World Academy of Science, Engineering and Technology
International Journal of Pharmacological and Pharmaceutical Sciences
Vol:12, No:09, 2018

Self-Medication with Antibiotics, Evidence of Factors Influencing the Practice in Low and Middle-Income Countries: A Systematic Scoping Review

Authors : Neusa Fernanda Torres, Buyisile Chibi, Lyn E. Middleton, Vernon P. Solomon, Tivani P. Mashamba-Thompson

Abstract : Background: Self-medication with antibiotics (SMA) is a global concern, with a higher incidence in low and middle-income countries (LMICs). Despite intense world-wide efforts to control and promote the rational use of antibiotics, continuing practices of SMA systematically exposes individuals and communities to the risk of antibiotic resistance and other undesirable antibiotic side effects. Moreover, it increases the health systems costs of acquiring more powerful antibiotics to treat the resistant infection. This review thus maps evidence on the factors influencing self-medication with antibiotics in these settings. Methods: The search strategy for this review involved electronic databases including PubMed, Web of Knowledge, Science Direct, EBSCOhost (PubMed, CINAHL with Full Text, Health Source - Consumer Edition, MEDLINE), Google Scholar, BioMed Central and World Health Organization library, using the search terms:' Self-Medication', 'antibiotics', 'factors' and 'reasons'. Our search included studies published from 2007 to 2017. Thematic analysis was performed to identify the patterns of evidence on SMA in LMICs. The mixed method quality appraisal tool (MMAT) version 2011 was employed to assess the quality of the included primary studies. Results: Fifteen studies met the inclusion criteria. Studies included population from the rural (46,4%), urban (33,6%) and combined (20%) settings, of the following LMICs: Guatemala (2 studies), India (2), Indonesia (2), Kenya (1), Laos (1), Nepal (1), Nigeria (2), Pakistan (2), Sri Lanka (1), and Yemen (1). The total sample size of all 15 included studies was 7676 participants. The findings of the review show a high prevalence of SMA ranging from 8,1% to 93%. Accessibility, affordability, conditions of health facilities (long waiting, quality of services and workers) as long well as poor health-seeking behavior and lack of information are factors that influence SMA in LMICs. Antibiotics such as amoxicillin, metronidazole, amoxicillin/clavulanic, ampicillin, ciprofloxacin, azithromycin, penicillin, and tetracycline, were the most frequently used for SMA. The major sources of antibiotics included pharmacies, drug stores, leftover drugs, family/friends and old prescription. Sore throat, common cold, cough with mucus, headache, toothache, flu-like symptoms, pain relief, fever, running nose, toothache, upper respiratory tract infections, urinary symptoms, urinary tract infection were the common disease symptoms managed with SMA. Conclusion: Although the information on factors influencing SMA in LMICs is unevenly distributed, the available information revealed the existence of research evidence on antibiotic self-medication in some countries of LMICs. SMA practices are influenced by social-cultural determinants of health and frequently associated with poor dispensing and prescribing practices, deficient health-seeking behavior and consequently with inappropriate drug use. Therefore, there is still a need to conduct further studies (qualitative, quantitative and randomized control trial) on factors and reasons for SMA to correctly address the public health problem in LMICs.

Keywords : antibiotics, factors, reasons, self-medication,low and middle-income countries (LMICs)
Conference Title : ICDIA 2018 : International Conference on Drug Interactions and Antibiotics
Conference Location : Lisbon, Portugal
Conference Dates : September 24-25, 2018