



Antimicrobial Resistance: The Key to Integrative Medicine in Primary Care?



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Primary Care and Antimicrobial Resistance (AMR)

In the United Kingdom nearly eighty percent of antibiotics are prescribed in primary care, making it one of the most important contributors to the development of antimicrobial resistance (AMR) [1]. Reducing the use of antibiotics in primary care and controlling the development of AMR are pressing national and international priorities.

Respiratory Tract Infection (RTI)

General practice consultation rates in England and Wales show that a quarter of the population will visit their GP because of a respiratory tract infection (RTI) each year [2]. The diagnosis and management of RTIs varies considerably between clinicians, GP practices and countries, suggesting clinical uncertainty regarding optimum treatment. Recommended management for most patients with RTI involves self-care and treatment of symptoms [3]. Nevertheless antibiotics are commonly prescribed for RTIs in adults and children in primary care, and are the reason for 60% of all antibiotic prescribing in general practice in the UK [4]. Previous studies show that antibiotics have small or negligible symptomatic benefits for patients with acute otitis media (AOM), pharyngitis, bronchitis, laryngitis and common cold, and that widespread use of antibiotics for infections, including the common cold, sore throats, and the flu is prevalent in paediatric practice [5-8].

Urinary Tract Infection (UTI)

Urinary tract infections (UTIs) are the most common confirmed bacterial infection managed in primary care, with about half of all women experiencing one or more UTI in their life time [9]. Between 20% and 30% of women will experience a recurrence, and around 25% will develop ongoing recurrent episodes, with implications for individual well-being and healthcare costs [10]. Most women with UTIs are currently treated with antibiotics, making it one of the most important contributors to the development of AMR in primary care (with longer duration, multiple courses associated with higher AMR rates [11,12]. Finally, antibiotic use has short and long term effects, including side effects (e.g. diarrhoea, candidiasis) and microbiome disruption (which may take as long as 4-years to return to pre-treatment levels) [13].

Role of Complementary and Alternative Medicine (CAM)

CAM might be able to contribute to a reduction in antibiotic use. On the one hand, CAM therapies, which are proven effective and safe, could be used to strengthen the self-healing capacities of the organism (preventive and curative health promotion). Here CAM is an alternative for antibiotics but is not directly based on the antimicrobial properties of the product itself. On the other hand, several CAM products may act as a non-antibiotic treatment strategy (fighting disease strategies) to control infectious diseases based on their own (bactericide or bacteriostatic) antimicrobial properties.

CAM, Antimicrobial Stewardship and Antimicrobial Resistance

The increase of antibiotic resistance worldwide, rising numbers of deaths and costs associated with this, and the fact that hardly any new antimicrobial drugs have been developed during the last decade have increased interest in Integrative Medicine (IM) therapeutic interventions, if proven safe and effective. However, worldwide research in IM/CAM is seriously hampered by a lack of research infrastructure and funding, lack of appropriate research models and strategies, and the scepticism of the conventional scientific community.

Now, it is time to bridge the academic knowledge of IM/CAM and conventional experts for the integration of possible CAM contributions into conventional medicine, especially in primary care, with the ultimate goal to reduce inappropriate antibiotic consumption (antimicrobial stewardship) and AMR.

Conflict of Interest

None

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