Reviewer's report

Title: Cisplatin induced posterior reversible encephalopathy syndrome and successful retreatment in a patient with non-seminomatous germ cell tumor: a case report

Version: 2 Date: 19 July 2012

Reviewer: Christian Roth

Which of the following best describes what type of case report this is?: Unreported or unusual side effects or adverse interactions involving medications

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is the case report ethical?: No

Is there any missing information that you think must be added before publication?: No

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Is the anonymity of the patient protected?: Yes

Comments to authors:

Trigger factors for PRES are diverse. Immunosuppressive drugs, especially the calcineurin inhibitors such as cyclosporine and tacrolimus are often associated with PRES. Most PRES episodes due to immunosuppressive therapy occur within 2 weeks of initiation or dose increase but drug serum levels are within the therapeutic range. Other cancer chemotherapies have also been described in association with PRES (eg, cytarabine, cisplatin, gemcitabine, bevacizumab).

The authors present a case report of a 23-year-old patient who developed posterior reversible encephalopathy syndrome (PRES) after chemotherapy with Cisplatin and Etoposide. After complete remission of the clinical symptoms
chemotherapy with Cisplatin was restarted. The patient was discharged on day 8. The follow-up covers a period of 90 days without any signs of another episode of PRES.

If one postulates that a particular vulnerability of the brain and certain trigger factors are prerequisites for the recurrence of PRES, then one would expect recurring attacks of PRES to occur much more frequently. Trigger factors such as acute elevation of blood pressure occur frequently in patients with hypertension, second or third childhood or recurrent chemotherapy and should, therefore, lead to recurrent PRES attacks in those patients who are particular susceptible. There are some publications about recurrence of PRES (A retrospective study might indicate an incidence of recurrent PRES episodes in 3.8% of cases (Sweany JM et al 2007 J Comput Assist Tomogr). Another study found an incidence of recurrence of PRES episodes in 8% of the patients prospectively years after complete recovery from their first episodes (Roth c et al. 2010 JNNP). There is only one publication about the long-term follow-up (Roth c et al. 2010 JNNP). Especially under the aspect of the possibility of another PRES episode after treating the patient with Cisplatin again the authors should discuss these studies.

There is little knowledge concerning the correct therapy of PRES. Early treatment of the trigger factor is demanded. So far, no study has been able to show a benefit of treatment, for example withdrawal of chemotherapy or early antihypertensive medication.

There are some comments:
- Introduction: The introduction is too long. This is not a review about PRES. The introduction should lead quickly to the topic and the question of the study.
- Figure 1: Please improve the figure legend. Only “PRES after Cisplatin” is not sufficient. What can we see? Which MRI sequences are shown? Times of the MRI investigations? Etc.
- MRI description: The radiological findings should be described in more detail. What about diffusion-weighted or T1-weighted MRI sequences of the initial MRI compared to the follow-up investigations?

**Quality of written English:** Acceptable

**Declaration of competing interests:** None