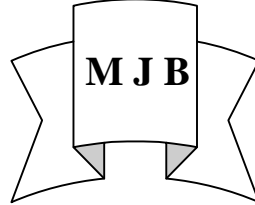


BURN TRAUMA IN BABYLON

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Abstract

From Feb. 1999 to Feb. 2001, There were 1000 patients to be treated for burn in Hilla Surgical Teaching Hospital burn unit in Babylon.

-596 male patients (59.6 %), 404 female (40.4 %).

-660 (66%) of cases were children, young adults 330 (33%), and old age group form 10 (1%). The vast majority of cases fall in the group of moderate to major burns.

Flame burn formed 653 (65.3 %), 332 (33.2 %) cases hotliquid, and 15 (1.5 %) sustained electric burn. -100 patients (10 %) treated surgically. Hospital stay extended from 1-12 weeks. Bacterial study showed 54% psuedomonas, staph. Aureus 22%, Klebsiella 13 % Proteus 9 % and E coli 2 %, 175 patients died due to : - inhalation injury 55%, septicemia 44%, G. I. bleeding one case.

The study has shown the burn injury problem as amajor national health problem , and prolonged morbidity and temporary or perminant disability associated with it to result in astaggering economic drain on social resources and finantial support is required. Prophylaxis against burn is better than treatment. Teamwork approach to burn care is found to be of great importance. This study can be regarded as amessage to whome it may concern.

الخلاصة

تم احذ 1000 مريض من مرضى الحروق للفترة من شباط 1999 لغاية شباط 2001 في وحدة الحروق-مستشفى الحلة التعليمي. كان عدد الذكور منهم (596) أي ما يعادل (59.6%) ، اما الاناث فكان عددهم (404) أي ما يعادل (40.4%). شكل الاطفال ما نسبته (66%) حيث بلغ عددهم (660) طفلا، وكان عدد الشباب (330) شابا أي ما يعادل (33%) بينما بلغ عدد الكبار في السن عشرة فقط أي ما يعادل (1%).

كان الجزء الاعظم من المرضى لديهم حروق مصنفة بين الحروق المتوسطة الى الشديدة.

كانت نسبة الحروق المسببة بالنار (65.3%) حيث بلغ العدد (653) مريضا ، (33.2%) من الحالات أي (332) مريضا كان الحرق لديهم مسببا بالسوائل الحارة وبلغ عدد المرضى الذين كانت حروقهم مسببة بالحرق الكهربائي (15) مريضا فقط أي ما يشكل (1.5%).

مئة مريض أي (10%) تمت معالجتهم جراحيا، اما الرقود في المستشفى فقد امتد من اسبوع الى 12 اسبوع.

الدراسة البكتريولوجية اشارت الى النتائج التالية:

Pseudomonas (54%), *Staph.aureus* (22%), *Klebsiella* (13%), *Proteus*(9%), *E.Coli*(2%)

175 مريضا توفوا بسبب: اصابة استنشاقية (55%) ،تسمم الدم (44%)، النزف من القناة الهضمية حالة واحدة فقط.

أظهرت الدراسة ان مشكلة اصابات الحروق هي من المشاكل الصحية الكبيرة في البلاد، إضافة الى الاعاقة الطويلة و العوق المؤقت او الدائم المترافق معها مما يؤدي الى عبء اقتصادي كبير على المارد الاجتماعية إضافة الى الحاجة للدعم المادي.

الوقاية من الحروق خير من علاجها. ضرورة العمل التوافقي كفريق في العناية بالحروق اظهر اهمية عظيمة. يمكن اعتبار هذه الدراسة هي رسالة الى من يهمه الامر.

Introduction

Burn is a tissue jury in which there is acoagulation necrosis of tissues from thermal application or from absorption of physical energy of chemical contact. (1)

No one is immune from thermal injury . (1)

Burn injury problem is anational health problem with an evident difficulty in management and which may result in prolonged morbidit and disability which may highlight the importance of prevention such injuries .

The factors which affect the severity and prognosis of burn injuries are:

- 1- Total body suface area burn (T. B. S. A)
- 2- The debth of the burn.
- 3- The complications which may occur.
- 4- Associated medical illnesses or injuries .(1)

With well planned and proper management protocol the prognosis can be improved.

Patients and Methods

From Feb. 1999 to Feb. 2001 aclinical prospective study in Hilla Surgical Teaching Hospital was

accomplished in the burn unit on 1000 patients of both sexes, all age groups and on different kinds of burn injuries. Parenteral fluid resuscitation used from the admission when needed usually with Ringer lactate, Normal Saline, Glucose Saline, Glucose Water. Plasma and blood transfusion given as required.

Systemic Antibiotics are given from the start as prophylaxis, usually with penicillin then changed on need according to the clinical status of the patient and the wound and according to the results of culture and sensitivity test of wound swabs.

The patients submitted to daily cleaning of the wounds and local application of Antibacterial preparations, such as Silver Sulphadiazine cream, Hibitane cream, Celavex cream, Soframycin, Garamycin cream according to the need of the patient and the availability of the drugs.

The vast majority of patients wounds healed spontaneously on conservative line of treatment.

100 Patients needed surgical interference in the form of wound excision and skin graft with very good results functionally and esthetically. Early physiotherapy afford to the patients.

After discharge of the patients they were followed up for some time depending on their need and their cooperation ranging from one visit to multiple visits along more than 1.5 year. The patients who had died were referred to the forensic medical department.

Results

Sex incidence:

No. Of male patients =596 (59.6)
No. Of female patients=404 (40.4)
Male / female ratio =1.4 / 1

Age incidence:

No. Of children = 660 (66%)
No. Of young adults =330 (33%)
Old age group =10 (1%)

Severity of Burn:

Major Burn =180 cases (18%)
Moderate Burn = 455 cases (45.5%)
Minor burn =365 cases (36.5)

Type of Burn:

Flame Burn = 653 cases (65.3%)
Hot Liquid Burn =332 cases (33.2%)
Electrical Burn = 15 cases (1.5%)

Sites of burn:

The majority of patients sustained burns of more than one site of the body at the same time

Head and neck = 205 cases (20.5%)
Trunk = 470 cases (47%)
Upper limbs =275 cases (27.5%)
Lower limbs =305 cases (30.5%)
Genitalia = 60 cases (6%)

Type of Treatment:

Conservative Treatment = 900 cases (90%)
Surgical Treatment =100 cases (10%)

One setion of skin grafting =60 cases
Two setions of grafting =30 cases
Three setions of grafting =10 cases
No skin graft failure occurred.

Seasonal incidence:

December = 135 cases (13.5%)
March =105 cases (10.5%)
January =103 cases (10.3%)
Other months = 60 -70 cases amonth

Hospital Stay

Up to one week =575 cases (57.5%)
2-4 weeks =370 cases (37%)
5-8 weeks =46 cases (4.6%)
9-12 weeks = 9 cases (0.9%)

Cooperation of patients

60 – 70 % of patients and their companion were uncooperative concerning compliance with medications, local wound care, positioning, physiotherapy, and feeding.

Bacteriological study of burn

wounds

Wound swabs taken 3-5 days post burn.
Positive cultures form 25 % of the swabs

Psuedomonas aeruginosa =54 %
Staph. Aureu = 22%
Klebsiella = 13 %
Proteus = 9 %
E. coli =2 %

Mortality

Total number of deaths is 175 patients (17.5%.)
Inhalation injury=96 patients (9.6 %).
Septicemia =78 patients (7.8 %).
G.I. Bleeding =1 patient. (0.1 %)

Discussion

The management of burn patients is known to be one of the most difficult tasks that demands a great deal of efforts, knowledge, experience, patience, and team work approach and is found to be one of the medical problems that is surrounded by an evident deal of controversy.

Burn management demands cooperation and coordination of many specialities and well trained personale, but unfortunately we lack this in our burn unit.

Children form a significant number of cases 66% which indicates the carelessness and inadequate follow up by the family in addition to low precaution level in the presence of the old fashion methods of cooking, heating, and lighting.

The vast majority of patients fall in the group of moderate to major burns which results in burn of more than one site of the body at a time which can denote the size of efforts and facilities needed and the extent of morbidity and mortality.

The majority of burns were found to be of flame type which could be related to the use of fire for lighting, heating and cooking.

Our approach of treatment is late wound excision and skin grafting (2-3 weeks post burn) because we have no material and equipment facilities and personale available to perform early wound excision and grafting,

Our results were excellent and no graft failure occured.

Cooperation of patients and their companion found to be disappointing (60-70% uncooperative), and so we can imagine the difficulty of management of these patients and how can this be reflected on the results.

The seasonal incidence of burn injury from the previous incidence which we used to know in which we got peak incidence on cold months, but in this study we found the majority of the cold and hot months have got approximate incidence, this can be related to the shortage of electricity power supply of the governorate (Babylon) which is all over the year.

25% of the swabs taken 3-5 days post injury were positive with dominance of pseudomonas and staph. aureus, this result can be improved by increasing care and support to the burn unit.

Mortality rate was 17.5% is relatively comparable to that of Yorksire regional Burn center (1966-1983) which was 16% (5).

This rate may be decreased by improving the standard of service offered to the patient

Conclusion

The study has shown the burn injury problem as a major national health problem and the prolonged morbidity and temporary or permanent disability associated with it to result in staggering economic drain in social resources and financial support is required.

Prophylaxis against burn is better than treatment and the whole society should be fire cautious.

Care of burn patient is optimized when an organized team with a thorough understanding of burn pathophysiology develops and implements a plan to prevent further complications.

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