Antifungal stewardship

C. Lass-Flörl

Med. University of Innsbruck, Innsbruck, Austria

Antimicrobial stewardship has overwhelmingly focussed on antibiotics while antifungal agents have been largely neglected despite data of antifungal drug use showing clear deficiencies in prescribing behaviour. Antifungal stewardship refers to coordinated interventions designed to improve and measure the appropriate use of antifungals by promoting the selection of the optimal antifungal drug regimen, dose, duration of therapy, and route of administration. Antifungal stewardship seeks to achieve optimal clinical outcomes related to antimicrobial use, minimize toxicity and other adverse events, reduce the costs of health care for infections, and limit the selection for antifungal resistant strains. The high mortality and morbidity associated with IFDs, including adverse impact on curative chemotherapy, combined with suboptimal diagnostic tools, has driven the overuse of antifungal drugs. Deescalation of empiric therapy is one of the most challenging aspects of antifungal stewardship to implement. Nonculture-based tests may enhance antifungal stewardship, but refinement of both target populations and clinical pathways incorporating their use is required. Performance indicators including structural, process and outcome measures are integral for demonstrating the value of antimicrobial stewardship programmes. Pharmacy costs inclusive of antifungal agents are a major determinant of IFD-attributable hospital cost. High drug costs and the toxicities of antifungal agents are the principal rationale for antifungal stewardship while antifungal resistance is an emerging but less prevalent issue. The primary goal is therefore to optimize clinical outcome while minimizing unintended consequences of antifungal drug use followed by reduction of health care costs displaying a secondary goal. New antifungals have slight differences in the spectrum of action, dose required, route of administration, and interactions with other drugs, which are difficult to manage by a non-fungal specialist. Practice guidelines adapted to the local context are the cornerstone of antifungal stewardship. Local epidemiology informs the choice of antifungal agents for the prevention and management of IFDs, underscoring the need for surveillance. Adherence to minimum standards of prescribing ensures that clinical outcomes are optimized and drug toxicities minimized, thus meeting healthcare quality and safety goals.

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reckoner. Antimicrobial stewardship is the need of the hour and every hospital irrespective of its size, scale or resource status must adopt AMS. I believe that the model of AMS discussed here offers a viable solution to implement AMS in a resource limited setting. The clinical and cost outcome measures in the coming years will further establish the full utility of this model in the hospital setup.

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HPV vaccination introduction into the African region

H. Rees
University of the Witwatersrand, Johannesburg, South Africa

The World Health Assembly’s adoption of the Decade of Vaccines and the Global Vaccine Action Plan (GVAP) provides us with a global mandate to accelerate the introduction of new vaccines into developing countries, with an emphasis on previously neglected diseases. The remarkable success in the development and introduction of human papilloma virus vaccines demonstrates that this can be done, despite the stigma associated with sexually transmitted pathogens. In Australia and the United States there is already evidence of the impact of the HPV vaccine in reducing the spread of oncogenic HPV types, as well as significant clinical impact on genital warts. There is now a major push to introduce HPV vaccines into the African region supported by the Global Alliance on Vaccines and Immunization (GAVI) which has negotiated massive reductions in vaccine prices. Pilot studies have been successfully undertaken in Uganda and Tanzania, and Rwanda has successfully introduced the vaccine with South Africa committed to do this in 2014. This talk will address the many questions that African countries need to consider when introducing HPV vaccines: age group, girls and boys, programmatic decisions including where to immunize and dosing schedules, and will consider what the potential long term impact of these vaccines could be on the epidemiology of HPV within the region.

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Containment of antimicrobial drug-resistant gonorrhea

D. Lewis
NICD, Johannesburg, South Africa

Gonorrhoea remains a common sexually transmitted infection and enhances both the transmission and acquisition of HIV in high prevalence settings. The capacity to treat, and thereby control, gonorrhoea diminishes as antimicrobial resistance (AMR) worsens. Enhanced efforts are urgently required to reduce the global burden of gonorrhoea and simultaneous sustained AMR containment measures are also needed to limit antimicrobial misuse. Both approaches are critical for reducing the rate of emergence and spread of AMR determinants to Neisseria gonorrhoeae. Expanded surveillance of gonococcal AMR, urgently needed for provision of valid data worldwide, has been initiated by the World Health Organization and various national public health laboratories. These surveillance programmes may identify the emergence and transmission of novel AMR-associated N. gonorrhoeae strains. They also provide the evidence base to update STI management and treatment guidelines. In the absence of AMR surveillance, many countries continue to use old antimicrobial agents without any idea as to current drug efficacy. Critically, within the context of gonorrhoea control, decreased susceptible N. gonorrhoeae isolates displaying elevated minimum inhibitory concentrations to the extended spectrum cephalosporins are now being identified in many countries. However, the imprecise nature of laboratory criteria for detecting these gonococci means that the distribution and prevalence of these strains, as well as multi drug-resistant (MDR) and extensively drug-resistant (XDR) N. gonorrhoeae, remain uncertain. The availability and affordability of high quality efficacious antimicrobial agents in all settings and countries is essential. Achieving this goal will be difficult but failure to do so will only accelerate the spread of existing MDR-NG and the further emergence of XDR-NG. Finally, given the challenge of achieving sustained sexual behaviour change, research initiatives to develop an effective vaccine for gonorrhoea are crucial in an era of reduced research funding and must be prioritized.

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