

## Intracranial hypotension and PRES: a reply

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Dear Sir,

We thank Dr Hong-Liang Zhang and colleagues for their interest and comments on our article [1] about the probable causal association between intracranial hypotension (IH) and posterior reversible encephalopathy syndrome (PRES).

We surely agree that further investigations are required in order to better clarify the relationship between these two entities.

We are aware that the association between IH and PRES has not been reported in literature, that we should be cautious about proposing this diagnosis and that this physiopathological correlation is only a presumption.

Our hypothesis is supported by the prompt resolution of the neurological symptoms and radiological alterations of both IH and PRES only after the treatment of IH with a blood patch without any other specific therapy used to treat PRES and any other clear cause of PRES.

Some of the possible etiologies of PRES were ruled out with clinical examination and laboratory data. They were negative for arterial hypertension, proteinuria, liver function abnormalities, peripheral edema on examination; moreover, none of the drugs used in the peripartum period could be responsible for PRES.

About the diagnosis of IH, although lumbar puncture is the gold standard, we considered it dangerous because of the accentuated venous hypertension and consequent brainstem descent.

Moreover, imaging revealed not only the presence of pachimeningeal thickening, enhancing after contrast administration, but also, as mentioned, downward displacement of brain and engorgement of venous structures, such as dural sinuses, Galen vein and epidural venous plexi associated with bilateral subdural cerebrospinal fluid collections, signs suggestive of IH.

It is correct to note that the Fig. 1a in our article is a T2-weighted image acquired with a fluid attenuated inversion recovery technique.

Even considering the limitations of our single experience and of the proofs provided, we look forward with a great interest to other reports that could eventually clarifying the relationship between IH and PRES.

### Reference

1. Pugliese S, Finocchi V, Borgia ML, Nania C, Della Vella B, Pierallini A, Bozzao A (2010) Intracranial hypotension and PRES: case report. *J Headache Pain*. doi:10.1007/s10194-010-0226-z

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