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Antidepressant Drugs and Hip Fracture Associations: Is the Remedy for Depression less Toxic than its Direct Impact on Hip Fracture Injuries Acute and Recurrent: a 2026 Retrospective Overview

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Author Details

*Ray Marks**

Research, Osteoarthritis Research Center, Box 5B, Thornhill, ONT L3T 5H3, Canada

*Corresponding author

Dr Ray Marks, OARC Clinical Research and Education Director, Ontario L3T 5H3, Canada, Tel: +1-647-968-2725, Email: Dr. RayMarks@osteoarthritisresearchcenter.com, doctorraymarks75@gmail.com

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Abstract

Falls that lead to hip fractures commonly impact many older adults highly adversely, often leading to disabling hip joint osteoarthritis, premature death, second or third hip fractures, pain and most commonly to a significantly reduced life quality among those who survive. This mini review examines some past and current [2022-2926] literature published in the English language concerning the probable association of persistent antidepressant medication usage even though its risk has been known for some time to be associated with hip fractures as well as bone metabolism deficits, among the burgeoning vulnerable older adult population. Based on a careful review of relevant peer reviewed published articles on this topic we conclude antidepressant usage may have the potential to independently or collectively heighten hip fracture risk in a fair number of vulnerable older adults suffering with depressive symptoms, but not all. Efforts to identify cases who use these drugs as well as interventions to prevent or minimize ongoing depression in the healthy as well as the post hip fracture case, the use of alternate non drug methods of depression mitigation is indicated.

Keywords: Antidepressants, Depression, Falls, Hip Fracture, Prevention, Treatment

Introduction

Regardless of years of inquiry, the incidence and prevalence of debilitating hip fracture injuries among older populations generally appears to persist with few exceptions [1]. An exceptionally adverse albeit potentially preventable health condition where a host of risk factors prevail, including falls, a small but possible potent contributory or cumulative role of antidepressant drugs in this regard has been and continues to be studied [2-4]. Other drugs reported to be related to falls that often predate hip fractures among the older adult include: cimetidine, psychotropic anxiolytic/hypnotic drugs, barbiturates (which may decrease bone quality), opioid analgesics, and antihypertensives [4], long-acting benzodiazepines, anticonvulsants and caffeine [5]. In addition to depression and its possible impact on bone metabolism in its own right, the inappropriate use of tranquillizers, sedatives and exposure to any of the three classes of antidepressants is associated with a significant increase in the risk of falling, suboptimal sensori-motor integration, possible declines in physical activity levels, osteoporosis, and sustaining a hip fracture and in mediating factors implicated in all-cause mortality post hip fracture [6,7].

Indeed, both the failure to detect depression, as well as detecting it, but treating it in some cases with certain axiolytic drugs for extended periods may underpin the inability to effectively lower hip fracture rates in some aging populations, while markedly increasing projected social care costs [1]. In our view there may thus be a mismatch between the goal of fostering optimal geriatric health for all, and the risk that depression and drugs used to mitigate unremitting depression and/or the persistence of unrecognized depression and depression-related mechanisms may drive the risk of incurring a potentially more disabling hip fracture outcome among some vulnerable older adults. While it remains challenging to separate antidepressant usage from other

possible confounding hip fracture deterministic factors [8] such as poor health or bone status, in general, their usage could independently raise the risk for injurious falls and a hip fracture [2,9]. While some suggest this idea only applies to some forms of antidepressant-related medications, others support the view that a role for antidepressants in hip fractures mechanisms cannot be ruled out [8,10-14]. Their use may impact health services needs as well as post fracture costs detrimentally as well as impairing life quality [1,15] due to their detrimental cardiovascular and central nervous system side-effects and impact on hip fracture risk attributable to falls [13-17].

Aims of Review

This mini review aimed to examine past as well as current observations and conclusions regarding whether there is any cause for concern in recommending antidepressants to vulnerable older adults, largely as far as primary and secondary hip fracture risk is concerned.

Relevance

The incidence of index hip fractures, while possibly declining in some spheres, may be rising when considered cumulatively and globally where aging populations are growing exponentially [18]. Even so, in addition to the less than optimal outcomes of surgical hemi-arthroplasty or screw fixation remedies along with total hip arthroplasy surgery, the majority of individuals with femoral neck fractures who are triaged to some form of hip repair surgery to enhance their life quality, may frequently exhibit peri-operative symptoms of pain, anxiety, and sadness, which can duly extend recovery time and the desired degree of mobility to some extent, while heightening recurrent falls risk and secondary fractures especially if some forms of fall associated antidepressant drugs appear indicated [5,15,17].

Indeed, given the untold human and social costs of this possibly preventable and disabling injury, the immense harm caused by the emergence or perpetuation of depression in any form and especially its suppression using drugs that may pose an immense degree of additional risk to the older adult. The same idea applies in our view to the underuse of non injurious preventive interventions to counter geriatric depression [19,20].

Methods

To achieve the review aims, a comprehensive search and subsequent examination of the present topic of interest was undertaken wherein the PUBMED electronic data base, as well as Google Scholar, PUBMED, and PubMed Central were screened for salient articles. These data bases were selected due to their high volume of sound peer reviewed works. The search was not restricted in general, but searched for were all relevant peer reviewed full length articles especially those documented over the five years (2021-2026). The key words applied independently or simultaneously were; depression, hip fracture, antidepressants. All modes of research as well as reviews were deemed acceptable. Excluded were abstracts, foreign language articles, many studies older than 15 years since publication, preprints, or articles on depression occurring after a hip fracture, or in parallel with dementia or a chronic health conditions such as kidney disease and those that discussed multiple themes, rather than hip fractures and the influence of antidepressants specifically.

After examining potential articles, those deemed salient were reviewed and described in narrative form given the diverse nature of the posted data and their very limited focus on any one issue. The facts as presented are also possibly limited by the nature of the sample, the research methods, a limited array of reports, and inconsistent terminologies and varied modes of assessment and dosages of diverse antidepressants in limited samples. The term antidepressant was applied to collectively represent one or more prescriptive pharmacologic based interventions designed to alleviate symptoms of depression or prevent depression from reoccurring. No effort was made to identify the different classifications or types of antidepressant agent employed in the various study contexts, nor the duration for which these chemicals were applied, nor their dosage, which can all be quite diverse in nature. The term depression was used to encompass all forms of clinical depression, as well as depressive symptoms, which can range from mild to severe. The term hip fracture was applied to represent the different categories of this injury, rather than attempts to categorize and discriminate lesion site. This was owing to report limitations, and a failure of most studies to assess or conduct one or more sub group analyses in any of the aforementioned spheres.

Results

General observations

As of April 10, 2026, the data examined and covering all years with no restrictions using a PUBMED based search with citations containing the key words: hip fracture, depression, hip fractue and antidepressants were carefully searched for there is a highly probable role for adverse drug reactions in the context of efforts to pinpoint significant hip fracture risk factors among the older adult population, in general, as well as among those with depressive symptoms who may be using antidepressant medication, those taking antidepressants for no psychiatric reasons may have an increased risk of falls and fractures, albeit no post surgical adverse effects on outcomes [3]. Other data imply, various antidepressant agents used alone or in combination, with other drugs whether for alleviating depressive symptoms or for other reasons, may well depress vital or timely central nervous system functions, as well as impairing sleep processes that may heighten hip fracture injury risk, even while their use implies neurotransmitters in the brain may be more balanced rather than not [13]. Hu et al. [4] note: that their meta-analysis provided strong evidence that novel antidepressants, especially widely used selective serotonin reuptake inhibitors [SSRIs], have detrimental impacts on bone health as shown by decreases in bone mineral density and a doubled hip fracture risk.

Additional noteworthy antidepressant side effects are blurred vision, confusion, and dizziness, among other adverse general health concerns that could all be expected to heighten the risk for falling, the major antecedent of hip fractures along with a probable increased risk of subsequent fractures [21-26], although one group noted 'Esketamine' that has antidepressant properties can reduce short-term postoperative anxiety and depression, relieve postoperative pain and stress responses favorably , but its usage remains limited [14].

However, despite quite a substantive body of cautionary data, very few intervention studies addressing depression – a strong predictor of mortality in older adult hip fracture cases [27] and its possible prevention among vulnerable older adults at risk for a hip fracture prevail. Moreover even fewer are approached through non pharmacologic modes of mitigation. The issue of the carry over effect of antidepressant usage post hip fracture has also failed to be consistently discussed despite its relevance in surgical cases and others [23].

Newer drugs or non pharmacologic interventions are not commonly examined, along with the role of multiple medications or any preventive efforts in the pre and post operative realms [24]. Few direct indications for exploring what other options might prevail, who should definitely not receive antidepressant drugs, and whether type of depression and user health and age is of relevance or not were located. It is also impossible in any secondary analysis to glean if those who suffered premature mortality post hip fracture were depressed or taking antidepressants [24,25] and other possible confounding factors [26,27]. The early as well as current research remains divided as to the importance of antidepressants for the elderly with a risk profile matching those of a hip fracture patient but offers few alternative solutions [28].

However, authors Yoo, et al. [29] found the use of these medications was associated with increased all-cause mortality risk in cases with no history of psychiatric medication usage before sustaining a hip fracture. Patients studied were those who had undergone surgery for an index hip fracture and were over 65 years old and classified into Past, Current, and Non-users for each period according to their history of antidepressants or benzodiazepines drug usage. In the subgroup analysis, where cases were classified relative to past psychiatric medication history, current users of antidepressants or never-users, there was an increase in the adjusted hazard for death in the user groups compared to the non-user group. Indeed, of 10 drugs commonly used by older adults, antidepressants reportedly do pose the greatest hip fracture injury threat to vulnerable [30,31]. Moreover, the risk of all-cause hospitalization during 180-days follow-up was significantly increased by 55% when antipsychotic usage was combined with benzodiazepine usage, and compared to antipsychotic usage alone [31]. It was concluded that the increased risk of all-cause hospitalization and hip fracture may predict increased drug-related array of future adverse events. Nyugen, et al. [13] further stress that there are many biologically plausible explanations as to why antidepressant or co-dispensed antidepressants can heighten hip fracture risk, including the fact they can impair psychomotor and cognitive function, and/or sleep status.

Thus, even though not all researchers agree, it appears that when antidepressant drugs are indicated as necessary among older adults, careful and regular monitoring is needed to assess their responses to this type of treatment. Alongside more careful usage, insightful research to eliminate confounding factors such as the role of chance, reverse causation, and/or confounding by indication as discussed by Nyugen et al. [13] is strongly indicated as well.

Brännström, et al. [32] who investigated the association between antidepressant drug treatment and hip fracture that began one year before treatment initiation among a nationwide cohort of 204 072 individuals aged 65 years or older who were prescribed antidepressants between July 1, 2006, and December 31, 2011 found antidepressant users sustained more than twice as many hip fractures than did nonusers in the year before and year after the initiation of therapy. In adjusted analyses, the odds ratios were highest for the associations between antidepressant use and hip fracture 16 to 30 days before the prescription was filled, rather than when these were actually used. It was verified in separate analyses of age groups, and of men and women, and of individual antidepressant types that the highest odds ratios were seen 16 to 30 days before treatment initiation, and that no clear dose-response relationship was evidenced. The authors concluded that their findings raise questions about the association between antidepressant usage and hip fracture risk that should be studied further.

In another comparable study, Gorgas, et al. [33] who strove to describe the association between exposure to different antidepressant drugs and a subsequent hip fracture event among an older Mediterranean population of non traumatic hip fracture cases aged 50-95 years admitted to the emergency room during 2010, results of 134 cases and 544 controls showed the adjusted odds ratio for hip fracture associated with exposure to any antidepressants was 2.42. For those categorized as receiving selective serotonin reuptake inhibitors it was 3.52. For non-selective monoamine reuptake inhibitors the odds ratio was 1.07 and for other antidepressants it was 0.82. Sertraline with an odds ratio of 3.88 was the only active drug with a significant adjusted risk. When only exposures greater than six months duration were considered, significant risks were found to prevail as regards the use of selective serotonin inhibitors known as SSRIs. It was concluded there is a significantly elevated hip fracture risk in those taking SSRIs serotonin inhibitors, but not other types of antidepressants.

A meta-analysis of 23 studies conducted by Wu, et al. [34] and where hazard ratios were used as the outcome, the aggregated data of nine studies of a total of 309,862 cases revealed depression alone was associated with a 26% increase in fracture risk. The seven studies that reported risk ratios as the outcome for 64,975 cases specifically suggested that depression was associated with a 39% increase in fracture risk. Among eight studies that reported hip bone mineral density as an outcome (sample size, 15,442), the researchers found that depression was indeed associated with a reduced mean annual bone loss rate of 0.35%. This increased fracture risk and bone loss associated with depression was consistent in all meta-analysis, as well as those having modified inclusion criteria and when performing different subgroup analyses. Unfortunately, despite finding no significant publication bias in the reviewed reports, the role of antidepressants per se was not examined. In applying a common protocol to cohorts of older antidepressant users in multiple jurisdictions to estimate fracture risk associated with different antidepressant classes, drugs, doses, and potential treatment indications, Tamblyn, et al. [35] found an increased fracture risk in some, but not all jurisdictions. The authors concluded however, that even though antidepressants are used to alleviate non depressive symptoms in some cases, such as pain, fracture risk in all classes is higher when prescribed for depression than for chronic pain. In another report, McArthur, et al. [36] found that among the key risk factors unique to non-hip fractures as compared with hip fractures were having a history of psychotropic medication usage.

Iaboni and Maust [37] note furthermore that in the case of benzodiazepines for alleviating mental distress, and where the primary concern for older adults has been their increased risk of falls-related injuries, all benzodiazepines, even those that are short-acting appear to heighten an unanticipated falls risk. Macri, et al. [38] who support this view observed those adults who started taking antidepressants had a significantly increased risk of falls and sustaining a fall-related injury among long-term care residents, regardless of patient subgroup designation and antidepressant class. The parallel observation that the presence of depression appears to impact an increased risk for falls [39] as well as hip fractures [9] plus low bone mineral density at common fracture sites, which can be exacerbated by antidepressant medication [23] speaks to the high clinical relevance of this body of research.

In addition, it clearly speaks to a possible further need to prevent rather than mitigate. depression via potentially risky medications in vulnerable older adults [40]. This may be very important to consider given that plasma analysis has shown the use of antidepressants and benzodiazepines – a specific class of psychoactive depressant drugs-when assayed among hip fracture cases is observed to be present more prevalently than respective prescription frequencies that occur in the general older population. Moreover, this association may be underestimated due to a lack of consistency between recorded and actual use of psychotropic fall-risk drugs at the time of hospital admission of the hip fracture patient.

Thus the risk of using antidepressants may not be acknowledged or accurately evaluated in all cases [41]. Hence its associated relevance may be underestimated as far as having any adverse effect on hip fracture risk, where depression alone may be strongly implicated. Other data reveal that for all examined antidepressants, the odds were higher for other fractures than for hip–pelvis fractures [42] even though their actions may contribute to an excess falls risk and bone mass attrition consequent to their bone mass depletion potential, sedative and orthostatic hypotension properties [43].

Research limitations

Despite a compelling literature, numerous gaps as well as flaws in this related material must be acknowledged. For example, what precisely are the most salient causes of depression among the older vulnerable adult population, and what explains the mechanism of depression linked hip fracture injuries other than those attributable to possible antidepressant drug usage. Additionally, what level of depression as outlined in diverse reports is often unclear. It is also unclear as to whether a diagnosis of depression as documented clinically is operative or only symptomatic based on subjective screening tests. In

addition, medication adherence and dosages, exposure misclassification, as well as unknown medication variations or overdoses cannot be readily discerned. Moreover, the importance of identifying the longevity of antidepressant usage and its possible influence on the extent of falls and recurrent falls risk remains challenging to unravel specifically [44].

As well, subjects studied in the few currently available reports that show negligible antidepressant effects on hip fracture risk may be confounded if indeed subjects studied were receiving multi component therapies including counseling, or were non adherent prescription drug users. The extent of antidepressant impacts may also be an underestimate because subjects studied to date have largely been those who survived their hip fracture injury and surgery, and were treated in major centers. They may thus have been healthier and had better outcome options than those who had already died post hip fracture, but were antidepressant users, but who were not treated in time or in an advanced care setting.

Another area of concern is how depression symptoms and associated cognitive dysfunction, bone health, sleep and fatigue impacts overall hip fracture risk even if untreated pharmacologically [26,46] as this may require differing treatment pathways. In the meantime, the degree to which having high degrees of psychiatric illness and inflammation that may foster worse depression than not among high age older adults and that might be heightened by frailty, a fall, recurrent falls, and poorly considered depression-falls linkages and antidepressant medication usage [38,40] as well as the use of anti-dementia drugs and opioids [45] is an area of high salience that is rarely discussed or mostly studied in women [46].

In light of the above, it appears hip fracture prevention plans for aging adults will fail unless they are well conceived and do account for the probable increase in the risk of falling and fracturing a hip if receiving antidepressants or feeling sad and emotional, particularly among those at-risk populations, such as diabetics and fallers who sustain injuries due to other unsafe pharmacologic interventions, declining reflex responses, and mobility features even in the face of surgery [47].

What also remains unclear though is whether there is a point at which it is more important to provide antidepressants to non resilient emotionally impaired older adults than withdraw this. For example, in this regard, one study found that among residential elders, a high risk hip fracture group, more than half of those residents deemed to be depressed, remained without any antidepressant treatment, others who were more depressed than residents treated with antidepressants only, or even not treated at all were inappropriately treated with potentially addictive benzodiazepines. To remedy this degree of inordinate diversity while trying to prevent falls injury risk it was concluded cooperation of a dedicated inter professional team in the screening and evaluation of any emergent depressive symptoms may greatly improve the quality of care of this vulnerable group while saving lives and immense suffering but this remains to be tested [48].

In addition, separating current medication practices and modes of delivery from those embedded in the past literature as related to falls and hip fracture risk, may prove beneficial as well. Caution is advised however, by multiple authors as regards the unrestricted usage of antidepressants.

Discussion

In addition to age, a variety of age-related physiological changes, physical and mental and other factors, such as poor nutrition practices and low access to healthy foods, some forms of medication may impact two crucial determinants of hip fracture, namely, femoral bone strength and the propensity to falls. As well, the decline in muscle function with aging, along with cognitive, visual and neural reflex response declines that may be impacted by both aging as well as medications such as antidepressants, is likely to impact the propensity of older adults towards hip fracture injuries, which remain highly devastating injuries with a high premature mortality rate despite years of study. In this regard, medications to combat one or more health associated issues that commonly predominate in older adults, where administered in high risk older adults, and possibly even after hip fracture surgery, may well explain why hip fracture incidence rates remain substantive, despite much research and considerable advancements in medical, surgical and preventive approaches among those with a depressive history.

In a search for more practical approaches to avert preventable hip fractures, this mini review chose to focus on whether a variety of commonly used antidepressant medications, often employed by older adults, is a noteworthy under represented risk factor for hip fractures in those older than 65 years of age worthy of more focused attention. Yet, despite over 50 years of research in this realm, even though the weight of the evidence points to possible mediating or moderating hip fracture risk, it remains impossible to definitely attribute all hip fractures among those who use antidepressants to this factor and their weight must remain unclear in this respect as discussed by de Filippis, et al. [27]. Indeed even if a fair number of past observations imply a role for higher than expected relative risk rates of antidepressants in certain hip fracture cases, not all data are current, and most do not include all available antidepressants that are variously employed. As put forth by Iaboni and Maust [37] even though each of these new antidepressant drug classes have offered significant treatment benefits—typically because of fewer adverse effects—the recognized risks for each has steadily grown the longer the newer class is used. The mediating role of overall health status, total numbers of medications used, age and other factors, the sample studied, and mode of inquiry among other factors [47] are not sufficiently well articulated in this regard however, and need to be carefully studied.

Nonetheless, it seems safe to say that a sizeable number of current researchers do agree that regardless of a possible fracture risk, caution is advised when antidepressant remedies are recommended among older adults at risk for falling and possible hip fractures. The impact of antidepressant medication may also be underestimated if indeed its influence is more immediate rather than delayed [48] and may be overlooked if other fall risk-increasing drugs such as opioids, dopaminergic agents, anxiolytics, and hypnotics/sedatives are being taken without due caution [26,49].

According to one group [50] the prevalence of antidepressant usage may indeed be deemed to be quite high among a fair percentage of older hip fracture cases compared with the general population, especially in the context of frailty, comorbidity, and polypharmacy. Other data revealed those using multiple medications, including antidepressants, could fall quite readily due to their impact on generating cognitive lapses [50]. Yet efforts to withdraw such usage are not often forthcoming [5] even though Brännström, et al. [32] show at least twice as many hip fractures tend to occur among those older adults who have used or are using antidepressants compared to nonusers in the years before and after treatment initiation and where the odds ratios for association between antidepressant use and hip fracture was highest 16 -30 days before the prescription was filled.

As a result of their findings, Yang, et al. [51] concluded older adults employing benzodiazepines alongside antidepressants, and other medications may heighten their falls and fracture risk, especially following benzodiazepine initiation, even if they attain some emotional benefit thereby. Those older adults suffering unremitting depression, osteoporosis and/or other comorbid illnesses might hence be preferentially targeted in this regard as pre and post fracture depressive presence tends to induce a significant detrimental impact on functional recovery post fracture [52-54].

In this regard, to reduce any possible chances of falling on a single occasion or recurrently, periodic screenings and evaluations of those at risk may prove helpful, as may any opportunity to uncover the pre-

vailing source of any persistent depressive state and its potential for mitigation by non-pharmacologic strategies such as vitamin D supplementation [55]. Educating caregivers accordingly, along with efforts to encourage the creation of a physically safe supportive environment that reduces the presence of excess fears, distress, stress, and anxiety, and one that promotes healthy living and routine screening opportunities from a young age is also indicated. The possible use of certain supplements, ultra violet light exposure, grief counseling, aerobic exercise, and cognitive behavioral therapy and the control of chronic pain and diseases to address mitigating depressive symptoms safely is also clearly warranted.

In the interim, sufficient evidence shows even with largely inconsistent research protocols and variable samples and degrees or modes of instrumentation and drug usage, antidepressants may not be safe to recommend for all older adults with depressive symptoms. In addition, their use in the non-depressed older adult, as well as the presence of unrecognized depression may impact hip fracture risk independently, for example if antidepressants are being used for the treatment of chronic pain and behavioral and psychological symptoms of dementia, including insomnia, anxiety and agitation. In addition, Walkerly, et al. [53] warn that peripheral serotonin applications and their probable negative effects on bone may outweigh the benefits caused by any antidepressant enhancement of central serotonin neurotransmission, hence must be recommended with all due caution.

In short, despite their limitations, and a need for continued research, a fair proportion of available current research findings suggest that unremitting depression and the persistence of depression-related mechanisms plus use of certain drugs to counter depression in vulnerable adults may heighten the risk of falling and fracturing a hip. This appears important to acknowledge even if other factors are implicated [8] but is not uniformly supported in all studies.

To arrive at their own consensus while research proceeds, academics and clinicians who are evaluating the findings of prevailing studies that relate exposures to antidepressants to hip fracture occurrences must a) clearly consider how the investigators addressed confounding factors, and b) draw conclusions based not merely on the findings, but also on multiple research design issues and the complexity of depression in the midst of aging, mobility dysfunction, injury, bone and immune and healing responses [54].

Alongside this, several authors imply a key role for early detection, and efforts to minimize low grade chronic pain-a depression correlate [56-61] – along with exercises to alleviate depression, plus efforts to strengthen health affirming cognitive behavioral and physical determinants of health, plus possible sleep therapy even if more study is needed [55, 61]. More emphasis too on identifying minimal antidepressant doses that can be used safely to alleviate unrelenting feelings of depression is indicated, as well.

Additional efforts to catalyze changes in the care of older vulnerable adults, may also include:

1.The promotion of healthy behaviors and lifestyles;

2.The provision of careful periodic bone, mental health;

3.General health, follow up, and evaluations of any advocated antidepressant treatment;

4.Multidisciplinary and holistic planning approaches;

5.Efforts to mitigate the role of diabetes, stress, low grade chronic inflammation, and malnutrition, as mediators of both falls as well as adverse hip fracture hospitalization outcomes [62-66];

6.Attention to the role of establishing a close or ongoing provider-patient partnership, sufficient resource allocation, and long term tangible as well as intangible support needs [56].

To this end, more insightful dedicated collaborative attention by primary care providers, psychiatrists, cardiologists, diabetic specialists, physical therapists and nurses, alongside pharmacists and social workers may be expected to render a sound contribution here. Indeed, all providers are urged to work collectively with their older at risk clients and families, policy makers, and retirement and other health organizations to mitigate or avert the onset or perpetuation of depressive symptoms where possible among those 65 years of age or older, and advise them thoughtfully on the use of antidepressant drugs and their multiple side effects that may alleviate depression, [or not if depression is linked to loneliness or unresolved grief] but may still prove highly injurious in the realm of falls risk [21,57] in the face of frailty, multiple comorbid health condition, and trait depression [58-60]. At the same time, the need for more precision based depression therapy and one reflecting the role of inflammation in depression, remains understudied.

As well, the benefits of personalization of care approaches employed alongside the underpinnings of the biopsychosocial model of health status that has been further indicated in both hip fracture as well as depression prevention realms is generally untested [62]. In addition, the role of income in this regard plus reduced immunity post hip fracture also appears noteworthy to acknowledge and address [63]. The possible counter role of dedicated efforts to empower and educate vulnerable older adults who want to age 'in place' should arguably be more formidably addressed in multiple insightful ways.

Alternately, if no further progress or consensus is forthcoming in this regard, it seems fair to say, a modest proportion of older adults who are using antidepressants may incur one or more hip fracture injuries, and thereby a life of extreme suffering inadvertently if they survive. Even more importantly perhaps, older adults who are depressed, but not identified may fall more often than anticipated even after a hip fracture repnair and may sustain excess rates of hospital readmissions post surgery, plus impaired functional recovery, possible secondary falls and hip/other bone fractures that translates to enormous degrees of disablement and possible dejection and prolonged bouts of severe pain and depression [67-70].

Key Conclusions

In examining whether under or over treatment of depression via psychoactive drugs can influence the rate and severity of hip fracture incidents and consequences in the older adult, based on our analysis of a fragmented but insightful literature we conclude:

a)Older depressed adults are at risk for hip fractures and falls.

b)Those receiving various antidepressant agents may be at a higher risk.

c)Reliance on one or more forms of antidepressants is likely to increase social as well as individual costs, even if careful surgery is forthcoming.

d)Efforts to broaden and expand upon the scope of understandings regarding the mechanisms of depression in older vulnerable adults and how to mitigate this safely and effectively are urgently needed.

e)To avert unwanted costs, premature mortality, independence and life quality declines among sizeable numbers of aging adults, it seems reasonable to try to offset this burden and to continue to investigate the most salient risk factors underlying this condition.

f)There is also a need to investigate whether it is possible to improve upon current strategies for preventing secondary falls and hip fractures/others post-hip fracture surgery.

In the interim, we also conclude careful treatment of emergent or trait depression via non pharmacologic means may well influence the interaction of the aging person with the environment more favourably than not at all ages regardless of the degree of prevailing physical impairments.

At the same time, continued vigilance in the realm of primary and secondary prevention is needed, as well enhanced screening efforts and the recognition of individual variations in socio-demographics and health status plus the nature of the hip fracture occurrence in the presence of trait or state depression.

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Conflicts of interest

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