Observed incidence of linezolid-associated serotonin syndrome during concomitant serotonergic therapy

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Observed incidence of linezolid-associated serotonin syndrome during concomitant serotonergic therapy

Disciplines
Pharmacy and Pharmaceutical Sciences

Comments
Poster presented at Faculty Scholarship Celebration, St. John Fisher College, October 25, 2012.
Prospectively determine the incidence of SS in hospitalized patients receiving linezolid and concomitant serotonergic therapy

Objective

- IRB-approved prospective analysis
- Inclusion criteria: ≥ 18 years of age, receipt of linezolid between March 1, 2012 and June 15, 2012
- Exclusion criteria: none
- Primary outcome: development of SS, by definitive diagnosis via the primary patient care team or by satisfying the HSTC criteria used to diagnosis SS
- Concomitant serotonergic therapy was defined as any agent known to affect serotonin activity
- A CPDE-based report of active linezolid orders was generated daily to capture patients for inclusion
- Electronic health records (EHR) of included patients were assessed for documentation of SS and concomitant serotonergic activity
- If documentation in the EHR suggested possible SS, the primary patient care team was contacted to confirm

Methods

- The Hunter Serotonin Toxicity Criteria (HSTC) are the most widely accepted entities that may have a direct or indirect interest in the subject matter of this presentation. Questions or comments can be directed to mwoytowish@sjfc.edu.
- Limitations
  - Single center
  - Short study period
  - Patients were not physically assessed daily by investigators
  - Linezolid-associated SS is rare despite use with serotonergic therapy at West Virginia University Hospitals
  - Further observation is needed in order to describe the true incidence of this life-threatening reaction and related risk factors

Results

- No patients receiving linezolid in combination with other serotonergic therapy developed the primary outcome
- The following symptoms were observed
  - Six patients were agitated
    - Five during combination therapy
    - The other was agitated 9 days after completion of linezolid
  - One patient was diaphoretic during combination therapy
  - Although the primary team did not make a diagnosis of SS, the ID consult team listed SS on the differential for a patient hospitalized with traumatic brain injury and sympathetic storming who had persistent fever, tachycardia, and flushing

Discussion

- The incidence of linezolid-associated SS in 37 patients receiving linezolid in combination with other known serotonergic agents at a large academic medical center was zero
- To our knowledge this is the first prospective study investigating the incidence of linezolid-associated SS
- The following symptoms were observed
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References