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Olanzapine and pancytopenia with severe folate deficiencyF. Maurier¹, N.Petitpain², J-F. Guichard¹, L. Javot², P. Tréchet²

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40 total protein and cobalamin were slightly decreased and renal and hepatic functions were
41 normal. Shortly after admission, only olanzapine was discontinued. The patient received
42 probabilist cobalamin supplementation with no immediate hematologic improvement. On 14
43 August, he began to receive intravenous folate supplementation (50 mg/day). Ten days later, a
44 huge reticulocyte crisis was observed, whereas the white blood cell and platelet counts were
45 significantly increased (Table 1). Meanwhile, the results of bone marrow aspiration confirmed
46 the diagnosis of megaloblastic anaemia. The patient was supplemented with folic acid over 2
47 weeks. Because the medical staff decided against restarting olanzapine, the loxapine dosage
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26 cases of drug-induced folate deficiency imply methylenetetrahydrofolate reductase (MTHFR)
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This first case of pancytopenia with severe folate deficiency associated with olanzapine underlines the necessity of hematologic controls during the administration of this drug.

Table 1: Summary of laboratory data

	Units/ [normal range]	11/8	13/8	14/8	18/8	20/8	25/8	27/8	2/9	18/9
Hemoglobin	g/l [130-180]	82	91	85	75	85	71	83	97	129
MGV	fL [78-94]	124.6	111.1	104.2	104	104.8	118.2	116.3	112.9	102
White blood cell count	$10^9/l$ [4-11]	1.1	1.7	1.58		3.89	12.12	17.77	5040	6100
Platelets	$10^9/l$ [150-400]	39	28	27	16	52	174	323	507	121
Reticulocytes	$10^9/l^*$			15.2			368	158	235.6	
Cobalamin	ng/l [>300]	141								
Folate (serum)	nmol/l [4.5-21]	0							>45.4	
Folate (erythrocytes)	nmol/l [400-1300]								>3100	
Protein	g/l [65-80]	65				61				
Creatinine	mg/l [5-12]	10.3				8				10

*: reticulocytes $>80.10^9/l$ are consistent with regenerative anemia

The authors declare that they have no conflict of interest.

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