Malaria In Afghanistan

Malaria is one of the most significant contagious disease in the world. World Health Organization gives an estimation that 300-500 million cases of malaria exist yearly. Additionally, 2-3 million people dies in response to it. Malaria is a disease that caused by a protozoan parasite called Plasmodium and transmitted to human through an infected female mosquito called anopheles. In general, malaria is a disease that can be cured if diagnosed early and treated promptly. While malaria is not common in modest climates, malaria is still prevalent in tropical and subtropical areas. Signs and symptoms of the disease is mainly: Fever, Chills, Headache, Nausea, vomiting, Muscle pain and fatigue. The incubation periods usually take 7 days. however, the signs and symptoms might take a few weeks or longer after being bitten by an infected anopheles, however some kinds of malaria parasites can stay dormant in our body for up to a year. Until now, there is no effective vaccine for malaria, however people can take antimalarial drug called Chemoprophylaxis to prevent malaria from happening. Chloroquine is the treatment that can treat such a disease; however, it might not work with all types of malaria due to resistance of some species of plasmodium. To detect the infection, there are many methods to confirm the disease. The major one is the thick and thin blood smears where a drop of blood stretched onto a slide made of glass. Then treated by special stains and inspect under microscope for the morphology of infected red blood cells. There are other methods such as: PCR, Serology and Antigen testing. [3,4,10]

Introduction

As a result of the soviet infestation of Afghanistan in 1979, over 3 million refugees had escaped to Pakistan over the early 1980. the refugees were settled in 340 camps. The camps were located on a derivative land that was either water-logged or neighboring rice cultivation. Because of the locations of settlements and route of malaria transmission which is through infected anopheles, Malaria had become a critical problem in that non-immunized population. 25% of the cases of malaria were caused P.falciparum and the rest were due to P.vivex. This shift, displacement and poor living conditions were the reason for malaria to become an infectious disease in Afghanistan and killed thousands.[8]

Background

After the soviet- Afghan war that took place between 1979 and 1989, more than 2.8 million Afghans had migrated to Pakistan while around 1.5 million had escaped to Iran. The war had triggered a population displacement internally and externally. The war started after left-wing military officers Nur Mohammed Taraki had overthrown the government of president Mohammed Daud Khan at that time which led the power later to be shared between two parties (People’s (Khalq) Party and Banner (Parcham) Party). The new government then had started aggressive purges of all interior objections. Rebellions had arisen against the government by an Islamic party called Mujahideen. These events beside the internal conflict had induced the soviet to overrun the country. After 1992, the mujahideen groups, especially the Islamic Party (?ezb-e Esl?m?), led by Gulbuddin Hekmatyar, enclosed Kabul city and bombard the city with a destructive weapon. Those attacks were persisted intermittently for the next several years as the rural areas outside Kabul had turned to mess. As a response, Taliban (puritanical Islamic

group) that led by a former mujahideen leader Mohammad Omar, was arisen in the fall of 1994 and took-over control of the country. the fighting was at a dead-end till 2001, when the Taliban refused the U.S. government request to extradite the Saudi Arabian expatriate Osama bin Laden, the commander of al-Qaeda, which had close relationships with the Taliban and was behind terrorist attacks against the United States, including September 11. Thereafter, U.S. had launched a series of military operations in Afghanistan that caused Taliban to be impower by early December. According to Adam Zeidan (2018), “Afghanistan was, by the end of the 20th century, one of the most heavily mined countries in the world, and vast quantities of unexploded ordnance littered the countryside” Due to this conflict and the following internal conflict, many infectious diseases had arisen and Malaria was the main. [1,7]

Epidemiology

Malaria is seasonal and hypoendemic in majority of Afghanistan and neighbouring Pakistan, which includes the urban zones of Kabul and Jalalabad. In the rice-cultivation regions of eastern Afghanistan, transmission is at the highest levels and is mesoendemic. The malaria rises from April through November, with less cases reported in the winter. Plasmodium falciparum predominates from September through November, while P. vivax is responsible for the most of the cases during the rest of the malaria season. [7]

The total malaria cases in Afghanistan in 2002 was estimated to be 3 million incidences per year, the majority reside in Kundoz Province. Most of the cases were caused by a parasite called Plasmodium falciparum and P. vivax. Falciparum malaria which is transmitted by freshwater breeder (Anopheles superpictus) had been controlled while P.vivax remained highly endemic because it was associated with rice cultivation areas. Vivax was transmitted by endophilic and exophilic rice-field breeders. In 1970, the number of the cases with malaria recorded was between 40,000 and 80,000 per year. According to Michael K. Faulde, in emerging infectious disease, “During 1996–2001, from 202,767 to 395,581 malaria cases were reported annually, sharply increasing in 2002 and 2003 with 590,176 and 591,441 cases confirmed, respectively, and 3 million cases estimated annually”. [6]

Many factors have played a role to an increased peril of malaria: governmental shut down wheel control, shelter insufficiency , increased numbers displaced people which have led to overcrowding, increased numbers of water pools from building of shelters or sanitation efforts due to environmental modification, shortage of affordable antimalarial drugs, the increase in parasite resistance of Plasmodium species to antimalarial medications and of the transmitter to pesticides, and an inflow of refugees to formerly stable areas of malaria endemicity. [7]

UNHCR has been adopted a rule for maintain malaria in these conflict areas. Insecticide spraying with lambdacyhalothrin and malathion has been used aggressively in a variety of trails and public health measures in the Afghan refugee camps in Pakistan and in nonrefugee zones in Pakistan. very effective control of P. vivax and P. falciparum could be achieved with spraying but demands organized, well-timed, and seasonal operation by local governments or sponsoring agencies. The effectiveness of spraying has been varied, but 1 series of study showed up to 37%–44% protective efficacy for P. vivax and 49%–56% for P. falciparum in the camps of refugee in the North West Frontier Province. Some have suggested that malathion might be less useful now (vs. lambdacyhalothrin) than in the past because of widespread resistance in A. stephensi and increasing resistance in A. subpictus and other species. Furthermore, spraying

within tents and compounds has been found to be effective and reduced the risk of P.falciparum malaria in nomadic Afghan refugee children from 50% to 16% by applying 0.5% emulsion of permethrin to the fly-sheeted ridgepole tents and was given to refugees by the United Nations High Commissioner for Refugees (UNHCR). Using an electric fan, pyrethroid-vaporizing mats, pyrethrum coils, permethrin-impregnated curtains and untreated curtains had a role of reducing the catches of blood-fed mosquitoes.[11]

The ongoing conflict in Afghanistan still exacting a heavy toll on the humanitarian postion in the country. As a result of the general rise in insecurity, humanitarian access to populations in need remains limited. By the end of 2017, out of a total population of approximately 34.5 million people, 14 million resided in the highest conflict-affected areas. The limited exist of humanitarian actors in conflict affected zones inhibits access to life-saving assistance for Afghanistan's most unprotected people. Long times of conflict and frequent natural disasters have left Afghanistan's people in a state of extreme vulnerability, with many people's experience mechanisms having been exhausted. The ongoing conflict also triggers these vulnerabilities through the ruin of livelihoods and the loss of livestock, increasing rates of communicable diseases, growing in displacement, persistence of human rights abuses, and higher crimes levels. Accordingly, in addition to the 3.3 million Afghans who were specified in late 2017 as having acute humanitarian needs in 2018, more 8.7 million Afghans were identified with chronic needs demanding long-term systemic actions. Recently, it was estimated that 474,000 people were newly displaced in 2017, a decreased from an estimated 653,000 in 2016, but an increase from the displacement levels reported in 2015 (around 335,000 persons). Between 1 January and 20 May 2018, an estimation of 114,995 people has reportedly been newly displaced.[11

In the ongoing conflict populations like Afghanistan are dependent on the long term non-governmental organisations for the most of the basic health services. Over 70% of health-care services in Afghanistan are provided by such organisations. There is a need for a regenerate international commitment to basic health protection and assistance of war-affected populations and recognition of the importance of infectious diseases as major killers in such affected populations. Moreover, a need to better classify all people affected by conflict with a long-term perspective, and not just refugees and internally displaced people (IDP). The progress being made in peaceful building and reconstruction in Afghanistan offers hope for the future of the country and people. It is crucial that the international community take advantage of the opportunity to assist governments and partners in this country to rebuild its health-care systems. By targeting assistance on passing the key interventions for infectious diseases, preventable death and disease could be significantly reduced, while set in place the health systems that necessary in the long term for these and other disease interventions. [1]

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