Sporadic reports of Olanzapine and other “atypical” antipsychotic agents-associated diabetes and diabetic ketoacidosis have recently emerged in literature. Development of diabetic ketoacidosis with partial seizures of the right hand is described in a 80-year old female patient with resistant depression and resistant headache ten months after the onset of treatment with Olanzapine in combination with paroxetine which (paroxetine) did not help until the add of Olanzapine. There was no report of diabetes mellitus from the patient’s personal and family medical history. She reported two mild ischaemic strokes and hypertension. Only a mild left hemiparesis was noticed during the neurological examination. She was not obese and also she did not gain weight during the treatment with Olanzapine. She was admitted at a hospital of our city because of diabetic ketoacidosis. After the interruption of treatment with Olanzapine, the clinical picture of the patient was improved and the blood sugar was normal at the sixth day after admission. The pathogenetic mechanism of diabetic ketoacidosis during treatment with Olanzapine is not clear. A possible mechanism is the change in the function of receptors which are related with resistance in insulin. This case study supports that Olanzapine like the other neuroleptics can cause
diabetes and diabetic ketoacidosis and we suggest monitoring of blood sugar and substitution of olanzapine with other neuroleptics if blood sugar is elevated before the appearance of diabetic ketoacidosis.

**Key words:** olanzapine, diabetic ketoacidosis.