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# Hydroxychloroquine (Hcq): A Game Changer Drug To Pharmacy Of The World In The Era Of Covid-19

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## Abstract

The Indian pharmaceutical industry is astounding the world market by producing low-cost generic medicines and can fulfill the demand of the global market. Hydroxychloroquine(HCQ), pharmacy of the world is playing an important role in the fight against the coronavirus pandemic. The unapproved doubtful drug HCQ is using as the preventive measure for COVID-19 treatment. India has decided to export HCQ after the title of the game-changer drug. It will help India to build a position across the globe. Currently ,India is exporting the drugs to more than 50 countries which includes the US, UK, European countries, SAARC, Africa, and Latin America. India's political side, relationship goals, and friendly gesture are strengthened but right now showing a degree of generosity to the world.

**Keywords:** Hydroxychloroquine(HCQ), COVID-19, India, Gesture of Humanitarian, Political Goodwill

## Introduction

India is the second largest industry of pharmaceutical which exports various drugs more than 200 countries in the world, with fulfilling the 50 percent of global demand of various vaccines. For counting in generic drugs, 20 percent of global exports, which include 40 percent of generic medicine demand from the US and 25 percent of different medicine from the UK. This makes India the largest provider of generic medicines globally (Karim and Adnan, 2016; IBEF, 2020).

As per the economic survey 2018-19, the Indian government increased the expenditure from 1.2 percent to 1.5 percent as compared to the year 2014-15 for health. Indian pharmaceutical sector is expected to grow at a Compound annual growth rate (CAGR) of 22.4 percent. Also, the medical equipment market is expected to grow to US\$ 55 billion by 2020 (Indian Pharmaceutical Industry, 2020; Chokkakula et al., 2018).

This can only be achievable with the expertise in the reverse-engineering course of action for manufacturing drugs at low costs. It becomes the advantage and impressed the Indian pharmaceutical industry in the world market.

Indian pharmaceutical companies are playing an important role in the fight against the coronavirus pandemic that has affected over 2.5 million people across the world. India is one of the leading manufacturers of anti-malarial drug name hydroxychloroquine (HCQ). Hydroxychloroquine and chloroquine are Food and Drug Administration (FDA)-approved drugs to treat and prevent malaria and also in autoimmune conditions such as chronic discoid lupus erythematosus, systemic lupus erythematosus in adults, and rheumatoid arthritis. The Examination Under Anaesthetic (EUA) showed up inadequate proof that the medicines provide benefits (Vouri et al., 2020; Chen et al., 2020).

Some doctors in the U.S. and China use this drug to treat the coronavirus, but due to lack of definitive substantiation as effective treatment from the FDA, it is not recommended. Even with profound doubts, some doctors have been advised the drug as a preventive measure for COVID-19 treatment. The initiative of use hydroxychloroquine for COVID-19 came from two small studies in China and France and also from some of the successful treatments in India with the combination of Oseltamivir, Lopinavir 200, and Ritonavir. None of the treatment is approved by any of the government nor by their health organization. Not even WHO supports the use of either chloroquine or hydroxychloroquine for COVID-19 treatment or prevention. After the outbreak of coronavirus and declared as a pandemic by WHO hundreds of clinic trials, studies, and research get underway. All the effective antibiotics, antifu, antiviral, plasma from recovered patients, and other herbals medicines are tested on patients. Even though HCQ is an unapproved drug but slows down the effect at the time of the SARS-CoV-2 (Chen et al., 2020; Amariles et al., 2020).

After the extensive pandemonium on the antimalarial drug, hydroxychloroquine as a preventive measure by the Indian Council for Medical Research (ICMR) said in the statement on March 23<sup>rd</sup>, 2020. Also, publicize by US President Donald Trump that HCQ is the possible cure for Covid-19 called it as “game-changer” in the fight against COVID-19 (The Print, 2020).

HCQ, a 75-year-old drug used for the treatment of malaria and auto-immune diseases like rheumatoid arthritis and lupus is not doing wonders for COVID-19 but still a new global deliberate asset. Fascinatingly, The US-FDA inexplicably lifted the ban which was placed to Indian generic pharma firm Ipca Laboratories on 15 June 2017 after its facility failed US-FDA’s routine inspection. The ban was put back after 48 hours that is from 22<sup>nd</sup> march to 25<sup>th</sup> march. The subsequent rescind of ban turn up into large US orders and also to other 30 major countries (The Economic Times, 2020).

India has decided to export HCQ and other drugs used for treating COVID-19 patients under categories – (i) Political goodwill (ii) Charitable aid (iii) money-making supply.

According to the COVID coordinator and Ministry of External Affairs of India reports that exporting the drugs to more than 50 countries in which selling to the US, UK, and few other

European countries and planning to donate to SAARC, Africa, and Latin America (India Writes Network, 2020).

**Firstly**, India has mustered international goodwill after the exports of (HCQ) supplied to countries. Whereas, on the other hand, China is not only giving the defective testing kits and ventilators, and also their protection equipment not even pass the quality checks. In this time of pandemic where many nations do not want to purchase any type of equipment from China, India's international goodwill is not only in receiving HCQ as a gift but also thanked by the heads of many countries including the US, West Asian, African and BRICS countries (India Writes Network, 2020; The Tribune, 2020).

**Secondly**, a charitable wave from India in the hour of COVID-19 pandemic emergency. This isn't the first time that India has come forward to help countries in need and not for earning money. At the time when AIDS hit over 22.5 million in Africa, India supplied anti-HIV drugs at a minimal cost. This time also India is supplying these essential drugs to some nations who have been badly affected by the pandemic and show international unity to fight against coronavirus. India's political side, relationship goals, and friendly gesture are strengthened but right now showing a degree of generosity. This kind of gesture of humanity is still smaller as compared to coronavirus warriors of different countries. After the lockdown and seeing the global crisis how one country will help another country is not going to relate to this. But right now India is not taking advantage of a particular country in a crisis (The Tribune, 2020; Amir and Bin, 2020).

**Third**, the money-making advantage of HCQ is unlocking the new horizons to India's upcoming economy. The pharmaceutical sector currently contributes about 1.72 percent to India's gross domestic product. This is approximate \$43billions industry of drugs, vaccines, and other medical equipment and exports the same at \$20billions (India Writes Network, 2020; The Tribune, 2020). This pandemic hit hard to different businesses across the globe so too the Indian pharmaceutical sector. This industry exports drugs to almost every nation, and after HCQ export India marked a route in all the highly-regulated developed markets of pharmaceuticals. China the country which is considered as the origin of coronavirus is now, manufacturing hub of masks, Personal protective equipment (PPE), and other medical equipment (Bauchner et al., 2020). Indian drug formulators export 80-85 percent of the production to almost all parts of the world. The majors pharmaceutical drug formulator almost stopped large scale production of HCQ due to its low cost and lack of demand in the export market. But now, companies are producing four times that is 40 metric tonnes and five to six times that is 70 metric tonnes (MT) in the upcoming months. India's hold its requirement exceed to almost 10 crores Ipca, which earned 18 percent of its revenues in 2018-19 from the sale of antimalarials, sales of Active Pharmaceutical Ingredient (API) and intermediates drugs worth Rs 885 crore (Singh et al., 2020). About 77 percent of this was

exported, except for the US due to the ban. Sources said India's exports of HCQ in 2018-19 were only \$51 million and the whole current size of the US market is only \$220 million, generating about 5.5 million annual prescriptions (The Print, 2020; The Economic Times, 2020; India Writes Network, 2020).

The Recent decision of US President to send the 200 ventilators is the evidence of underline companion ship of two countries during the combat of COVID-19 pandemic (Hindustan Times, 2020). A gesture of humanitrian and political goodwill of both the countries to the world.

The plantation of the lower Himalayas under Cinchona cultivation, a tree whose bark is a natural source of quinine found in the mountains of eastern India. The doubtful diagnosis hydroxychloroquine a derivative of quinine is the new hope for the coronavirus.

### **Acknowledgements**

None

### **Funding statement**

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

### **Conflict of Interest**

The authors declare that there is no conflict of interest.

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