Author's response to reviews

Title: Bilateral brachial plexus injury following acute carbon monoxide poisoning

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Author's response to reviews: see over
Corrections to reviewer’s remarks:

Reviewer: Antonio Garcia

1/ Conclusion of the first electrophysiological study were added in the text only, because results were not so evident, that’s why an other ENMG was repeated few days later.

Names of muscles studied were also included. Muscles used in electromyography are: deltoid, biceps brachii, supinator longus muscle, triceps brachii muscle, radialis muscles, and muscles of the hands (the first dorsal interosseous muscle, abductor pollicis brevis and adductor pollicis muscle)

The study of the brachial plexus consisted in the evaluation of the motor conduction of median and ulnar nerves, tiered stimulation were not done. Sensitive study included analysis of median (only in the finger 3-wrist), radial and ulnar nerves conductions. We concluded to a plexus brachial injury because both motor and sensitive conduction were altered with abnormal sensitive amplitudes found in all nerves (which cannot be seen in radicular damage) and also regarding results of needle electromyography.

2/ All muscles of the upper limbs were clinically affected by the same way.

3/ Discussion has been shortened.

4/ Yes, we agree, a demyelinating process does not explain our ENMG results that’s why we concluded to an axonal damage in our case. This finding is different from literature. Indeed, most reported cases were caused by demyelinating lesions, and that was our conclusion.

5/ Others minor revisions were also added.
Reviewer: Fadi Xu

1/ This study is the second one after the one published by Garcia that mentioned ENMG values. All others reports have only cited type of neuropathy without focusing on ENMG technique and results.

2/ At our examination, patient did not present edema of the brachial plexus, but he might had it as we saw him 3 days after the intoxication and perhaps edema disappeared.

3/ I have done a large research and only 8 reports have been published last decades in addition to sporadic cases reported in the beginning of the 20 century. Moreover, all these articles have just cited type and localization of neuropathy after CO intoxication and only one study have really mentioned detailed ENM analysis and values recorded (12).

4/ All patients (total of 2759) victims of CO poisoning and admitted in hospital for this reason between 1976 and 1982 were examined. Neuropathy was diagnosed in 23 of them which correspond to a percentage of 3,64%.

5/ Discussion has been shortened.

6/ The mechanism of neuropathy was discussed in the last paragraph before conclusion.

Yes we can speculate that neurological improvement was due in part to regression of edema.