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Mini Review

Antidepressant Drugs, Injury, and Aging: The Case of Intrinsic and Extrinsic Depression, Falls, and Hip Fracture Injuries

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Abstract

Injuries are the major cause of disability among adults 65 years and above. Depression, a highly common mental health correlate especially prevalent among the older population may provoke injury risk when exposed to certain drugs. Associated with varying degrees of increased susceptibility to chronic diseases, fracture, high rates of disability, as well as pain, relatively little has been done over time to reduce the incidence and immense burden of these overlapping widespread health problems, despite evidence that depression and its consequences are not inevitable and may be prevented or mitigates safely. This article focuses on this topic of depression as applied to aging, especially from the viewpoint of prevention, as well as treatment, and early detection relative to antidepressant drug usage. Specifically, antidepressants and opioids often employed by older adults may foster injurious falls that lead to hip fractures, hip joint osteoarthritis, premature death, second or third hip fractures, pain and most commonly a significantly reduced life quality among those who survive. Data shown on drug usage approaches to combat depression and pain may have the potential to independently or collectively lower hip fracture risk in a fair number of vulnerable older adults suffering with depressive symptoms, and in addition, may help avert a more profound depression and need for risky medications.

Keywords: Antidepressants; depression; drugs; hip fractures; opioids; prevention; treatment

Introduction

Among the many unintentional forms of injury known to evoke and heighten aging disability, and regardless of years of inquiry, the incidence and prevalence of falls leading to debilitating hip fracture injuries among older populations generally appears to induce much impairment among survivors with few exceptions [1]. Commonly attributed to an array of diverse person centered intrinsic and extrinsic risk factors, including depression, a small but possible potent contributory or cumulative cause is the use of drugs or 'non-food substances that chemically effect the structure or functioning of an individual in some way'. Important examples are drugs such as antidepressant sedative type psychoactive drugs and opioids that continue to be studied, but remain problematic and widely used [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), antihypertensives [4], long-acting benzodiazepines, anticonvulsants and caffeine [5]. In addition to polypharmacology raising the risk for falling, depression and its possible impact on bone metabolism in its own right, antidepressant usage is are associated with having a bearing on suboptimal sensori-motor integration,

possible declines in physical activity levels, osteoporosis, balance and vision issues, plus all-cause mortality post hip fracture [6,7].

Indeed, this set of facts is not just theoretical but of high clinical relevance in that:

a) Prescription drugs are dispensed to persons over 65 years of age even if the risks outweigh the benefits.

b) Over 200,000 older adults or more may be hospitalized each year in the United States and possibly elsewhere because the drugs they have been prescribed by health providers are not risk free.

c) While helpful for cases younger than 65 years of age, some drugs may not be appropriate for people of higher ages

In particular, aging is said to increase the risk for medication problems because as people grow older, they may: a) Become more sensitive to the therapeutic and toxic effects of drugs, b) experience more adverse drug reactions or increased side effects than younger persons taking the same drugs, c) they may require large amounts of different medications that interfere with how drugs are metabolized, d) because if an older person is often taking five or more medications, sometimes several times per day there is a greater risk of drug interactions with other medications, foods, or alcohol and the risk of adverse drug effects also increases dramatically with each additional drug, e) When multiple medications are taken at different times each day, dosage schedules can often be complicated, f) This complication increases the risk of making a mistake, for example, taking a dose twice or forgetting to take a medication when prescribed.

At the same time, elders may suffer intently from bouts of depression and often more so in the face of the use of certain axiolytic drugs for extended periods and its mechanism of action may drive the risk of incurring a potentially more disabling outcome among some vulnerable older adults if these provoke falls and bone mass attrition and one or more hip fractures even in the face of surgery [2,8,9]. While some suggest this idea only applies to some forms of antidepressant-related medications, others support the view that a role for antidepressants in bone fractures mechanisms cannot be ruled out and this uncertainty is likely to add rather than attenuate the aging burden and social costs of care needs and possible re-hospitalization and medical and surgical complications after bone fracture surgery [1,8,10-15]. This is increasingly relevant though in those aging populations where detrimental cardiovascular and central nervous system side-effects and impacts of antidepressant usage have been observed alongside other that are associated with bone mass declines and geriatric depression [13-17].

Review Aims

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 or opioids to vulnerable older adults, largely as far as primary and secondary hip fracture risk due to falls is concerned, and where many older adults will already be using multiple medications.

Rationale

Older adults are more likely to be taking medications that have a greater potential for causing adverse reactions for example, cardiac, diuretic, antihypertensive, anticoagulant, and central nervous system depressant medications than not. They may also heighten falls injury risk and a life of excess suffering or even provoke premature death-the major cause of mortality in older adult populations.

Relevance

As societies age, and efforts to encourage health for all and independent living across the lifespan are pursued, the incidence of index hip fractures, while possibly declining in some spheres, appears to remain a global concern especially where aging populations living to high ages are growing exponentially [18]. Moreover, even when operated upon, aged hip fracture sutvivors 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 are used or indicated [5,15,17].

Indeed, in addition to possibly mediating a disabling hip fracture injury, the immense harm caused by the emergence or perpetuation of depression in any form and especially its suppression using drugs may pose an immense degree of additional risk to the older adult in our view. The same idea applies in our view to the underuse of non-injurious preventive interventions to counter geriatric depression in general [19,20].

Importantly:

a) Up to half of all deaths in the US due to drug abuse-either overt or vicariously influenced- are encountered by people 60 years and older.

b) 10-17% of all hospitalizations of older people are related to abuse of drugs.

c) Upon discharge, 50% of those patients with a history of drug abuse experience a notable decline in their ability to perform one or more activities of daily living, compared to 24% of patients without any evidence of drug abuse.

Methods and Procedures

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, 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; *aging, depression, falls, hip fracture, antidepressants, opioids, psychoactive drugs*. 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 condition 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 and appear to be largely treated pharmacologically but with many undesirable clinical ramifications. The term hip fracture was applied to represent the different categories of this injury, rather than attempts to categorize and discriminate lesion site and this site was focused on due to its immense debilitating consequences that remain unaffected despite 25 years of recent research.

Results

General Observations

As of April 15, 2026, the data examined and covering all years with no restrictions indicate 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 alongside other medications, or for no psychiatric reason may have an increased risk of falls and fractures. Other data imply, this impact is based on their ability to depress vital or timely central nervous system functions, as well as impairing sleep processes that may heighten inattention or slow reactions as far as exacerbating falling and a hip fracture injury risk, even while their use implies neurotransmitters in the brain may be more balanced in the face of their usage rather than not [13]. Unsurprisingly, one meta-analysis has provided strong evidence that novel antidepressants, especially widely used selective serotonin reuptake inhibitors [SSRIs], have detrimental impacts on bone health and may double hip fracture risk [4].

This may reflect the emergence of antidepressant side effects such as blurred vision, confusion, and dizziness, among other adverse general health concerns that can heighten the risk for falling, the major antecedent of hip fractures along with a probable increased risk of subsequent fractures [22] even if some forms can reduce short-term postoperative anxiety and depression, pain and stress [14]. Antidepressant usage may also be a strong predictor of mortality in older adult hip fracture cases [27,29]. Indeed, of 10 drugs commonly used by older adults, antidepressants reportedly do pose the greatest hip fracture injury threat to vulnerable older adults [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 an 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 their ability to impair psychomotor and cognitive function, and disrupt sleep status. Careful and regular monitoring is needed to assess their responses to this type of treatment is thus strongly indicated, especially as it is likely the affected older adult is not able to actively help themselves in multiple key ways or is fearful of being labelled mentally impaired.

Brännström, et al., [32] in examining the association between antidepressant drug treatment and hip fracture incidents that began one year before treatment initiation among a nationwide cohort of 204 072 individuals aged 65 years or older prescribed antidepressants between July 1, 2006, and December 31, 2011 found antidepressant users sustained more than twice the number of 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. The authors concluded the probable association between antidepressant usage and hip fracture risk that should be studied further.

Results of a case control study 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 [33]. Depression alone may however increase fracture risk, regardless of antidepressant use [34]. On the other hand, where antidepressants are used to alleviate non depressive symptoms in some cases, such as pain, fracture risk in all classes is higher than when prescribed for depression. 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, possibly due to ensuing

bone attrition impacts.

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, regardless of long-term care 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]. Despite numerous gaps as well as flaws in this related material treating depression among the older vulnerable adult population, antidepressant drug usage appears to have enormous far reaching adverse rather than favorable implications when viewed as a whole in the context of older populations. This is true in many spheres and especially in its possible independent impact on fractures, plus its influence on the extent of bone attrition, cognitive impairments, falls and recurrent falls risk [44,45].

As well, very few counter treatments to prevent unrelenting depression are offered including counselling, and how to mitigate both depression symptoms and their associated sleep and fatigue challenges that may impact overall falls risk if exacerbated by antidepressant usage [26,46]. 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 is notable, but often not discussed to any degree [38,40]. The use of anti-dementia drugs and opioids is another area of high salience that is rarely discussed or mostly studied in women and should be examined further to account for their probable influence in increasing in the risk of falling and fracturing a hip among antidepressants users. Those older adults feeling sad and emotional, particularly among those at-risk for falls and poor healing, such as diabetics, along with pharmacologic interventions, such as antidepressants, that can impair reflex responses, and mobility features even in the face of surgery, clearly need to be targeted more comprehensively rather than not [47].

What 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. Face to face analyses and discussions are needed here in our view rather than the use of online mediation and resources that may encourage adverse drug usage.

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 fracture injuries, namely, bone strength and the propensity to falls. As well, the decline in muscle function with aging, alongside age related cognitive, visual and neural reflex response declines may be impacted adversely by medications such as antidepressants. Associated directly or indirectly with the propensity to sustain one or more fracture injuries, antidepressant usage can induce a highly devastating injury with a high rate of premature mortality, despite years of study to support this possible outcome. In this regard, this effect is compounded when combined with medications to combat one or more health non cognitive as well as cognitive associated issues that commonly predominate in older adults, such as cardiovascular disease and dementia.

Unfortunately, despite sufficient evidence of the above risk, antidepressants continue to be used widely and are commonly administered to high-risk older adults, or not withdrawn before

or after hip fracture surgery, a state where preventive approaches against falls are strongly indicated to avert secondary bone fractures and falls. In a search for more practical approaches to avert geriatric disability associated with 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 and one worthy of more focused attention. As such, we have observed that even though the weight of the evidence points to a possible independent as well as mediating or moderating hip fracture risk, it remains impossible to definitely attribute all hip fractures among those who use antidepressants to this factor 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 fractures in general [45] as well as in certain hip fracture cases, not all data echo this to a high degree. 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 have 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 however not sufficiently well articulated in this regard, and need to be carefully studied. In one case, the sub-group analysis showed an association risk of fracture to persist relative to antidepressant usage regardless of geographical location, study design, risk factors, defined daily dose, SSRI use duration, fracture site, period of study and after adjusting for depression, physical activity, gender, and age group [45].

Nonetheless, it seems safe to say that while some current researchers do not attribute undue risk to antidepressant use by adults older than 65, a high percentage tend to agree caution is advised when antidepressant remedies are indicated among those older adults at risk for falling and possible hip or other bone 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, multiple 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 or refrain from such usage and a discussion of alternatives 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] conclude older adults employing benzodiazepines alongside antidepressants, and other medications may heighten their falls and fracture risk, especially following benzodiazepine initiation, even if the user attains 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 as post fracture depressive emergence or perpetuation can have a significant detrimental impact on functional recovery post fracture and can engender a high chance of recurrent injuries and falls events if treated by antidepressants [52].

In this regard, to reduce any possible chances of falling on a single occasion or recurrently due to associated drug and/or depressive symptom effects, and the fact falls prevention programs are unlikely to succeed universally - more timely health status screenings and evaluations of those deemed at high risk for possible excess feelings of depression at some points are indicated. Alternate strategies to overcome adverse emotional states and responses that limit mobility and self-care and safety practices are sorely needed sooner rather than later. Additionally, any opportunity to uncover the prevailing intrinsic or extrinsic source of any persistent or excessively reactive depressive state and its potential for mitigation is strongly implied using cognitive as well as non-pharmacologic strategies such as vitamin D supplementation [55]. Educating caregivers accordingly, along with efforts to encourage the creation of an emotionally as well as a physically safe supportive environment that reduces the presence of excess fears, distress, stress, negative feedback, food scarcity, and anxiety, and one that promotes opportunities healthy living alongside routine screening opportunities from a young age is also indicated. The possible use of certain supplements, ultra violet light exposure, transcranial photo biomodulation therapy, acceptance therapy, grief counselling, aerobic exercise, yoga, relaxation, music, and cognitive behavioral therapy and the control of chronic pain and diseases to address depressive symptoms mitigation safely, as well as effectively, is also clearly warranted.

In the interim, what the evidence shows is that even with largely inconsistent research protocols and variable samples and degrees or modes of instrumentation and drug type usage, antidepressants may not be safe to recommend to all older adults suffering mild to moderate depressive symptoms. In addition, their use in the non-depressed older adult, as well as the presence of unrecognized depression among aging adults, 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 [61] - along with exercises to alleviate depression, plus efforts to strengthen health affirming cognitive behavioral and physical determinants of health, plus possible sleep therapy and bone optimization even if more study is needed [55,61,63]. More emphasis too on identifying minimal antidepressant doses that can be used safely to alleviate unrelenting feelings of depression as well as numbers of antidepressants and other medications being used is indicated, as well. At the same time, health care professionals can help to ensure that older people do take their medications appropriately, effectively and safely, while policy makers can try to maximize cost containment, by rulings that limit widespread use of drugs known to provoke possible bone attrition as well as falls injuries.

In the community, counsellors can work with older persons and family members to provide social support and resources that enable the promotion of healthy behaviors and lifestyles. They can help to organize the provision of careful periodic bone, mental health; general health, follow up evaluations of any advocated antidepressant treatment. Multidisciplinary and holistic multidimensional integrated planning and collaborative approaches, plus efforts to mitigate the mediating role of multiple medications, diabetes, stress, low grade chronic inflammation, dementia and opioid usage in the context of depression as well as falls, and adverse hip fracture hospitalization are also of possible value to pursue [13,65,66]. Efforts towards establishing a close or ongoing provider-patient partnership, sufficient resource allocation, and long-term tangible as well as intangible support needs can likely yield immense long-term benefits as well [56]. Moreover, it appears safe to predict that an insightful dedicated collaborative effort 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 in this regard.

Indeed, all providers are urged to work collectively with their older at risk clients and families, to mitigate or avert the onset or perpetuation of poor bone status as well as 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 bone fractures and loss of the ability to function physically without assistance [21,57-60]. At the same time, the need for more precision based depression therapy and one reflecting the role of inflammation in depression that remains understudied should be pursued. As well, personalized care approaches that embody the complexity of both biology of aging and the role of diverse biopsychosocial factors is indicated in both hip fracture as well as depression and falls prevention realms [62]. In addition, the role of income in this regard plus reduced immunity post hip fracture should be acknowledged and addressed [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 at the outset.

Alternately, if no further progress or consensus is forthcoming as to the safety or the risk of chronic antidepressant use for older adults, 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 repair 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].

Concluding Remarks

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 (Figure 1).

In the interim, we also conclude insightful treatment of any emergent or trait depression via non pharmacologic means may well influence and enhance the adaptive capacity and interaction of the aging person with the environment more favourably than not at all ages regardless of the degree of prevailing physical or comorbid related impairments. Enormous health costs and social suffering and health resource demands would likely fall exponentially in this regard. As well, in light of the importance of continued vigilance in the realm of primary and secondary hip fracture and depression prevention highlighted by several authors, enhanced screening efforts and the recognition of individual variations in socio-demographics and frailty status, rules governing pharmacologic prescriptions and modes of therapy delivery may require re-examination. In the interim, sufficient evidence points to the fact needy as well as vulnerable older adults can be helped to deal more actively in the face of depressive feelings, and a direct or indirect fracture risk may be duly attenuated in light of interventions that harness the individual's strengths, account for their composite health status, personal situation and goals, environmental safety, food security issues, and social support profile.

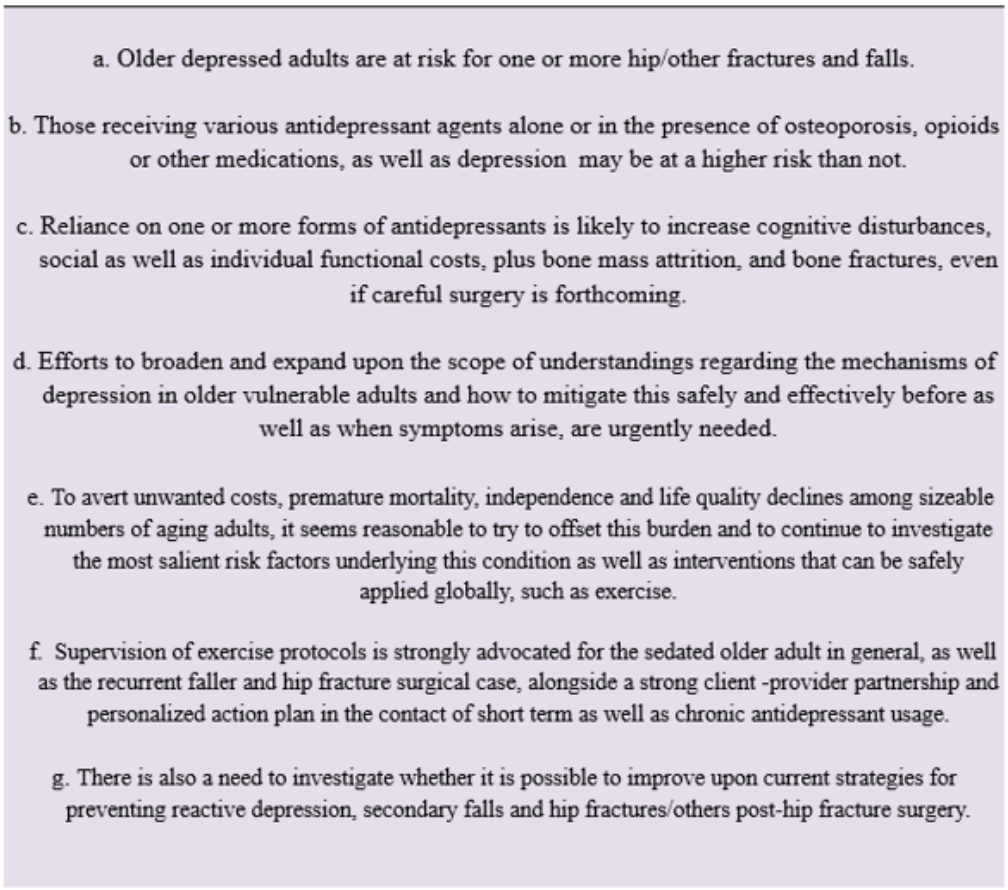

Figure 1

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Conflicts of Interest

None.

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