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Exploration of chromium reduction using *Luteimonas aestuarii* from waste water

Baljeet Singh Saharan and Ankita
Kurukshetra University, India

Beneficial rhizospheric bacteria that are known to stimulate plant growth are called Plant-Growth Promoting Rhizobacteria (PGPR). The mechanisms of plant growth promotion by rhizospheric bacteria include sequestration of nutrients, production of phytohormones (IAA), production of siderophores and antagonism against plant pathogens. A close and direct association of PGPR with the rhizoplane and the inner root surface is essential for these mechanisms to be functional. Effective root colonization is also an important factor contributing to PGPR activity. In addition to the promotion of plant growth, PGPR are also employed for controlling plant pathogens, enhancing efficiency of fertilizers, and degrading xenobiotic compounds (rhizo-remediation). PGPR have been reported to be key elements for plant establishment under nutrient-imbalance conditions. Their use in agriculture can favor a reduction in agro-chemical use and support eco-friendly crop production. In our laboratory, we are working on the isolation of various bacterial strains from their autochthonous sites, characterization and PGPR properties exhibited by them. The bacterial isolates have been identified by molecular characterization/methods. Details of these isolates and properties exhibited by them will be discussed in detail in this presentation.

Over prescription of antibiotics for tonsillitis in secondary care

Defne Saatci, Kamil Kanji, Gopal Rao, Priya Khanna, Paul Bassett, Bhanu Williams and Murtaza Khan
Northwick Park Hospital, UK

Aim: To determine whether antibiotics are prescribed appropriately for acute tonsillitis in secondary care, according to the Centre criteria and the recently suggested fever pain clinical score.

Design & Setting: Cross sectional observational study was carried out at Northwick Park Hospital, London North West Healthcare (LNWH) NHS Trust.

Participants: All patients were diagnosed with acute tonsillitis at the emergency department, Northwick Park Hospital over a three month period ending 4th March 2015.

Results: Antibiotics were prescribed inappropriately to 76% (95% CI: 69%-82%) of patients diagnosed with acute tonsillitis presenting with <3 Centro criteria.

Conclusions & Recommendations: The study indicates that the scale of inappropriate antibiotic prescribing for acute tonsillitis in secondary care may be very high. The Centre and fever pain criteria are not being applied and broad spectrum antibiotics are being used to treat acute tonsillitis. The implementation of clinical scoring systems such as centre and fever pain in secondary care needs to be improved. Further research is needed to assess the outcome of using the above clinical scoring systems in secondary care, which is an important point of access for patients.