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HYPERPYREXIA SECONDARY TO HYPOTHALAMIC LESIONS - LITERATURE REVIEW

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Abstract: Introduction: Hyperpyrexia occurs when our temperature exceeds 41.5ºC. Serious infections can cause this disorder, but the condition most often involved is hemorrhagic stroke (COSTA and TEMUDO, 2004). **Objective**: **To** review hyperpyrexia secondary to hypothalamic lesions. **Result**: If left untreated, it can lead to fatal seizures, with autopsy findings revealing hyperchromasia, retraction and liquefaction of neurons, all similar to fatal cases of seizures due to hyperpyrexia in children (WELLS, 1961). **Conclusion**: Always look for and treat hyperpyrexia in cases of central lesions, with no presumable signs of an infectious focus, with hypothalamic lesions in mind, because, if left untreated, it can lead to fatal seizures (WELLS, 1961).
Keywords: Hyperpyrexia; Hypothalamus; Febrile convulsions.

INTRODUCTION

We can define fever as a hypothalamic disorder of thermoregulation, i.e. the hypothalamus, our thermal regulatory center, is "readjusted" to maintain a high basal temperature (COSTA and TEMUDO, 2004).

In healthy individuals, the hypothalamic thermoregulatory center regulates body temperature through fine-tuning, which maintains a balance between heat loss, mainly through evaporation through the skin and elimination through the lungs, and heat generation through the metabolic activity of the muscle and liver (MOBUI and WEINSTEIN, 1970).

The normal levels of our temperature still leave us with some doubts, since American literature doesn't usually use axillary measurements. According to national semiology textbooks, the oral temperature varies between 36 and 37.8o C, the axillary temperature between 36.6 and 37.2o C and the rectal temperature is about 0.6o C

higher than the oral temperature; the various measurements have lower levels around six in the morning and higher levels between four and six in the afternoon (MOBUI and WEINSTEIN, 1970).

Hyperpyrexia occurs when our temperature exceeds 41.5ºC. Serious infections can cause this disorder, but the condition most often involved is hemorrhagic stroke (COSTA and TEMUDO, 2004).

In rare cases, the hypothalamic thermostat can be readjusted due to the presence of local trauma and tumors (MOBUI and WEINSTEIN, 1970).

MATERIAL AND METHODS

The search was carried out in the PubMed database and was limited to articles from 1961 to 2024 which met the criteria of being literature reviews and case reports. The decrepit date is due to the low volume of articles on the subject.

We then analyzed the keywords in the titles of the articles and selected those whose subject matter most closely matched our objective.

Three articles were selected for full reading.

DISCUSSION

Hyperpyrexia can be caused both by infections and by central lesions in the regulatory center of the hypothalamus, the main etiology being hemorrhagic stroke (MOBUI and WEINSTEIN, 1970).

If left untreated, it can lead to fatal seizures, with autopsy findings revealing hyperchromasia, retraction and liquefaction of neurons, all similar to fatal cases of seizures due to hyperpyrexia in children (WELLS, 1961).

CONCLUSION

Always look for and treat hyperpyrexia in cases of central lesions, with no presumable signs of an infectious focus, with hypothalamic lesions in mind, because, if left untreated, this can lead to fatal seizures (WELLS, 1961).

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