

Supplementary material

Virtual case examples

1. Low dose LUR in an adolescent with mild symptoms of schizophrenia, impaired cognitive functioning and increased appetite.

The patient was a 14-year-old girl, firstly presenting with low mood, then auditory hallucinations, persecutory delusions, and social withdrawal due to concerns about her safety. She was diagnosed with schizophrenia. Olanzapine was started and increased up to 20 mg, with mild improvement, sedation and increased appetite. After two months, she was switched to aripiprazole, up to 20 mg, with improvement in psychotic symptoms but persisting sedation, weight gain, and significant impairment in cognitive and academic functioning. LUR was then started at 18.5 mg, then titrated up to a dose of 37 mg, whilst reducing the aripiprazole dose. After changing medication, psychotic symptoms remained well controlled, while a significant improvement in cognitive functioning was observed. Moreover, a decrease of body weight of about 5 kg was observed during the follow-up.

2. Case example of switch from oral atypical antipsychotic to lurasidone

This patient was a 38-years old man with a history of schizophrenia, alcohol and cannabis. During the course of his illness, he presented symptoms such as affective flattening, loss of motivation, social withdrawal, inability to feel pleasure, paranoid delusions (including thoughts that he was being stalked, hunted, framed, and tricked), referential delusions (believed that gesture from a TV host, were a special message just for him), auditory hallucinations, confused thoughts and disorganized speech. He had been treated with several antipsychotics and was presently on amisulpride, with an acceptable efficacy on positive symptoms but only partial efficacy on negative and cognitive symptoms, along with side effects such as hyperprolactinemia, weight gain, and increased cholesterol. The patient was therefore switched to LUR, which was gradually titrated up to 111 mg/day, while amisulpride was gradually tapered down and discontinued. The result was a clear improvement in negative and cognitive symptoms, continued efficacy of positive symptoms, as well as a return to the normal range of prolactin and cholesterol, along with a progressive reduction in body weight. The switch to LUR was also associated to an improvement in cognitive skills and social functioning.

3. Switch to lurasidone due to arrhythmia

The patient was a 48-year-old female who received a diagnosis of paranoid schizophrenia. The patient appeared in a stable phase of the disorder, she denied current auditory or visual hallucinations and paranoid ideation. She was dressed appropriately and demonstrated good hygiene. She reported getting along well and has had no conflicts with family members. She was treated with quetiapine 800 mg/day. During routine examination, the referring clinician found the following:

Blood pressure: 150/94 mm Hg

Pulse: 74 beats per minute (bpm)

Laboratory data were normal, while the most recent electrocardiogram (ECG) reported QTc 479 ms (compared to the previous ECG reporting QTc 438 ms).

Furthermore, the patient reported some episodes of tachycardia and frequent headaches, which should be associated to the systolic hypertension.

Therefore, the pharmacological treatment was switched to lurasidone 75 mg/day, with a concomitant reduction of quetiapine at 600 mg/day for seven days. Then, lurasidone was increased at 111 mg/day and quetiapine at 300 mg/day, with a strict monitoring of side effects (repeated ECG evaluations) and of clinical status. Considering the presence of good clinical response, quetiapine was suspended and lurasidone was increased at 148 mg/day. After 15 days, at the ECG evaluation, a reduction in QTc length was found, with a value of 458 ms.