EDITORIAL

Developing Comprehensive National Cancer Control Programs in Iraq Focusing on the Leading Cancers

Prof. Nada A. S. Al Alwan (MD, PhD)
Professor of Cancer Pathology,
Baghdad University Medical College
Oncology Teaching Hospital, Medical City
Currently, Visiting Professor, Oxford University
Email: nadalwan@yahoo.com

The Burden of Cancer

Cancer, the leading cause of death worldwide, is emerging as a major public health challenge of this era [1]. Currently there are over 50 million people living with cancer all over the world with an estimated 10 million dying annually from the disease; nearly 70% are from developing countries [2]. Cancer incidence and mortality rates will continue to rise owing to demographic changes associated with population growth and aging [3]; the highest are likely to be registered in low- and middle-income communities for reasons attributed to lifestyle modification, urbanization, exposure to carcinogens and limited resources for diagnosis and treatment [4]. The financial, physical and emotional strains on cancer patients and their families yield a considerable economic impact specifically when the disparities in access to care within the weak health systems lead to advanced stages at cancer presentations, prolonged disability and premature deaths [5]. According to the latest global cancer statistics (1,2), breast cancer is the most prevalent malignancy worldwide (11.7%), surpassing lung cancer (11.4%) and followed by colorectal (10%), prostate (7.3%) and stomach cancers (5.6%). On the other hand, lung cancer is the leading cause of cancer mortality (18%), followed by colorectal (9.4%), liver (8.3%) stomach (7.7%) and breast cancers (6.9%).

Iraq is an upper middle- income country that had the most robust health care system in the Middle East before 1980. The impact of consecutive wars, sanctions, conflicts and political instability generated a remarkable deficit in the medical recourses, infrastructure and requested funds with massive disruption of the health services including cancer care. During the Gulf wars, Iraq was exposed to various weapons including depleted uranium-tipped ammunitions, which raised unresolved debate on their potential carcinogenicity so far [6,7]. Currently, cancer is the third leading cause of death in Iraq following heart and cerebro-vascular diseases [8]. Among an estimated population of 41,190658 the Iraqi Cancer Registry (ICR) reported 35,815 new cancer cases and 10,909 deaths in 2021 [9]. The five most common sites of cancer were the breast (20.2%), lung (7.8%), colorectum (6.9%), brain/ CNS (5.3%) and urinary bladder (4.9%), whereas the main related deaths were attributed to lung (21.5%), breast (17.3%), brain (10.9%), colorectal cancers (9.1%) and leukemias (8.2%). The top leading cancers in Iraq are steadily increasing in upward trends but they seem lower than the global standards for reasons that could be attributed to suboptimal registration and lack of a national surveillance system [10].

Establishing a National Cancer Control Strategy

To respond to the growing challenge of cancer burden, the World Health Organization (WHO) developed a global strategy for the prevention and control of cancer that was endorsed by the World Health Assembly Resolution (WHA58.22) in 2005. Member states were urged to intensify actions against cancer by developing effective national cancer control programs (NCCP) tailored to their available resources [11].

WHO defined “cancer control” as an aim to reduce the incidence, morbidity and mortality of cancer

and to improve the quality of life of affected patients in a defined population through the systematic implementation of evidence-based interventions for prevention, early detection, diagnosis, treatment and palliative care [12].

In 2017 WHO member states adopted the resolution on cancer control that included recommendations to establish evidence-based protocols for cancer management and centers of excellence supported by referral networks. In 2018, the International Union against Cancer launched its advocacy campaign "Treatment for All" to engage cancer organizations worldwide with their ministries of health and other national partners in order to design country-specific strategies for the improvement of quality and coverage of cancer care services [13].

Under the Title "Cancer Control: Knowledge into Action, WHO Guide for Effective Programs", WHO produced a series of modules to provide practical advice for program managers and policy makers on how to advocate, plan and implement effective cancer control programs particularly in low- and middle-income countries [11].

The Main Elements of a NCCP [11-14]

Prevention: Is considered the most cost-effective long-term method of cancer control that offers the greatest public health potential. Currently, there is sufficient knowledge to prevent around 40% of cancers through avoiding exposure to common risk factors, including tobacco use, alcohol consumption, unhealthy diet, infectious agents and environmental carcinogens.

Early Detection: It has been documented that one third of cancer cases could be saved yearly from immature deaths if they have timely access to early diagnosis and effective cure. It involves two strategic approaches:

- Early detection through early diagnosis (down staging) by raising the awareness of communities to early signs and symptoms of cancer followed by prompt referral.
- Early detection through screening of asymptomatic and apparently healthy individuals to detect pre-cancerous lesions or early stages of cancer.

Di**agnosis and Treatment:** Treatment aims to cure cancer and prolong survival of the patients after the diagnosis is confirmed through appropriate available procedures that include history, clinical examination, imaging, laboratory and biopsy techniques. Treatment of cancer is achieved through a series of interventions that comprise surgery, chemotherapy, radiotherapy, hormonal manipulation and psychosocial support.

Palliative Care: An approach that improves the quality of life of cancer patients and their families especially in advanced cases where there is little chance of cure; through the relief of pain and other related symptoms and the provision of physical, psychosocial and spiritual care,

Other supporting components of an effective NCCP include governance, policy-making, advocacy, upgrading cancer registry, strengthening research, information system management, service delivery network and involvement of NGOs, charities and the private sector.

Challenges Facing Cancer Control in Iraq

In general, the leading three cancers in Iraq are consistent with the most prevalent malignancies reported globally; namely, the Breast, Lung and Colorectal cancers.

Breast Cancer is the most common registered malignancy worldwide and among the Iraqi population in particular; where it accounts for the second leading cause of related mortality [9].

With the objective of down staging the disease at the time of presentation and raising public awareness, a national program for early detection of breast cancer was initiated in Iraq since 2001; whereby referral centers and/or specialized clinics for early detection of breast cancer were established in the major hospitals in all governorates including Kurdistan region [15].

Following the war on Iraq in 2003, the progress of that program was impeded through years of upheaval, specifically in vulnerable provinces, where many specialists were targeted and a many equipments were destroyed, looted, or failed because of lack of maintenance and paucity of financial resources (7). Although the program activities continued owing to the resilience of a committed workforce and the affected patients are still offered free diagnostic and treatment services, nevertheless, the related mortality rates remained relatively high (7,9,10).

The low breast cancer survival in Iraq is mainly attributable to late-stage presentation (4, 15-17), due to many factors including stigma, remarkable gaps in the knowledge and attitudes towards the disease even among the educated sectors (18), substandard referral, paucity of national protocol guidelines on cancer management in addition to the weak monitoring, evaluation and follow-up systems which lack quality control measures (7).

In a comparative study on the behavior of breast cancer among Iraqi and British women [19], it was clearly displayed that our patients were statistically younger and had significantly higher advanced cancer stages (III and IV) at the time of diagnosis (44% versus 3%).

Lung Cancer is the second prevalent cancer and the leading cause of related deaths both worldwide and in Iraq (2,9). International trends are closely associated with the tobacco epidemic (10,20). As cigarette smoking is considered the greatest, single, modifiable risk factor for mortality (21), it accordingly places lung cancer on top of the malignancies that could be controlled through prevention (3,11-14). According to local surveys, Iraq has a high prevalence of tobacco reaching 20% of users in the population; nearly 11% of youth are current smokers (22). Despite the fact that Iraq has adopted preventive measures in this field through tobacco control legislations and mobilizing public awareness campaigns, yet there are no available data regarding the stage of lung cancer at diagnosis and up to the present time no national screening program to control this lethal disease was initiated. Regrettably, palliative care is impeded due to deficient public policies, inadequate financial resources, limited access to pain relieving drugs and the lack of hospices to deal with patients in advanced stages.

Colorectal Cancer ranks third in terms of incidence among the Iraqi population and globally (2), and the forth in terms of mortality in our country (9,10). It has been reported that this cancer represents a marker of socioeconomic development that could reflect changes in lifestyle activity patterns, diet and environmental conditions (23). The declining incidence rates in transitioned developed countries have been attributed largely to the uptake of screening colonoscopy and fecal occult blood test or stool DNA examination (24). Few minor attempts for opportunistic screening of colorectal cancer were practiced during the past decade in Iraq, however, no national program was adopted to control this type of malignancy and the reported information on its staging remain scarce.

CONCLUSION:

It is time to appeal to the health authorities to close the gap in cancer care and survival through emphasizing the urgent need for developing a coordinated national approach to control the leading cancers in Iraq. In order to implement an effective NCCP there should be a determined political will to invest in the health care system through prioritizing cancer in the agenda of the Ministry of Health, provision of the requested financial support and establishing effective strategic plans tailored to the existing resources in accordance with evidenced-based protocol guidelines. More efforts should be directed at strengthening the population-based cancer registry and the associated surveillance system and oncology workforce. Promoting preventive measures enhanced by high-quality research is mandatory to address the impact of environmental pollution and other prevailing risk factors. It is essentially recommended to endorse the adopted early detection programs by ensuring the provision of appropriate treatment and palliative care; integrating data bases related to progress of planning, monitoring and evaluation.

REFERENCES:

1. Ferlay J, Ervik M, Lam F, et al. Global Cancer Observatory: Cancer Today. Lyon, France, International Agency for Research on Cancer; 2020 (https://gco.iarc.fr/today).
2. Sung H, Ferlay J, Siegel RL, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA Cancer Journal for Clinicians. 2021; 71 :209-249.
3. Soerjomataram, I., Bray, F. Planning for tomorrow: global cancer incidence and the role of prevention 2020–2070. Nat Rev Clin Oncol, 2021; 18: 663–72.
4. Pourghazian N, Sankaranarayanan R, Alhomoud S et al. Strengthening the early detection of common cancers in the Eastern Mediterranean Region. East Mediterranean Health Journal, 2019; 25:767–68.
5. Prager GW, Braga S, Bystricky B, et al. Global cancer control: responding to the growing burden, rising costs and inequalities in access. ESMO Open. 2018; 2;3:e000285.
6. Country Policy and Information Note. Iraq: Medical and Healthcare Issues, Version 1.0, Home Office, UK, 2019.
7. Alwan NAS, Kerr D. Cancer Control in War-Torn Iraq. The Lancet Oncology, 2018;19: 291-92.
8. Annual Statistical Report 2021. Planning Directorate, Ministry of Health, Republic of Iraq, 2022.

9. Annual Report, Iraqi Cancer Registry 2021. Iraqi Cancer Board, Ministry of Health, Republic of Iraq, 2022.
10. Alwan NAS, Lami F, Al Nsoor M, Kerr D. Trends in the incidence and mortality of the most common cancers in Iraq. The Gulf Journal of Oncology, 2022; 40: 47-57.
11. Cancer Control: Knowledge into Action: WHO Guide for Effective Programmes: Planning, Advocacy, Prevention, Early Detection, Diagnosis and Treatment, Palliative Care Modules. World Health Organization, Geneva, 2007.
12. National Cancer Control Programmes: Policies and Managerial Guidelines, 2nd ed. World Health Organization, Geneva, 2002.
13. Adams C, Johnson S. Global Health and Cancer. The Lancet, 2019; 393 : 983-84.
14. Roadmap towards a National Cancer Control Program. International Atomic Energy Agency, Vienna; World Health Organization, Geneva, 2019.
15. Alwan NAS. General Oncology Care in Iraq (Book Chapter); in: Shamsi HO & Abu Ghelda IH. Cancer in the Arab World, Springer Nature, 2022.
16. Alwan NAS, Tawfeeq F, Maallah M et al: The Stage of Breast Cancer at the Time of Diagnosis: Correlation with the Clinicopathological Findings among Iraqi Patients. J Neoplasm, 2017; 2:1-10.
17. Alwan NAS, Tawfeeq FN, Mallah N. Demographic and clinical profiles of female patients diagnosed with breast cancer in Iraq. Journal of Contemporary Medical Sciences, 2019; 5:14-19.
18. Alwan N, al-Attar W, Eliessa R, Al-Midfaei Z et al. Knowledge, Attitude and Practice regarding Breast Cancer and Breast Self-Examination among a Sample of the Educated Population in Iraq. EMHJ, WHO, EMRO, 2012; 18:337-45.
19. Alwan NAS, Kerr D, Al-Okati D, et al. Comparative Study on the Clinicopathological Profiles of Breast Cancer among Iraqi and British Patients. The Open Public Health Journal, 2018; 11: 3-17.
20. Wipfli H and Samet JM. One Hundred Years in the Making: The Global Tobacco Epidemic. Annual review of Public Health, 2016; 37:149-66.
21. Kessler M, Thumé E, Scholes S et al. Modifiable risk factors for 9-year mortality in older English and Brazilian adults: the ELSA and SIGa-Bagé Ageing Cohorts. Sci Rep. 2020;104375 .
22. Tobacco Control Laws, Legislations by Country,IRAQ, https://www.tobaccocontrollaws.org/legislation/iraq. Accessed 1Nov. 2023.
23. Fidler MM, Soerjomataram I, Bray F. A global view on cancer incidence and national levels of the Human Development Index. Int J Cancer, 2016; 139:2436-46.
24. Keum N, Giovannucci E. Global burden of colorectal cancer: emerging trends, risk factors and prevention strategies. Nat Rev Gastroenterol Hepatol. 2019; 16:713-32.