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RESEARCH ARTICLE

THE EPIDEMIOLOGICAL PROFILE OF HOSPITALIZED PATIENTS IN BURN INTENSIVE CARE DEPARTMENT IN UNIVERSITY HOSPITAL MOHAMED VI MARRAKECH: ABOUT 198 CASES

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Abstract

This is a retrospective and descriptive study including all patients hospitalized in the burn intensive care department during the period from January 2016 to August 2019 on an estimated number of 198 patients.

The M/F sex ratio is 2.03; the average age is 33. Of which 50.54% are out of school with a medium to low socio-economic level. 71% of the hospitalized are residents of the MARRAKECH-SAFI region, only 16% are admitted within the first 6 hours, hospitalized on average for 15 days. Thermal burning remains the most common burning mechanism in adults 70% (butane flame in 48%); while in children (<15 years) thermal scalding, is the most common burning mechanism with 37.5%. This trauma occurs in 68% of cases in the home. The average burned skin surface is 25% with a predominance of hand burns and the face either isolation or isolation must be associated. 62% healed spontaneously, while 31% required one or more grafting times, with LA50 at 47%.

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Introduction:-

Burns is a real public health problem, defined as the partial or total destruction of the skin covering, and/or the underlying structures, by different mechanisms: thermal, chemical, electrical, or ionizing radiation. It is a serious pathology, responsible for significant morbidity and mortality, requiring specialized care.

Material And Method:-

The data collection followed by an Excel and SPSS software, based on the data of the operating sheet, regrouping 198 patients hospitalized in the intensive care unit of the ARRABI HOSPITAL burns over a period from January 2016 to August 2019, retrospectively and whose age is over 4 years old with a 2nd to 3rd degree burns not requiring respiratory assistance.

Results:-

Age:

The mean age of all patients hospitalized in the burn unit during the study period was 33 years (ranging from 4 to 95 years) with a predominance of the 17 to 30 year age range with a percentage of 29.59%. Children account for 21% of all patients

Gender:

In our series of studies a notable predominance of males over females with a sex ratio of M/F at 2.03 (FIGURE 1).

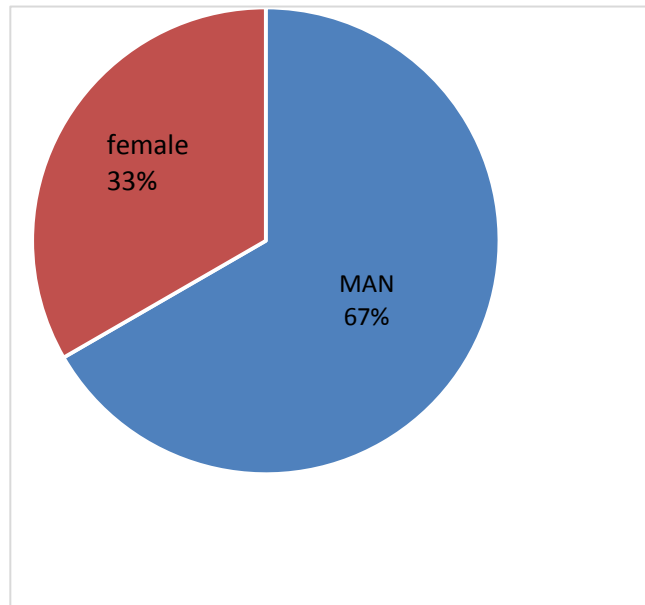


Figure 1:- Gender Distribution of Patients.

Level of education :

50.54% of the patients are out of school while 43.40% had an average level of schooling in a country where the number of illiterates is 40% (in 2004) (FIGURE 2)

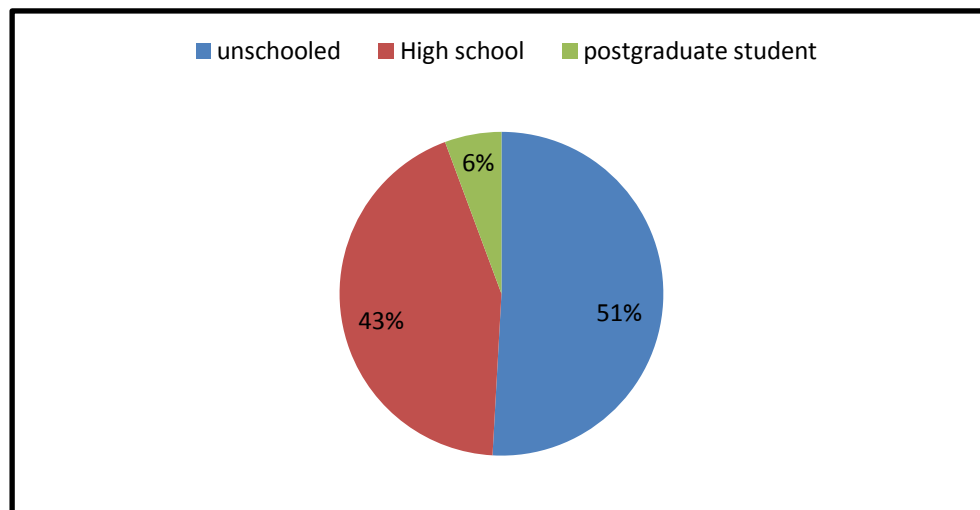


Figure 2:- Patient education level.

Social-economic level :

95% of patients have a medium to a low social and economic level.

Only 15% of the patients have social security coverage, unlike 85% who are beneficiaries of the RAMED social program.

The geographical origin of the patients:

ARRAZI CHU receives among its emergencies an average of 2% of burns, of which only 71% are from the MARRAKECH -SAFI region (FIGURE 3).

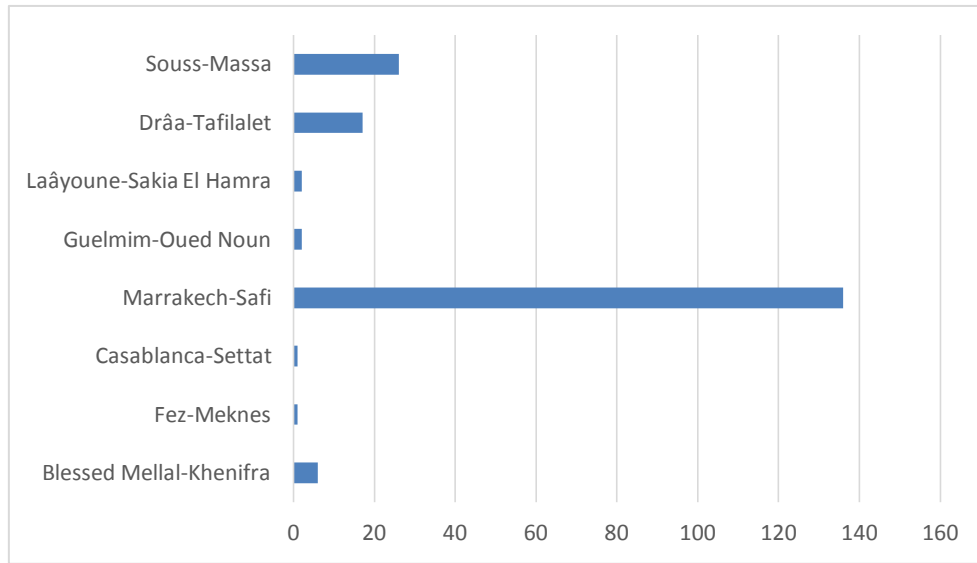


Figure 3:- Geographic origin of patients.

Patient distribution by admission time :

A delay in presentation to the emergency room that is on average 24.8 hours, regardless of the geographical origin of the victims. (FIGURE 4)

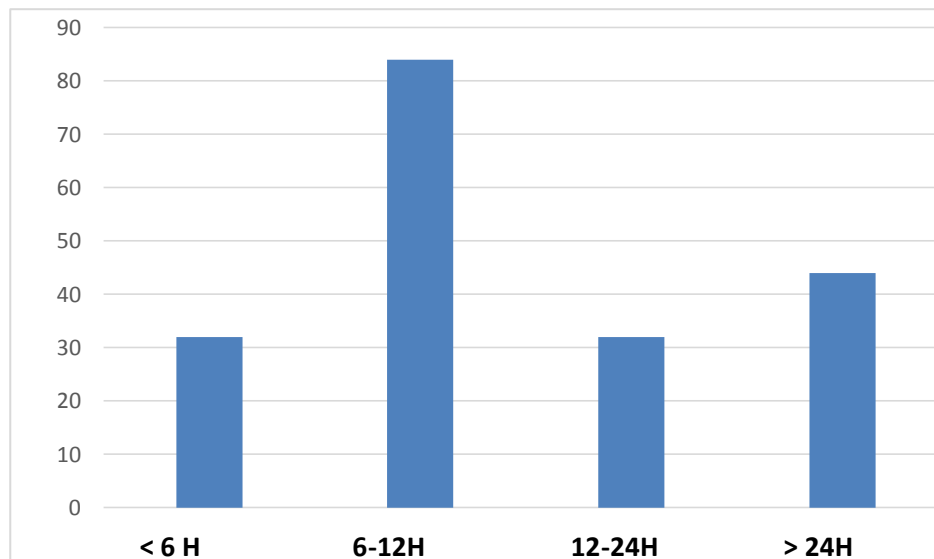


Figure 4:- Patient Distribution by Admission Time.

Mechanism and the agent and circumstance of the burn :

Thermal burns remain the most common burn mechanism in adults with a percentage of 70% Caused in 48% of cases by the butane flame.

While in children thermal burns, which is the most common mechanism of burns, are due in 37.5% to scalding. In 68% of cases, thermal trauma occurs at home regardless of the patient's age.

The burned skin surface and the location of the burn :

The average area of skin burned is 25%, ranging from 5% to 85% (FIGURE 6).

In all of his patients, a burn on the upper limb is present in 77% of cases, followed by damage to the face in 62% of cases (FIGURE 7).

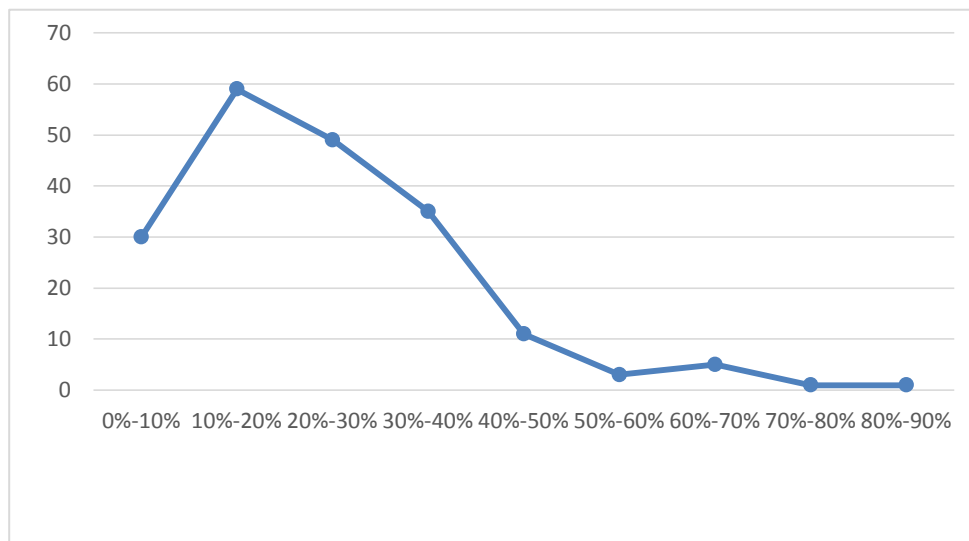


Figure 6:- The burned skin surface.

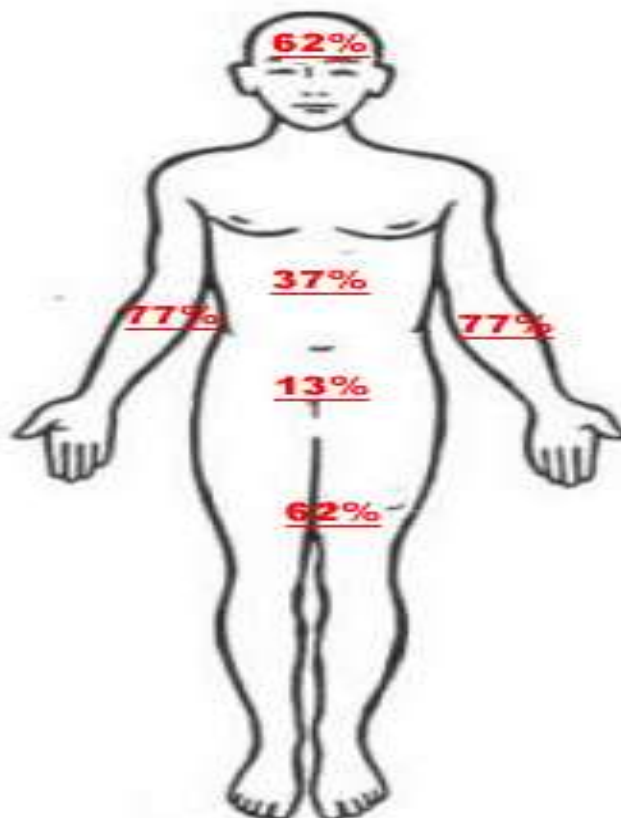


Figure 7:- Location of the burn.

Distribution of patients by month and year of study :

The year 2018 saw a significant number of hospitalizations with a fluctuation in hospitalization figures according to the months with generally two peaks: in winter (February) and summer (June-July).

Duration of hospitalization :

Despite the limited number of places in intensive care for burn victims, The length of stay for patients ranges from 1 to 101 days, with an average of 15 days depending on the patients' infection status and the depth of their lesions.

Evolution of the burnt

The evolution was marked by spontaneous healing 62% of patients, while 31% required one or more grafting times, while 7% died, with a prognostic factor LA50 at 47%.

Discussion:-

The study of the epidemiological profile of patients burned during the last 3 years has shown that 67% of the cases are in front of a young man; thus joining the results of the literature (1) (2) (3) (4).

The peculiarity of our population is the predominance in 50.5% of patients not attending school, with a medium to low socio-economic level: This can be explained by a significantly high unemployment rate at the regional level compared to the national average of 13.1%; as well as by a poverty level of 15.9% compared to 8.9% at the national level (5).

Only 15% of patients have social security coverage, unlike 85% who are beneficiaries of the RAMEL social program, which allows them to be treated completely free of charge within the hospital but does not reimburse them for medicines or the care they need after leaving the establishment.

Thermal flame burns remain the most common burn mechanism in adults in our context and the literature. (1) (2) (4) (6) (8)

On the other hand, the peculiarity of our population is that the causal agent in 48% of cases is the 3 kg gas canister, which can be found in most homes due to its reasonable price and manageability and which unfortunately lacks a safety system.

The child burns in 37.5% by scalding as described in the literature (10).

Placing burns occurring at home at the top of the list with a percentage of 68% regardless of the patient's age.

His thermal trauma usually predominates in winter:

Following the use of boiling water to heat the shower and which accidentally burns the children by the inattention of the parents, or by the use of coal for heating purposes as well.

In summer: can be explained by the increased use of gas bottles during this festive period.

This particular psycho-social component (ignorance and poverty) of our population prolongs the time of presentation to the emergency room to an average of 24 hours, delaying the initial treatment of the burned person and exposing him to the risks of general and local complications. (11)

Burn resuscitation admitted during the study period any patient requiring hospitalization without respiratory assistance, with an average burned skin surface of 25%; and in whom upper limb involvement was found to be predominant, either alone or in combination with a facial burn as part of the hand-to-face syndrome (a flame protection reflex that is the most common burn mechanism in this study series). (2) (6) (7) (8) (9)

His patients are hospitalized for 15 days if not infected, contrary to the Chinese study (9) which prefers to keep the patient until total epimerization, which we cannot afford given the limited number of beds.

Noted that the CHU DE MARRAKECH is the only university structure with a burns resuscitation service, thus taking in addition to patients from the region the total number of patients transferred from the south for a bedding capacity of 6 beds; Consequently a single university hospital center for 8025927 inhabitants (5).

A satisfactory evolution of the majority of patients with 62% spontaneous healing and 31% coverage of the loss of substance by one or more grafting times.

On the other hand, 7% died, with a prognostic factor LA50 at 47%, the mortality rate is higher in China compared to our study with a figure of 14.21%, (9) Or even in France with a figure of 18% according to the study of Nelebrusselsaer (12).

The decreased mortality figure in our study can be explained by the hospitalization of severe burn patients requiring ventilatory support or drug administration in a surgical intensive care unit and not in a burn unit that lacks a full-time intensive care unit resuscitator.

Conclusion:-

The study of burn characteristics, as well as the social and epidemiological profile of an unfavorable patient, has highlighted the importance of primary, secondary, and tertiary prevention.

1. Thus the sensitization on the risks of handling objects involved in burns (gas bottles, coal, gasoline ...) and their safekeeping from children.
2. The importance of first aid measures, including cooling.
3. The need for prompt and immediate presentation to the emergency room in the event of a burn requiring medical intervention

As a result, avoiding the burden and spawning of heavy management of sequelae and complications that can be prevented by the adherence of patients to the team's advice.

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