing Research Summer 16 (3): 228-233, 1967.

16-Latarjet J., and Choiniere M.: Pain in burn patients. Burns, 21(5): 344-348, 1995.

17-Byers JF, Bridgs S, Kijek J and LaBorde P.: Burn patient's pain and anxiety experiences. J Burn Care Rehabil Mar- Apr; 22 (2): 144- 9, 2001

18-Rae CP, Gallagher G, Watson S, and Kinsella J.: An audit of patient perception compared with medical and nursing staff estimation of pain during burn dressing changes. Eur J Anaesthesiol Jan; 17 (1): 43-5, 2002.

19-Huber K, Huband L and Alster T.: Pain management for dermatologic laser surgery: a nursing perspective. Dermatol Nurs Dec; 10 (6): 427-9, 1998.

20-Rybarczyk B, deMarco G, DeLaCruz M, Lapidos S, and Fortner B.: A classroom mind/ body wellness intervention for older adults with chronic illness: comparing immediate

Ass. Univ. Bull. Environ. Res. Vol. 5 No. 2, October 2002

دراسة مقارنة لثلاثة طرق مختلفة لتخفيف الألم أثناء الغيار لمريض الحروق

جيهان عبد الرحيم[١]، عاصم حسين كامل[٢]، زينب عبد اللطيف[٣]، سوزان عطية عبد السيد[٤]

١- تمريض باطنة وجراحة – كلية التمريض – جامعة المنيا

٢- جراحة التجميل والحروق – كلية الطب – جامعة أسيوط

٣- تمريض باطنة وجراحة – كلية التمريض – جامعة أسيوط

٤- تمريض باطنة وجراحة – كلية التمريض – جامعة القاهرة

من المعروف أن الألم المرتبط بالحروق غالبا ما يكون شديدا أو أشد ألما . وكثيرا ما يعانى مرضى الحروق من الألم الناتج عن الغيار مكان الحرق. ويزيد القلق من الإحساس بالألم. والطرق المستخدمة لتخفيف الألم المريض عديدة منها على سبيل المثال الأدوية المسكنة والمخدرة، وهناك طرق أخرى لتخفيف الآلام بدون استخدام أدوية وتشمل الاسترخاء، شرح الطرق العلاجية للمريض، التخيل، جذب انتباه المريض إلى أشياء أخرى غير الألم نفسه، والتنويم المغناطيسى، ومن أهم مميزات هذه الطرق تجنب الآثار الجانبية المترتبة على الأدوية علاوة على كونها أمان للمريض .

ويتركز دور الممرضة فى : توفير الراحة للمرضى وحمايتهم من النواحى الطبية والصحية، كما أن احترام المريض ومعرفة الجوانب النفسية والفسيولوجية له تعد من أهم أسباب تخفيف آلام المريض .

ويهدف البحث إلى فحص تأثير استراتيجيات مختلفة لتخفيف آلام مرضى الحروق أثناء الغيار . وقد تم اختيار ٦٠ مريضا يعانون من حروق حرارية، وسلقية، وقد كانت مساحة الحروق المختارة من ١٥-٣٠٪ ، وتم هذا البحث بمستشفى أسيوط الجامعى، وذلك لمدة عام فى الفترة من ١٩٩٨ حتى ١٩٩٩، تم تقسيم العينة إلى ٤ مجموعات كل مجموعة تشمل ١٥ مريضا، المجموعة الأولى تم شرح طريقة الغيار لها ، والمجموعة الثانية تم إعطاءها أدوية مسكنة، وهى الفنتالين وأدوية غير استرودية مضادة للالتهاب ، والمجموعة الثالثة تم تطبيق الطريقتين السابقتين عليها . أما المجموعة الرابعة فقد خضعت لروتين المستشفى (ضابط التجربة)، وقد وضعت أدوات لجمع معلومات البحث وتقييم آلام المرضى أثناء الغيار ومعرفة تأثير الطرق المختلفة لتخفيف هذه الآلام، وقد أسفرت هذه الدراسة على أن المجموعة الثالثة تعد من أفضل الطرق العلاجية فى حالات الحروق حيث يجتمع الدواء مع شرح الطرق العلاجية والعلاج النفسى والفسيولوجى للمريض، ويوصى البحث بضرورة استخدام شرح الطرق العلاجية المستخدمة للمريض بجانب الأدوية فى علاج جميع حالات الحروق.