responses has stimulated new vaccine-concepts, especially in the field of adjuvant development.

Over the past two decades GSK Biologicals has developed an Adjuvant Systems (AS) platform. AS families are formulated with selected antigen(s) and are designed to enhance the immune response to the targeted pathogen for the target population. Extensive preclinical and clinical testing has led to the development of AS-based candidate vaccines for malaria (RTS,S), HSV, H5N1 pre-pandemic influenza, and licensed vaccines for HBV and cervical cancer prevention (HPV) formulated with novel adjuvant technology. The GSK proprietary novel Adjuvant System AS04 (aluminium hydroxide combined with the immunostimulatory molecule, 3-O-desacyl-4′-monophosphoryl lipid A) has been combined with HPV 16 and -18 virus-like-particles to tailor the immune response optimally against a virus that typically hides from the immune system.

The immune response induced by the AS04-adjuvanted cervical cancer vaccine has been assessed in pre-clinical and clinical studies. In clinical studies, GSK’s both HPV-16 and -18 L1-VLPs when adjuvanted with AS04, induced a stronger clinical response than when adjuvanted with aluminium hydroxide alone. In addition, AS04 allowed for higher and sustained concentrations of neutralising antibodies, as well as higher frequencies of memory B-cells.

New vaccine technologies have opened the door to vaccination against diseases that were not preventable before. GSK has formulated its cervical cancer vaccine with AS04 to address the need for long term protection against oncogenic HPV, a virus that typically hides from the immune system and for which the disease remain silent for years, if not detected by classical screening methods such as PAP smears.

Reference


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Implementation of Cervical Cancer Vaccination. Reaching Girls and Women: Challenges and Opportunities

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Cervical cancer is the most common cancer in women in many parts of Asia. Indeed, 54% of the world’s cervical cancer burden is in Asia. Although cervical cancer screening with Pap smears has been effective, most Asian countries don’t have the resources to implement a comprehensive screening programme. Implementation of vaccination provides a realistic approach to improve cervical cancer control in these countries.

In Asia, successful implementation of cervical cancer vaccination can present more of a challenge than it does on other continents. Experience following the introduction of vaccination against common childhood infections highlights several practical issues, particularly concerning vaccination policy, financing and system capacity for vaccine delivery and inoculation. While the efficacy and tolerability of anti-HPV-16/18 vaccines are well established, policymakers in many Asian countries aren’t ready to formulate a national policy.

Implementation of anti-HPV-16/18 vaccination in Asia is likely to start with opportunistic vaccination of individual women. Physicians will introduce the vaccine to their patients seeking cervical screening or attending consultations for other reasons. Caretakers will also discuss the benefits of vaccination for their adolescent daughters with these patients. In some Asian regions, opportunistic cytology screening has reached a high level of penetration and cervical cancer incidence is declining. Opportunistic anti-HPV-16/18 vaccination may gain momentum in a similar manner to cytology screening. Once sufficient demand from individuals for anti-HPV-16/18 vaccines is reached, policymakers are likely to adopt national policies for mass vaccination of targeted populations.

An important first step in implementing anti-HPV-16/18 vaccines in Asia should be to focus on heightening awareness of the need for effective strategies for cervical cancer prevention and the role of opportunistic vaccination among the general public and primary healthcare workers. In a two-pronged approach, a private-public partnership between industry and global charity organisations on competitive financing will further catalyse the wider acceptance of cervical cancer vaccination.

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Macrolides - Yesterday, Today and Tomorrow (invited)

36.001

RTI: Treatment Challenges

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Severe community-acquired pneumonia (CAP) treated in intensive care units (ICU) represents a great therapeutic challenge. There is growing evidence on the importance of atypical pathogens and combined infections as causes of severe CAP. Data from our single-center study show that Legionella and atypical pathogens are associated with over 20% of CAP. That is why combined ceftriaxone and parenteral azithromycin therapy became a standard treatment in our ICU. This is congruent with a majority of contemporary treatment guidelines which recognized the importance of a combined treatment of severe CAP. Evidences on the role of atypical pathogens, particularly C. pneumoniae, in the etiology of nosocomial pneumonia (NP), including ventilator-associated pneumonia (VAP), are also emerging. These pathogens are not so well recognized as possible pathogens and considered in present treatment guidelines of NP. Further surveillance is needed which might change our initial therapeutic approach in patients with NP.

In pediatric patients, Mycoplasma pneumoniae and Chlamydia pneumoniae seem to play a more significant