Reviewer's report

**Title:** Clinical apparent thrombosis as a complication of central venous access in pediatric patients with malignancies: A 5-year single-center experience

**Version:** 2  **Date:** 8 June 2014

**Reviewer:** Juan Mayordomo-Colunga

**Reviewer's report:**

The present study addresses a relevant point about the occurrence of thrombosis in children with malignancies. The main limitation of this work is being a retrospective database analysis, which difficults data interpretation.

The are some point that require being clarified:

Major concerns:

1) How were the thrombosis diagnosed? Were only included those which were symptomatic??

2) Please clarify if there was a protocol to decide whether to use prophylatic anticoagulation or not. “The different tumor entities significantly differed with regard to the use of prophylactic anticoagulation with heparin derivate at the time of thrombosis.”

3) Line 238. Does the higher incidence of thrombosis in vena subclavian reaches statistical significance? You do not elaborate on this result in the discussion section. Actually, you state: “As reported in previous studies, we confirmed that there was a lower incidence of CVC-related thrombosis with subclavian and jugular Access”.

4) You state in the conclusion that “Pediatric surgeons and oncologists should pay attention to optimal CVC placement in order to avoid CVC related complications”. According to your results it should be more appropriate stating that it may help avoid CVC thrombosis.

5) Limitations should be stated at the end of the discussion section. Some of them should be:

   - The study is retrospective and data were obtained by chart reviews.
   - Only symptomatic thrombosis were diagnosed.
   - Lack of protocols specifying when to use or not antithrombotic prophylaxis.
   - The simple size, and the number of thrombosis of each type of malignancy, which makes statistical analysis highly problematic.

Minor concerns:

- This should be part of Methods section:

Prior to CVC implantation, patients were screened for APC resistance, protein S and protein C deficiency, and dysfibrinogenemia. In case of positive findings (one
APC resistance, one protein S deficiency, and one protein C deficiency) prophylactic anticoagulation with LMWH was performed.

-Please specify how many patients had more than one thrombosis episodes and how many episodes each of them.

-Please introduce SAA, MDS, and HLH.
-Please introduce low-molecular-weight heparin the first time it appears in the text (not posteriorly).
-There is no need to include this abbreviation: deep vein thrombosis (DVT).

-Results:
- Lines 224-225. This should be part of discussion, you are giving an interpretation of the results. Just provide the p value, and then elaborate on this result in “discussion”.

-Discussion:
- line 260. CVC has already been introduced.
- Line 278. Please check: “controlateral veins”.

-Please check the references, there are several mistakes.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.