

Impact of Treatment of Fragility Fractures Due to Osteoporosis as an Economic Burden Worldwide: A Systematic Review

Authors : Fabiha Tanzeem

Abstract : BACKGROUND: Osteoporosis is a skeletal disease that is associated with a reduction in bone mass and microstructures of the bone and deterioration of bone tissue. Fragility fracture due to osteoporosis is the most significant complication of osteoporosis. The increasing prevalence of fragility fractures presents a growing burden on the global economy. There is a rapidly evolving need to improve awareness of the costs associated with these types of fractures and to review current policies and practices for the prevention and management of the disease. This systematic review will identify and describe the direct and indirect costs associated with osteoporotic fragility fractures from a global perspective from the included studies. The review will also find out whether the costs required for the treatment of fragility fractures due to osteoporosis impose an economic burden on the global healthcare system. METHODS: Four major databases were systematically searched for direct and indirect costs of osteoporotic fragility fracture studies in the English Language. PubMed, Cochrane Library, Embase and Google Scholar were searched for suitable articles published between 1990 and July 2020. RESULTS: The original search yielded 1166 papers; from these, 27 articles were selected for this review according to the inclusion and exclusion criteria. In the 27 studies, the highest direct costs were associated with the treatment of pelvic fractures, with the majority of the expenditure due to hospitalization and surgical treatments. It is also observed that most of the articles are from developed countries. CONCLUSION: This review indicates the significance of the economic burden of osteoporosis globally, although more research needs to be done in developing countries. In the treatment of fragility fractures, direct costs were the main reported expenditure in this review. The healthcare costs incurred globally can be significantly reduced by implementing measures to effectively prevent the disease. Raising awareness in children and adults by improving the quality of the information available and standardising policies and planning of services requires further research.

Keywords : systematic review, osteoporosis, cost of illness

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