中文題目：以尿崩症表現之及急性骨髓性白血病及血小板增多症

英文題目：Central Diabetes Insipidus Preceding Thrombocytosis Caused by Acute Myelogenous Leukemia

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Background: Central diabetes insipidus (CDI) is commonly caused by organic lesions affecting the hypothalamic-pituitary regions. However, CDI preceding the thromobocytosis uncovering acute myeloid leukemia (AML) was rarely reported and could go unrecognized, leading to delayed diagnosis with inappropriate treatment.

Methods: A 61-year-old man was referred for the unknown cause of CDI with sudden polyuria, polydipsia, and thirst for 3 months. His family and personal history were unremarkable. There was no visual field defect. CDI was confirmed by water deprivation and desmopressin test. Magnetic resonance imaging of the brain revealed loss of the posterior pituitary bright spot on T1 weighted sequences without other abnormality. At that time, a thorough examination including complete blood count, immune, tumor, infection, and inflammation survey was non-revealing. On laboratory examination, a markedly high platelet count (1,038,000 μL) was found despite normal platelet counts 3 months ago. The leucocyte count was 19,400 μL with 62.3% blast. Bone marrow examination showed hypercelluler marrow plus megakaryocytes and infiltration with 25% blast cells. The immunohistochemical and flow cytometry results were consistent with AML-M2. He achieved complete remission with resolution of CDI after induction and consolidation chemotherapy. To date, there were only five cases presenting with CDI, thrombocytosis and AML, all showing the association with chromosome 3 or 7 abnormalities. Cytogenetic analysis in this patient was normal despite positive CEBPA and negative FLT3 and NPM1 gene mutations.

Conclusions: CDI may be the preceding and presenting feature of thrombocytosis and/or AML. A regular check-up of complete blood count test is necessary for early diagnosis of hematologic abnormalities. The mechanism connecting abnormality of the hematopoietic cells, impact on the neurohormonal cells in the hypothalamus, chromosomes abnormality and platelets warrants further investigation.