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RESEARCH ARTICLE

DECUBITUS COMPLICATIONS IN BURN PATIENTS

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Abstract

The complications related to immobilization, include pressure sores and thromboembolic complications.The risk of these complications is increased in burn patients in general, and more precisely in severe burn patients, but it remains underestimated by practitioners.Through our study, we will try to highlight these different complications and their incidence in relation to all hospitalized burned patients.It is a retrospective study spread over a period of 3 years, from January 2020 to December 2022, with the aim of drawing up an epidemiological profile.

Conclusion: Pressure sores are the most feared complications, despite the wide range of preventive measures implemented to avoid them (change of position, anti-sore mattress, heparin therapy, etc.). This could correlate to the background pain found in almost all burn patients, which would constitute an obstacle to position changes in these patients.

Introduction:-

Decubitus complications mainly include pressure ulcers and thromboembolic complications.

They are more likely to occur, especially in patients with severe burns.

Pressure sores are ischemic skin lesions caused by excessive and prolonged compression of the soft tissues between a bony protrusion and a hard surface.

Pressure sores are a gateway for the onset of infectious episodes, which is why prevention is a key aspect of management.

The risk of deep vein thrombosis is death by pulmonary embolism; in this case, prevention is also the best course of action.

Preventive measures are therefore the mainstay of treatment for decubitus complications in burn patients.

Materials And Methods:-

This is a retrospective analytical study from January 2020 to October 2022 (03 years), carried out in the Department of Plastic Surgery and Burns, CHU Mohamed VI, Marrakech.

It was based on the patient's medical records, using a data processing form that included epidemiological data; duration of hospitalisation; clinical and para-clinical data; treatment, and progress.

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Results:-

Epidemiological data

We collected 295 cases of hospitalized burn victims who had an average age of 31 years, with extremes of 2 and 90 years.

67.5% were men and 32.5% were women, with a ratio gender of 2.07 M/F.

The average hospital stay was 18.17 days, with extremes ranging from 1 day to 300 days.

6% of patients developed complications, of which 88.88% were pressure ulcers and 11.11% were DVTs.

This was equivalent to 5.42% (16) of pressure sores in the general population studied and 0.68% (2) of DVTs.

Clinical and epidemiological data on complications

Pressure ulcers

The average age of patients who developed pressure sores was 21.4 years, with extremes of 1.5 and 64 years.

These patients all had a TBSA > 40% and were hospitalized for an average of 118 days, the earliest onset being 32 days.

Their location was mainly trochanteric in 75% of cases, followed by scapular in 37.5% of cases, sacral in 25% of cases, and occipital in 12.5% of cases.

Thromboembolic events

All DVTs were located in the lower limbs. They were discovered clinically by a large, red, painful lower limb.

Paraclinical confirmation was provided by venous Doppler ultrasound of the suspected lower limb.

The patients were respectively 76 and 82 years old.

Management

Our treatment plan for deep vein thrombosis was curative dose heparin therapy, in consultation with cardiologists.

For pressure ulcers, the treatment was mainly medical, based on hygienic and dietary measures and controlled healing.

Direct stitches were performed in the operating room, mainly during skin grafts.

Discussion:-

Pressure ulcers

Prevention remains the best treatment for pressure sores in our training, and their development could be correlated with background pain limiting changes in position in our severe burn patients with a TBSA > 40%.

Compared with the study by Fritsch, Coffee, and Yowler carried out in 2001 in Cleveland, Ohio, 4.1% of patients developed pressure ulcers, compared with 0.83% in the study by Still, Wilson, and J. Rinker in 2003 in the USA and 0.38% in the study by Griswold, Griffin, and Swain in 2017 in Alabama.

A risk assessment scale for pressure sores in burn patients should enable better management and reduce the incidence of pressure ulcers.

Thromboembolic complications

With regard to thromboembolic complications, drug prophylaxis would appear to be an effective means of prevention, as demonstrated in the study by Fecher et al in 2004 in the USA, where 0.25% of patients developed DVT; and in the study by Ahuja, Bansal, Pradhan, and Manju carried out in India in 2016, where 8% of patients without prophylaxis developed DVT compared with 0% of patients on prophylaxis.

Conclusion:-

Pressure ulcers are the main complication feared in burn patients.

Deep vein thrombosis and pulmonary embolism are rarer, probably due to the systematic preventive heparin therapy used in our training.

The treatment of choice remains prevention. However, numerous studies have established a link between malnutrition and pressure ulcers incidence; meaning that the prevention or treatment of sub-optimal nutrition is a key factor in promoting healing and also preventing pressure ulcers.

Bibliography:-

1. Fritsch, D. E., Coffee, T. L., & Yowler, C. J. (2001). Characteristics of Burn Patients Developing Pressure Ulcers. Journal of Burn Care & Rehabilitation, 22(4), 293–299.
2. Ahuja, R. B., Bansal, P., Pradhan, G. S., &Subberwal, M. (2016). An analysis of deep vein thrombosis in burn patients (Part 1): Comparison of D-dimer and Doppler ultrasound as screening tools. Burns, 42(8), 1686–1692.
3. Still, J. M., Wilson, J., Rinker, C., Law, E., & Craft-Coffman, B. (2003). A retrospective study to determine the incidence of pressure ulcers in burn patients using a low air loss pressure relieving mattress. Burns, 29(4), 363–365. doi:10.1016/s0305-4179(02)00313-3
4. Griswold, L. H., Griffin, R. L., Swain, T., & Kerby, J. D. (2017). Validity of the Braden Scale in grading pressure ulcers in trauma and burn patients. Journal of Surgical Research, 219, 151–157.
5. Gordon, M. D., Gottschlich, M. M., Helvig, E. I., Marvin, J. A., & Richard, R. L. (2004). Review of Evidenced-Based Practice for the Prevention of Pressure Sores in Burn Patients. Journal of Burn Care & Rehabilitation, 25(5), 388–410.