EDITORIAL

Spotlight on hypertension in the Middle-East

The Middle-East is a diverse region with many countries of differing socio-economic status. While some countries are facing war and famine, others have a booming economy. This is reflected in the health care in these countries. Hypertension is a problem of all these countries. In this spotlight, we wish to draw attention to the barriers faced by the different countries in the region in their fight to bring blood pressure under control.

Journal of Human Hypertension (2022) 36:425–427; https://doi.org/10.1038/s41371-022-00668-y

The Middle-East is a broad term used to refer to the geographical area that includes the Arabian peninsula and the adjoining countries of the eastern Mediterranean such as Jordan, Lebanon, Turkey, Egypt and the adjoining countries north of the Arabian Gulf such as Iraq and Iran. Some of the other terms that are often used to refer to this region include "The MENA (Middle east and north Africa) region" and also occasionally the "Near east". Although the countries here are grouped together as one big entity, they are diverse from an ethnic, racial, linguistic, religious and socioeconomic perspective [1]. As a result of its location between Asia and Europe, this region has been at the cross- roads of cultures from the times of ancient civilisations to modern imperialism and hence has a rich history and culture steeped in tradition that has evolved due to these interactions. The ethnic and racial mix seen among the population in this region is also a result of these historic interactions. For example, as a result of the Omani empire that in the 17th and 18th centuries extended from the Arabian peninsula up to north Africa and parts of what are now in Iran and Pakistan, the local Omani population now consist of people that are of Arab, African, Baluchi and Indian/Pakistani heritage [2].

The modern day Middle-east is a region of startling contrasts in terms of its socioeconomic status. The rich and modern countries of the Gulf cooperation council (GCC) contrast strikingly with the other countries in the region which would classify as low to middle income countries [1]. The latter part of the 20th century saw the countries of the GCC, become major producers and exporters of petroleum and its derivatives, leading to a boom in their economies [1]. This petroleum-driven economic growth spurt witnessed by the oil rich gulf countries have seen their countries transformed over the last 40 or 50 years from pearl diving and fishing dependent communities into modern states with efficient health care services that are replete with the latest technology [3]. This newfound wealth has also led to a dramatic change in the lifestyle and socioeconomic status of the population [4]. The once nomadic tribes in the region have been encouraged to settle. There has also been migration of people from the countryside to the major cities in search of jobs and better facilities. As in other countries, this rapid urbanisation has been associated with changing lifestyles such as lack of exercise, sedentary behaviour and altered dietary habits which in turn have led to a significant increase in obesity rates in the region [4, 5]. Indeed, according to a world health organisation (WHO) report, five of the fifteen countries with the highest rates of obesity are in the MENA region [6]. Reports suggest that almost 40% of adults in the region are either overweight or obese [7] along with worryingly high rates of childhood obesity [8].

Communicable diseases have been replaced with non communicable diseases as the major cause of mortality and morbidity in these countries [9]. Rising rates of diabetes, hypertension and obesity are of major concerns here, with more than a third of the adult population in these countries having either hypertension or diabetes or both [10, 11]. As in other emerging economies, the average age of the population is low (more than 60% of the population of Saudi Arabia is below 35) [12] and hence the high prevalence of non communicable diseases in worrisome. Reports from the GCC have shown that patients presenting with acute coronary syndromes and stable coronary artery disease are almost a decade younger than those in western countries [13].

While the GCC countries have been developing and modernising, other countries in the region have not been that fortunate. The political turmoil in some of the neighbouring countries have seen their economies decimated and livelihoods destroyed. Deteriorating economies have also led to low standards of living and in some of the war-torn countries, poverty and famine have led to a humanitarian crisis [14, 15]. The health care systems in these countries have also crumbled under the stress of war and strife [15]. While some countries such as Iraq are in the rebuilding process, those like Yemen are still facing the effects of war. The world bank has reported that in Yemen, only around 50% of the health care services are fully functional and over 80% of the population faces significant challenges in reaching food, drinking water and access to health care services. Shortages of human resources, equipment, and supplies are severely hindering healthcare provision [16].

This spotlight issue aims to highlight the complex health needs in the region, especially in terms of hypertension management and focussing on the variations and barriers to effective blood pressure control. High blood pressure is a major concern in most parts of the world and especially in the Middle-east. Prevalence of hypertension remains high in the region and is rising among the younger age groups as seen in the papers by Najafipour et al. [17], Pamukcu et al. [18] and Al-Riyami et al. [19] who report on the prevalence of hypertension in Iran, Turkey and Oman at around 19.2%, 33.7% and 29.8% respectively. Changing lifestyle and dietary habits, increasing rates of obesity, high salt diet and sedentary lifestyle all contribute to this high prevalence of hypertension [4, 5, 7, 8]. This high prevalence is accompanied by a lack of awareness of the health and blood pressure status as demonstrated by the papers from Iran [20] and Egypt [21]. In

Received: 31 January 2022 Revised: 7 February 2022 Accepted: 23 February 2022
Published online: 9 March 2022

addition, patients with diagnosed hypertension have poor control with more than 30% of those on treatment having high blood pressure readings [19]. This is similar to what has been reported previously from other countries in the region [22]. Lack of adequate facilities for proper hypertension care in some countries is a concern for proper blood pressure management. Al-Hadeethi et al [23] reported that many primary health centres in Jordan do not have adequate facilities for proper hypertension care, while previously Ghareeb et al [24]demonstrated the lack of proper maintenance of the mercury sphygmomanometers in Egypt.

War and conflict in the Middle-east has had a profound effect on the health in the region, with one of the fallouts being the displacement of people creating refugees both internally in different parts of the same country or externally, often in neighbouring countries. The health needs of these displaced people, especially those fleeing to other countries, are often neglected as they fall through the net of the health systems, as many of them might be undocumented [25]. This has created a humanitarian crisis in some middle east countries, similar to that seen during mass displacement of people in different parts of the world over different times in history. Recent conflicts in Syria, Iraq and Yemen have reportedly led to more than 20 million people displaced from their homes [26]. While most of these have been internally displaced, a significant number of people have fled to neighbouring countries. Most of the externally displaced Syrian and Iraqi refugees live in urban and semi urban refugee camps in Turkey, Lebanon and Jordan with adequate access to health care being previously highlighted as a major concern [25, 27]. Zibara et al. [28] studied the health burden and the hypertension care of these displaced people in the middle east. Not surprisingly they found that the prevalence of hypertension and poor lifestyle choices is high among the refugee population than the native population in the countries studied. However, as they mention, the true burden of the disease might be far worse than what is reported as many of the refugees might not have access to health care and therefore might not be represented in the various studies.

Another factor that affects the overall health care in the Middle east, but is often not addressed is the presence of a high number of expatriate workers. During the initial phase of the oil boom, and the need for increased work force which the local population could not cover, the GCC countries had lured many workers with promises of high paying tax free salaries. Although recently, there has been a trend in these countries to depend less on foreign workers and increase jobs for their own citizens, the proportion of foreigners is still high [29]. These foreign born non-native workers and their families, make up a high proportion of the population in many of the GCC countries, with expatriates accounting for almost 90% of the population in the United Arab emirates [30]. A high proportion of the expatriate population hail from the Indian subcontinent, but equally large numbers of workers from far east countries such as Philippines and African countries such as Kenya and Tanzania also contribute to the expatriate workforce [29]. Additionally, a high number of Arab migrant workers from countries such as Egypt, Morocco, Libya, Syria and Jordan are also present in these countries. The paper by Al-Riyami et al. [19] includes data on the expatriate workforce in addition to the native Omani population. It is interesting to note that there is a difference in the health of the western expatriate workers, as opposed to the Asian workers. The former appear to have better understanding of their health issues and have better blood pressure control, as opposed to the latter who have higher levels of obesity and poorer blood pressure control. Although the paper did not study the relationship between occupation, education and health indices of these different expatriate population, this finding suggests more needs to be done to improve the health of expatriate workforce in the GCC countries, especially the unskilled labourers [31, 32], an issue that was highlighted during the construction of the various stadia for the football world cup tournament in Qatar [33].

The Middle-east has seen tremendous change in its political, economic and social structure over the last few decades that has been reflected in the health of the population. There are numerous and varied health care challenges among the different countries in the region. The health needs of the middle east are unique to the region as they have to deal with inequalities in access to health care, a young population, high number of migrant workers, care of refugees, and the increase in non communicable diseases including hypertension. Abboud et al. [34] in their review, have summarised the current status of hypertension control and the main barriers to good hypertension control in the region. It is heartening to note that many initiatives have been launched to address these non-communicable diseases including hypertension [35]. Health education projects that highlight the need to increase exercise [36], decrease the dietary salt intake [37] and the need for regular health checks including blood pressure monitoring [35] have been launched in many countries to tackle the emerging epidemic of hypertension and one would hope that these efforts will bear fruit in the near future.

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AUTHOR CONTRIBUTIONS

HA and SKN both contributed equally to writing and checking the manuscript.

COMPETING INTERESTS

The authors declare no competing interests.

ADDITIONAL INFORMATION

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