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SUDDEN DEAFNESS TREATED WITH HYPERBARIC OXYGENATION IN CRIS-UTH DURING THE PERIOD 1980-2010. DESCRIPTIVE ANALYSIS OF 190 CASES.

Jordi Desola, Lluis I Garcia, Evangelos Poputsidakis, Pere Martos.
CRIS-UTH, the Hyperbaric Therapy Unit of Barcelona,
Moisès Broggi Hospital, 08970 Sant Joan Despí, BARCELONA. <cris@comb.cat>

BACKGROUND. Sudden deafness (SD) is a non solved problem with a relatively high prevalence. Several drug therapies have been empirically applied but no one has ever given significantly valuable results. Hyperbaric Oxygenation (HBO) has been applied to theses cases for a long time in many countries. In the last years, some controlled studies have undergone with stimulating results. We tried to conduct a randomized controlled study, but we failed to due to the lack of collaboration of the sending ENT specialists, who refused to introduce their patients in a control group. In spite of the fact, we have analyzed the experience of CRIS-UTH in the last 25 years with the aim of increasing the number of cases internationally reported and communicating our point of view on the topic.

METHODS. Descriptive analysis of the patients suffering from SD sent to CRIS-UTH for HBO treatment during the period 1980-2010. Data had been introduced from the beginning into a computer database that contained the main personal and pathological parameters. The analysis was focussed in the personal data (age, gender, origin) the single description of the disorder, latency, delay in application of HBO, number of sessions applied, and outcome. Results were qualified as healing, partial ameliorance, no change, or worsening, in base of the subjective validation of the patients or the reports given by ENT specialists when available. Quantitative data was analyzed by the Student-Fisher test, and qualitative parameters were analyzed by the Chi-square test.

RESULTS. One-hundred and ninety patients where introduced in the study; males 54.7% and 45.3% females; age 41.1±14.7 (13-77). The great majority of them had received several drugs with no positive effect, reason why they were sent to us with some days of delay. The hearing loss affected to the right ear in the 46.0% of the cases, to the left in 45.3%, and was bilateral in the 8.0%. The time elapsed between the hearing lost until starting HBO ranged from 2 to 30 days. From these 190 patients, 149 (78.4%) accomplished criteria for HBO treatment and received a minimum of 15 sessions applied in less than 20 days. 38 patients (25.3%) did not ended the full protocol; 11 patients (7.3 %) had a full recover of their hearing function before the 15th session; 3 persons (2.%) underwent complications and 6 (4%) suffered side effects; 13 patients (8.7%) voluntary asked to be discharged and 5 (3.4%) abandoned HBO without explanation. Eighteen patients (12.2%) had a full recovery with total restitution of their hearing function. Seventy-eight (52.7%) experienced a partial improvement. Thirty five patients (23.6%) did not experience any change. No patient ended in a worse condition than when HBO was started. The highest number of cases of whole recover of hearing corresponded to 19 patients (14.5%) who started treatment in the first ($p<0.01$) or in the 2nd day ($p<0.05$) after the SD. The highest number of favourable but not fully healing results, were obtained in 98 patients (65.3%) who started HBO therapy within the first 5 days ($p<0.01$). There was no significant relation of a favourable outcome and the number of days of delay when HBO therapy was started after the 6th day of the SD.

DISCUSSION. HBO therapy produced significant ameliorance of the hearing function in the 3/4 of our patients, even when applied after more than 20-30 days of delay. A small but very significant number of patients experienced a full recovery with whole restitution of their hearing function. Best results were obtained when HBO was applied within the 5 first days, and maximally within the first day.

CONCLUSIONS. HBO is by so far the best studied and the more consistently reported therapy of any kind that has ever been applied to patients suffering from sudden deafness. We failed to conduct a randomised study in our area, but providing the possibility of a spontaneous recover of this disorder, we understand that this would be really necessary. For that reason, our experience suffers some methodological mistakes, however it encourage us to continue working in this field and to try to endorse a randomized controlled study. According to these results, we should emphasize that any protocol delaying OHB while waiting for an eventual either spontaneous or drug-induced successful outcome, must be changed. We hypothesize that the classical concept of a Sudden Deafness should be replaced by the HBO treatment of neurosensitive deafness, independently on the short latency of the disorder.