

ние эффективности комбинаций. Наибольший эффект был отмечен после добавления макролидов (бактерицидный эффект комбинации меропенем-азитромицин-колистин для 77,8 % штаммов, комбинации меропенем-кларитромицин-колистин для 66,7 % штаммов).

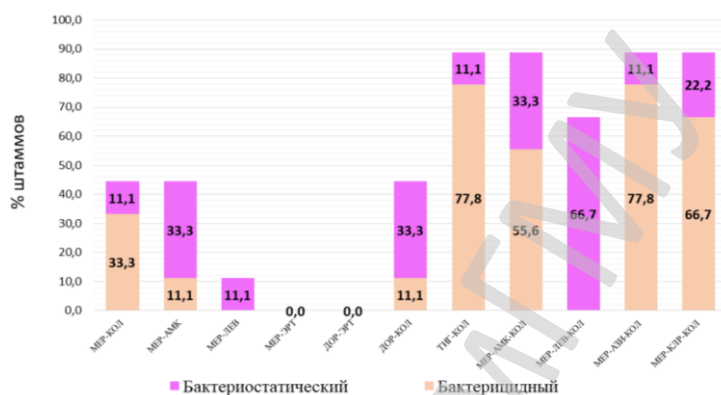


Рисунок 3 — Эффективность комбинаций из двух и трех антибиотиков в отношении штаммов *K. pneumoniae*: МЕР — меропенем; ДОР — дорипенем; ЭРТ — эртапенем; АМК — амикацин; ЛЕВ — левофлоксацин; ТИГ — тигециклин; КОЛ — колистин; АЗИ — азитромицин; КАР — кларитромицин

Заключение

Большинство выделенных от пациентов с инфекцией COVID-19 штаммов *K. pneumoniae* и *A. baumannii* сохраняли чувствительность к колистину. Выявлена высокая активность двойных комбинаций с добавлением колистина в отношении штаммов *A. baumannii*. Тройные комбинации с включением меропенема, колистина и макролидов демонстрировали бактерицидную активность в отношении 66,7–77,8 % штаммов *K. pneumoniae*.

ЛИТЕРАТУРА

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УДК 616.9-036.22(548.7)

EPIDEMIOLOGICAL VIEW ON INFECTIOUS DISEASES SUCCESSFULLY ELIMINATED BY SRI LANKA

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Relevance

Sri Lanka's achievement on control of communicable diseases in South-East Asia Region is highly exemplary to the fellow countries in the region. There was a time in the past that the citizens of Sri Lanka exceeded the harmful intensity in suffering from quite a number of infectious diseases. Currently the country has made remarkable progress in diseases elimination and has already eliminated several communicable diseases such as polio (2014), diphtheria, Japanese encephalitis (2016), malaria (2016), lymphatic filariasis (2016), measles (2019), rubella and con-

genital rubella (2020), mother-to-child transmission of HIV (2020), neonatal tetanus and whooping cough from the country. In fact, the WHO acknowledged that Sri Lanka managed to eliminate measles and rubella ahead of the 2023 target set for the country. The prevention methods carried out throughout the country, awareness programs, timely and regular immunisation coverage and surveillance have created this positive impact. The Ministry of Health under the guidance of epidemiology unit, family health bureau together with the regional WHO authorities and also the dedicated parents of the children have contributed to this success rate while the early clinical diagnosis and careful clinical management by experienced physicians and nurses increased survival of patients reducing the morbidity and mortality rates [1, 2].

Purpose of the study

To give a territorial-temporal characterization of the incidence of infectious diseases in Sri Lanka and evaluate the effectiveness of the organization of preventive measures for polio, diphtheria, Japanese encephalitis, malaria, lymphatic filariasis, measles, rubella and congenital rubella, mother-to-child transmission of HIV, neonatal tetanus and whooping cough.

Material and research methods

The literature and statistical data on recently eliminated infectious diseases from Sri Lanka were analyzed.

Results and discussion

Just a little over 50 years ago in 1968, Sri Lanka's Infant Mortality Rate was 55.6 per 1000 live births and the Under 5-Year Mortality Rate was 74.5 per 1000 live births. These values were typical of a poverty-stricken low-income country. A vast majority of these deaths were due to several infectious diseases mentioned above [3].

In the year 1968, The Ministry of Health and the Government of Sri Lanka instituted the Family Health Bureau (FHB) as the focal point for Maternal and Child Health (MCH) in Sri Lanka. From the outset the FHB promoted immunisation as a cardinal tool to be used against deaths from infectious diseases. The countrywide vaccinations to children succeeded with the launching of the Expanded Programme of Immunisation (EPI) by the Epidemiology Unit of the Ministry of Health in 1978. The EPI initiative was the 'Golden Venture' of the Ministry of Health which gradually became more successful with an extremely high coverage of immunisation of all children over many a decade [4].

Triple vaccination against diphtheria, pertussis and tetanus was introduced in 1961. Then oral polio vaccine was started in 1962, followed by BCG vaccine to the newborns in 1963 and tetanus toxoid to all pregnant mothers in 1969. The Expanded Programme on Immunisation (EPI) established in 1978 has continued to make excellent progress over the past two decades, most notably in terms of achieving high immunisation coverage and disease control. With the commencement of the EPI Programme in 1978 focus was to control childhood T.B., tetanus, whooping cough, diphtheria, polio and neonatal tetanus. In 1988, the focus shifted to disease elimination. In 1991, a fifth dose of OPV was introduced at school entry to facilitate the polio eradication process. Rubella, Hepatitis B and Hib containing Pentavalent vaccines introduced to the programme gradually over the years [4].

In 1989, an Anti Malarial Campaign program was established as a decentralized campaign implemented by 9 provincial health authorities under the technical guidance of the National Anti Malaria Campaign Directorate. In 2009, Sri Lanka embarked on a phased malaria pre-elimination programme after the end of the separatist war in the Northern and Eastern provinces of the country and, in 2011, launched the malaria elimination programme. The last case of indigenous malaria was reported in October 2012, well ahead of the targeted date of end 2014 [5]. The success of the elimination programme is largely due to the sustained actions such as identification of changes in vector breeding, extensive indoor residual spraying (IRS) operation, routine entomological as well as parasitological investigations, early

diagnostics — rapid diagnostic tests, PCR, treatment with anti-malarial drugs depending on the Plasmodium species followed by Primaquine to prevent a relapse [6].

Elimination of lymphatic filariasis in Sri Lanka, where the Anti-Filariasis Campaign (AFC) was initiated in 1947. Sri Lanka set up a national programme for elimination of lymphatic filariasis in 1999 based on the protocols recommended by the WHO. In 2002, the Ministry of Health, with the assistance of the WHO prepared an intense and systematic social mobilization programme called Communication for Behavioral Impact (COMBI) to support Mass Drug Administration efforts in Sri Lanka. Since 2002 annual Mass Drug Administration (diethylcarbamazine [DEC] and albendazole) was given to all endemic districts and five consecutive MDA rounds were completed in 2006 [6].

Conclusion

In Sri Lanka, the introduction of routine immunisation has generally reduced the incidence of several vaccine preventable diseases — polio, rubella, measles, tuberculosis, hepatitis B, diphtheria, pertussis, Haemophilus influenzae type b, tetanus, mumps, and the human papilloma virus. The World Health Organization's (WHO) Expanded Programme on Immunization (EPI), with assistance from the United Nation's Children's Fund (UNICEF) and other donors, has made great strides in extending medical aid to Sri Lanka. Immunising a child not only protects that child but also other children by increasing the general level of immunity and minimizing the spread of infection. Awareness programs, vector control, parasitological and entomological surveillance play a vital role in eliminating the diseases and to maintain a setting of disease free status of a country.

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