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Syndromic management of sexually transmitted infections: Is it time for the World Health Organization to revise its algorithms?

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According to the World Health Organization (WHO), more than 300 million individuals around the world are infected each year with some type of sexually transmitted infection (STI).[1] Although these estimates are more than a decade old, they continue to provide an order of magnitude on the burden of this type of disease. Further analysis of these estimates suggests that most of this burden is felt by low and middle income countries especially in sub-Saharan Africa, south and south-east Asia, Latin America and the Caribbean.

Due to the high cost of laboratory tests recommended for the diagnosis of STIs, at times it becomes difficult in low-income countries that these tests be carried out for all persons presenting as suspected cases or potential carriers. To address this issue, WHO developed guidelines for the syndromic management of STIs especially when the main symptoms are pain on urination, urethral discharge and ulcers or sores.[2] Since the application of WHO guidelines commenced in early 2000s, the outcome of their application has differed among countries, some studies supporting the role of guidelines in the effective treatment of the patients while others reporting findings which do not lend support for these guidelines.[3-9] Relatively more studies suggested poor performance of syndromic management in correctly identifying patients with disease[5-7, 9] Some studies showed high sensitivity with an increased number of false positives resulting in over-diagnosis;[3,4] another study with effective syndromic treatment was still unable to identify asymptomatic cases or carriers.[8]

Both types of findings, over-diagnosis or missing a case, have significant implications at patient level as well as family or societal level depending upon the norms and culture of the country or region. Over-diagnosis results in over-treatment and unnecessary use of antibiotics, which have been found to be an important cause of drug resistance resulting in no cure or partial cure with conversion to carrier state. Apart from drug resistance, inappropriate use or over treatment of antibiotics also poses an economic burden on already compromised health systems in these countries.

Wrong labeling of individuals with a diagnosis of STI may create inter-spousal mistrust at family level for the source of infection especially when the partner considers himself or herself as free of disease. This may also result in stigmatization at societal level especially in sub-urban and rural areas where information sharing by interpersonal communication is commonly practised.

The fear of diagnosis or stigmatization especially after recurrent infections may urge some individuals to self-medicate with antibiotics; this is not an unusual phenomenon in low-income countries where little or no distinction is made between the prescriptions versus over-the-counter medications, and may be another cause of drug resistance in such settings.

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Missing a potential case of STIs or inability to identify a carrier has both short term and long term effects on the reproductive health of an individual. In unidentified carrier states, when the presentation is not supportive as a clinical problem, the end result is long-term complications; if short term complications are present, they eventually lead to chronic conditions, such as ectopic pregnancy, spontaneous abortion, low birth-weight babies, blindness of newborn, and pelvic inflammatory disease.[1]

It has been more than a decade since the guidelines on syndromic management were developed and disseminated by WHO. Moreover, the existing evidence no longer supports these guidelines. For practitioners, there is a clear need for improved guidelines for syndrome management of STI by WHO. Furthermore, there is also a need for simple and effective tests (with high sensitivity and specificity) which are also affordable by the system or the individual: such testing should be as inclusive as possible so as avoid misclassifying persons as infected or otherwise. An appropriately designed strategy would have the effect of removing non-infective individuals from the treatment group and reduce the budgetary burden on the health system.

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