

The 1st Annual Geriatrics & Gerontology Conference "Aging Facts and Challenges" The 1st Annual Geriatrics & Gerontology Conference "Aging Facts and Challenges" was held on behalf of the Geriatrics and Gerontology Department, Ain Shams University, Cairo, Egypt, 27-28 March 2014.

The conference addressed the challenges that face elderly people with regard to different factors that create challenges, how to approach such challenges, and the possible interventions with deep insight on recent updates and researches. The discussed challenges were meant to cover a wide range of geriatric medicine practice topics as dementia, nutrition, frailty, cancer, osteoporosis and osteoarthritis, genetics, functional independence, and medical diseases. The conference started with highlighting Elderly health status in different countries and the available health services and resources for them.

The situation of elderly in Egypt, Tunisia, and Saudi Arabia was illustrated. There was agreement that the number of elderly is going to increase in the three countries with subsequent demands on the health care system that is working hardly in the three countries to earn the challenges in offering the health care services required for this particular population. This is achieved by establishing health care policies for elderly via offering geriatric medicine services in different hospitals, setting a primary care programs for elderly, training primary care physicians and elderly caregivers to care for elderly patients, and finally offering the academic background and required degrees for this specialty of medicine which is fortunately available in Egypt which welcomes all interested Arab medical students to have their study of geriatric medicine in the Geriatrics & Gerontology department of Ain Shams University.

Summary and recommendations: The invited lectures, topical discussions, and posters presented at the conference and the invited manuscripts served as the basis for the following summary and recommendations. Genetics and successful aging: General considerations: - Genetics and epigenetics play an important role in the aging process and age-related syndromes. - The human genome is under continuous threat from environmental genotoxins, and endogenous sources generated during normal metabolic activities. - Failure to repair these breaks results in human disease, such as cancer, neurodegeneration, and immunodeficiency. - Epigenetic is another field that is concerned with factors controlling gene expression without alteration of DNA sequence.

Epigenetic play the Link between the environment and the gene. This rapidly expanding field of science is providing us with lot of explanations for many unclear scientific points.

Osteoporosis" as a common age-related disorder that causes long term disability is a good example for the impact of the intrauterine life (intrauterine nutrition and maternal constitutional factors) on the latter adulthood and geriatric periods of human life. - The development of both gene therapy and stem cell therapy together with the prospect of human longevity widened the horizon for anti-aging treatment to achieve successful aging and tackle different geriatric syndromes.

Recommendations for the future and future research: -Highlighting the role of genetics, epigenetics to related geriatric syndrome and longevity. - The start of a series of research on their role with consideration to stem cell therapy as an interventional treatment for achieving successful aging. Brain; realities and myths

*Mild cognitive impairment (MCI):

MCI can be considered as a problem which has a definite relation with all precipitating factor of dementia. - Clinical pathological studies reported that some patients with MCI had other concomitant neuropathologic features, which may contribute to the clinical presentation of the subjects e.g. hippocampal sclerosis, cerebral ischemia and neocortical Lewy bodies. - Patients with MCI have shown a risk of developing dementia. - Several studies discussed the value of treatment of MCI with acetylcholine esterase inhibitor, multivitamins, antioxidants, and other treatment modalities, whether causing regression, delay or even prevent the progress to dementia syndrome. - Managing MCI by early detection, controlling risk factor, treatment, and proper follow up can be considered a serious task in geriatric practice and an important step to improve elder's quality of life.

Dementia is one of the devastating diseases of the elderly. It leaves its dark shadows over the patient and his family members; hence its prevention is worth wise for better quality of life and is considered the challenge of every geriatrician.

Recommendations for the future and future research: Early intervention for prevention of MCI via: - Treatment of risk linked to cognitive impairment (Diabetes, Current smoking Depression, High blood pressure, Elevated cholesterol, Lack of physical exercise, Infrequent participation in mentally or socially stimulating activities) and avoidance of drugs claimed to impair cognition. - Maintaining function and patient independence. - Starting longitudinal studies to

address the value of treating MCI among Egyptian Elderly. *Potentially reversible cognitive impairment (Reversible Dementia): - Potentially reversible cognitive impairment has emerged as an alternative term as reversible deficits are usually clinically mild and often not fulfilling functional criterion of a dementia syndrome. The frequency of causes of potentially reversible dementia varies from 0% to 23%.

The commonest causes are alcohol, medications, depression, surgical brain lesions as normal pressure hydrocephalus, tumors and chronic subdural hematomas, metabolic disorders such as hypothyroidism, hypoparathyroidism, vit B12 deficiency and central nervous system infections such as neurosyphilis and HIV. The results after treatment are heterogeneous from real reversibility to partial improvement to no response. Recommendations for the future and future research: - Raising the awareness of physicians especially primary care and family physicians about clinical picture, early warning symptoms and signs of potentially reversible causes of dementia that should be an essential part in their medical training . -- The use of systematic approach in assessment of patients with cognitive impairment to avoid missing a reversible cause without wasting of resources.

- Starting research to address the common causes of reversible cognitive impairment among elderly Egyptians, the actual response to treatment, and the degree of reversibility.

Frailty: the dilemma of ageing - Frailty is a clinical state of increased vulnerability and decreased ability to maintain homeostasis that is age-related and centrally characterized by declines in functional reserves across multiple physiologic systems. - Frailty is linked to increased mortality, medical instability, disability and dependency, institutionalization, injuries, falls, acute illness, hospitalization, health care resources utilization, and delayed recovery. - Prescreening of frailty involves a short evaluation that is not intended to be diagnostic, and does not replace, but rather optimizes Comprehensive Geriatric Assessment (CGA) by selecting those senior patients who may benefit from an intensive assessment.

Recommendations for the future and future research:

Pre-screening for frailty to determine whether further assessment is indicated, it's worth mentioning that screening tool is not diagnostic to replace

the comprehensive geriatric assessment yet it optimize it due to high sensitivity. - Counseling for nutrition and exercise that improve frailty. - Starting researches targeting the multisystem decline and vulnerability in frailty mainly at the level of genetics. Medical diseases and the dilemma of being atypical: - Renal diseases are usually missed in elderly when physicians rely on serum creatinine alone. - Serum cystatin C (Scys) has been proposed as a potential replacement for serum creatinine (Scr) in glomerular filtration rate (GFR) estimation. - Cystatin C level, is a reliable, rapid, and non-invasive method for evaluation of elderly patients with severe kidney disease and severe glomerular hypofiltration. Nevertheless, this is true for symmetrical diffuse renal disease. Recommendations for the future and future research:

The use of Cystatin C level for GFR assessment together with other renal functions in elderly patients must be taken in consideration.

Bone and Ageing; Osteoporosis and Osteoarthritis - Osteoporosis and osteoarthritis are main causes of functional disability and dependence in elderly. - Despite the high prevalence and morbidity of osteoarthritis (OA), an effective treatment for this disease is currently lacking. Fragility fractures are of a major health risk.

Fragility vertebral fractures carry a high morbidity rate. - Causes of fragility vertebral fractures are diverse ranging from osteoporosis to neoplastic conditions. Early detection of those causes and prevention of fragility vertebral fractures by treatment of the cause of fragility is the best line of management.

Recommendations for the future and future research: - Considering surgical treatment (vertebral support, vertebroplasty , kyphoplasty and spinal fixation with special precautions)of fragility fractures of the vertebrae in fitting Egyptian elderly.

Expanding the research that was started in Geriatrics and Gerontology department considering stem cell therapy for osteoarthritis in elderly Egyptians. Cancer and ageing; special issue: - Age is a major risk factor for many cancers. - The reasons for this may include tumor escape mechanisms and decreased immune-surveillance. Recommendations for the future and future research: - Screening for common cancers in elderly (breast-colon-cervical cancer) and introducing it as a part of primary care services in Egypt - Expanding the research regarding the relationship between inflame-aging and its consequence immunosenescence and cancer occurrence. Elderly Functional independence: Culturally adapted comprehensive geriatric assessment:

Comprehensive geriatric assessment which is the main tool for assessing function in elderly may contain inadaptible tools for Arabic country due to cultural difference. Recommendations for the future and future research: - Cultural adaptation of all tests used in the CGA to be translated and validated to be used among the Arabic Egyptian population. The circle of Life; the Challenge in Between There is a misconception that all European elderly live in care homes and Europeans leave their parents to professionals. Rotterdam Netherlands key values are self-reliance, independence, and participation. The elderly face many challenges including that at home, care and technology challenges.

Recommendations for the future and future research: Making use of the European experience can be useful but must avoid their pitfalls and make it fit for the Arab community. Acknowledgments:

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