Reviewer's report

Title: ADAMTS2 gene dysregulation in T/myeloid mixed phenotype acute leukemia

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Reviewer: Estella Matutes

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The manuscript by Tota et al reports a case of mixed phenotype acute leukaemia (MPAL) with a complex karyotype including a t(5;14)(q11;q11) that involves the rearrangement of ADAMTS2 with the T-cell receptor delta (TCRD) receptor leading to overexpression of ADAMST2. The authors emphasize the value of this molecular marker for minimal residual disease monitoring.

The rarity of this leukaemia and the finding of a novel translocation with deregulation of ADAMST2 not yet described in MPAL make this case suitable for report.

The case is well characterised and the diagnosis well established.

Minor revision

Since there are suggestions that ADAMST2 suppresses tumour growth by the inhibition of angiogenesis (Kumar et al, Cancers, 4, 2012), it is unlikely that deregulation of this gene with overexpression of the protein may have played a role in the pathogenesis of this leukaemia. Authors may comment on this.

The authors refer to the value of this abnormality for minimal residual disease monitoring by FISH. However, FISH is much less sensitive than multicolour flow cytometry to detect residual leukaemic cells. Therefore, this should be played down and a sentence regarding sensitivity of FISH versus flow cytometry may be pertinent.

Level of interest: An article whose findings are important to those with closely related research interests

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