Effectiveness of CDP-Choline in the Treatment of Head Injuries

*Arrotegui JI

*Department of Neurosurgery, Consorcio Hospital General Universitario de Valencia, Spain

Abstract

Material and Methods
A single blind randomized study has been conducted in 110 patients with mild or moderate head injury. With the aim of comparing the evolution of those that received only conventional treatment with the evolution of those treated with CDP-Choline.

Results
Our results shows, that CDP-Choline improves the global outcome of patients, and in motor, cognitive and psychic alterations in the patients treated with CDP-choline, as well as a short stay in the ward in relation with control group.

Conclusion
The Conclusion of our study about the use of CDP-choline in Head injuries with GCS between 13-10 in relation with symptoms and outcome is satisfactory.

Keywords
Head Injury; CDP-Choline; G.C.S. Motor Function; Cognitive Alterations

Introduction
In Western countries, HI is a major public health problem. In the US, the incidence of H.I. is 200 per 10000 inhabitants [1-9].

In UK account for 1% of all deaths in a year. In Scotland, it accounts for 3% of total hospital admissions in one year. In Spain, 211 people die per million inhabitants per year in traffic accidents, causing death in more than 50% of cases an HI. Approximately 200 cases per 100,000 inhabitants are treated in the emergency services by an HI. The incidence of mild HI is approximately 150 per 100,000 inhabitants [2-4].

The severity of an HI is intimately related to the initial anatomical lesions, but also to the oedematous appearance that conditions the process. Since 1967; we know the existence of two types of cerebral edema, vasogenic and cytotoxic. In HI, the two types of cerebral edema are the most important being the first, which determines the rupture of the blood-brain barrier. Several experimental models are known in rats in which it was possible to verify how the treatment with CDP-Choline allowed to reduce the vasogenic cerebral edema and re-establishing the blood-brain barrier [5-7].

*Corresponding author: Arrotegui JI, Department of Neurosurgery, Consorcio Hospital General Universitario de Valencia, Spain. E-mail: athbio@yahoo.es

Received September 13, 2017; Accepted October 20, 2017; Published November 15, 2017

Citation: Arrotegui JI (2017) Effectiveness of CDP-Choline in the Treatment of Head Injuries. SF J Surgery 1:2.

Copyright: © 2017 Arrotegui JI. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.
Regarding clinical studies; CDP-Choline has favored regression of cerebral edema and improved level of consciousness.

**Material and Method**

Our study is aimed at the treatment of HI considered as mild and moderate according to the Glasgow coma scale.

Two groups would form our study, with a total of 110 patients that would present the following characteristics:

A) - Control Group (55 patients)

B) - CDP-choline group (55 patients)

**Characteristics of Patients**

The inclusion of a patient in the study was performed following the inclusion protocol of any clinical trial.

G.C.S. [10-13]

Age 16-70

Sex (M_/ F)

Pharmacotherapy: Control group

- Fluid therapy 1’5 l / 24 h.
- Placebo
- Gastric protection (ranitidine 1 amp/12h)
- Tolerant Diet and High Head 30º

CDP- Group

The same as Control group +

- C.D.P. - Hill 1g / 8h (3 days) I.M. 2cc/8H; until the discharge of the patient.

**Parameters to be Evaluated**

- Level of consciousness (GCS) each shift of nursing.
- Symptomatology (Headache, Dizziness, etc.)
- Signs (memory disorders, character, motor impairment, etc.)

In all cases, the patient was informed and received the mandatory Consent informed.

The data collection is performed: To the admission of the patient by casualty; at each shift of nursing and to the routine visit of the medical staff until medical discharge. The revision of the patients will be done on the GOS scale every month; three; six months and a year. The conclusions were analyzed to know the significance or not of the results by means of the Chi-Square test.

There was a greater tendency for improvement in symptoms closely related to the HI in patients treated with CDP-Choline. If we compare the post-emotionally valued symptoms as a whole. These showed a clear improvement when compared to the placebo group, becoming significant in:

- At the level of the Clinic, I emphasize the improvement of the motor deficit.
- At the socio-labor level. It was possible to verify the quickest recovery of their socio-labor environment, but without becoming significant with respect to the placebo group.

1- Headache.
2- Dizziness.
3- Motor impairment.
4- Memory disorders

**Discussion**

A very important distinction has been made between the two forms of cerebral edema: Cacogenic and cytotoxic may exist which some authors call interstitial.

In the HI the two interrelated edemas appear, giving rise to the increase of fluid in the intercellular space, also the can provoke a hyperemia by a diminution of the vasoconstrictor response. Other factors favoring the development of edema are ischemia and hypercapnia leading to vasoplegia CDP-Choline accelerates the biosynthesis of cerebral structural phospholipids which is
Table 1: Number of Patients and Decades of Life

Table 2: Our Study Distribution in Relation to Sex and G.C.S. to your Income

Table 3: Distribution in Relation SEX/GCS
very useful for treatment of cerebral edema.

The pharmacological mechanism of the CDP-
Choline molecule can be summarized as:
1. Increased impaired phospholipidic biosynthesis.
2. Restoration of brain energy load
3. Interference with neurotransmitters and brain function.

Studies of experimental research have made it possible to molecule used in our clinical study has allowed obtaining an effect conducive to consciousness and motor activity.

Our study allowed to verify that this molecule is tolerated perfectly and that according to all the authors consulted and to our own studies that.

CDP- Choline significantly accelerates (p <0.05) symptoms such as character changes. The first thing we have to observe in our study and according to Table 1 is the decade of life most affected corresponding to the second decade of life.

Our study also had interest in seeing the evolution of our patients for it was divided into two sections according to their Glasgow at their entry Table 2 will fit into:

A) GCS 15-13
B) GCS 12-10

It was observed that there was no great difference between the total numbers of patients. Enter one or the other section. In relation to sex, the distribution was.
A) Men 42 Women 15

B) Men 40 Women 13

When assessing the symptoms of patients, we did so with reference to time 3 and 6 months (Table 4)
The symptomatology is concrete in these four sections:
Headache 1
Dizziness 2
Motor Impairment 3
Memory disorders 4

Being significant this last significant factor at 3 months of treatment (p <0.005)

At 6 months of treatment, we can see that there are no changes in the improvement in none of the symptoms studied [14-16]. (Table 5)
The GOS serves to know the evolution of the patients who entered to be part of our study.

Level 1 refers to the evolution known as Good recovery and the 5 like Death (death) the data at year evaluated allowed a significant result to be obtained in group 1 45/25 (P <0.05).

Analysing the results we can conclude that the use of the CDP-Choline molecule.

Favours
1. Improvement of Memory disorders (p <0.05)
2. Improve memory problems
3. The improvement of the symptomatology can be observed at 3 months of beginning
The treatment
4. One year the GOS scale is significant p<0.05 for section 1

The conclusion of our work is that treatment with CDP-Colina can to be treated with HI with Glasgow of 10-15, for the results obtained in the spheres mentioned, their null contraindications and good respond.

References

