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Editorial

Late-life depression: a silent epidemic

Nilamadhab Kar

Abstract

Late life depression is extremely common, but it is often missed or undertreated even in secondary care. It affects not only the morbidity and mortality, but also has negative impact on prognosis of many illnesses. It is associated with most old age suicides which are on the rise. It cannot be overemphasized that depression in elderly needs to identified and appropriately treated. There are screening questions which can be used at all levels of health and social care, which can clarify need for further assessment. There are effective intervention strategies which can be provided even at a primary care level. In summary, efforts should be taken so that older adults with depression are identified early and adequately treated.

Key words

depression, diagnosis, older adults, screening, treatment

It is well known that depressive symptoms are common in older adults, however the extent of the problem is probably not realised by clinicians and health authorities. Reported prevalence rates range of clinical depression varies considerably, between 10% and 20% in different regions; with a median prevalence determined to be 10.3%.[1] In different community studies rates have been reported up to 45%.[2,3] However the concerns regarding depression do not stop at the syndromal depression, they also extend to the subclinical or subsyndromal depressive symptoms.[4]

Late-life depression is associated with many negative outcomes beyond the suffering, functional impairment and poor quality of life; it increases physical and mental morbidity, use of health services and mortality.[5] It is associated with poor prognosis of many physical and other mental illnesses and there is increased risk of many conditions including cancer, dementia and suicide. In addition depression is associated with reduced compliance with treatment and rehabilitation, prolonged length of stay in hospital or care settings and an increased likelihood of placement in care home.[6,7]

In spite of the fact that depression is common in older adults, it is missed frequently, even in those attending health care set ups from primary to secondary care. It is shocking to know that around 70 to 90% of depression in elderly is undiagnosed; this is especially common in presence of a medical illness to which the somatic depressive symptoms could be attributed.[8] Sometime these are brushed aside as 'just old age', which should not be happening.

It is important to increase the awareness about it, at all levels where there is a contact with older people; this may involve all medical set ups, social service departments, old age care homes and related voluntary non-governmental organisations.

Often the depressive illness may manifest with physical symptoms and patients may actually present with the latter. It is important to ask the relevant questions to check for depression. It may be encouraged to screen for depression wherever possible. It does need careful assessment to arrive at a diagnosis and to identify any contributing factors which are essential for developing an effective management strategy.

In the UK, National Institute for Health and Clinical Excellence (NICE) suggests asking two screening questions to people who may have depression, particularly to people with a past history of depression or a chronic physical health problem.[9] These are:

- During the last month, have you often been bothered by feeling down, depressed or hopeless?
- During the last month, have you often been bothered by having little interest or pleasure in doing things?

A response of 'yes' to either questions suggests the requirement for further assessment for depression. Studies suggest that these two screening questions perform well for older adults in various care settings, including acute medical care.[6] The two-question screen has a diagnostic performance comparable with other instruments.[10]

A validated measure for depression can also be added to the clinical assessment. There are many scales that can be used to assess depression specifically in the elderly.[10] A commonly used one is Geriatric Depression Scale;[11] and for patients with dementia, Cornell Scale for Depression in Dementia may be appropriate.[12]

There are many risk factors for depression associated with increasing age,[13] many of them are modifiable or people can be supported for those. There are effective management strategies ranging from psychological interventions, antidepressant drugs and augmenting medicines, electroconvulsive therapy and even transcranial magnetic stimulation.[14]

In summary, there should be not any missed diagnosis or under-treatment for late-life depression; efforts should be taken at all levels for its early diagnosis and adequate intervention.

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Short review

Challenges with lithium use in geriatric patients

Shiva Shanker Reddy Mukku, Palanimuthu T Sivakumar, Mathew Varghese

Abstract

Lithium is the one of the oldest psychotropic used for severe mental illness. It has well proven efficacy in young patients with bipolar disorder. The use of lithium requires regular monitoring of the serum level and checking for adverse effects. When it comes to elderly patients there is always reluctance to use lithium as first choice. The studies done so far in elderly bipolar disorder had proved lithium efficacy similar to valproate and lamotrigine. The pharmacokinetic changes associated with aging, along with decreased functional reserve in elderly put elderly at higher risk of adverse effects and toxicity. This review discusses the challenges of using lithium in elderly patients and the efficacy of lithium in late onset bipolar disorder.

Key words

bipolar disorder, elderly, lithium

Introduction

Lithium is the simplest chemical used as a medication. It was in mid-19th century after an influential paper by John Cade entitled "Lithium salts in the treatment of psychotic excitement" lithium made its entry in to psychiatry.[1] Mogens Schou in Denmark was the first to conduct a randomised trial of lithium in mania showing its effectiveness. Many studies conducted following this trial demonstrated the efficacy of lithium in mania and bipolar illness. Over a period of time, lithium emerged as an alternative to electroconvulsive therapy (ECT) in mania and became established as the drug of choice for maintenance treatment in bipolar disorder.[1] Lithium was introduced in India in late 1960. The first study on lithium use in India by Dube et al. evaluated the role of lithium use in 20 patients with hypomania and found that 95% patients showed significant improvement.[2] In elderly patients with mood disorder lithium is considered for acute management and for prophylaxis. Limited studies exploring the efficacy of lithium in late onset bipolar disorder / mania have demonstrated positive evidence of efficacy.[3,4] Despite this lithium is under used in elderly due to age related changes in pharmacokinetics, associated medical comorbidities and risk for adverse effects. In this review we discuss about the challenges associated with the use of lithium in elderly.

Methodology

We have searched for the articles related to lithium and elderly using different terms such as "lithium and elderly", "lithium and pharmacokinetic changes with aging", "lithium and bipolar, lithium and adverse effects in elderly", "lithium and toxicity in elderly" and "lithium and dosage in elderly". The search sites used are PUBMED and GOOGLE SCHOLAR.

Pharmacology

Lithium is a soft metal with an atomic number 3. It is monovalent cation with two stable isotopes 6Li and 7Li, the latter being more abundant in nature.[5] There are few preparations of lithium, among them lithium bromide and lithium chloride were used in the past but they fell out of use. Currently available are lithium carbonate, lithium citrate, lithium orotate and lithium aspartate. Lithium carbonate is commonly used followed by citrate preparation. Lithium is rapidly and completely absorbed after oral administration with bioavailability of 80-100%. It has no metabolism and excreted unchanged by the renal system. It elimination half-life is 18-36 hours.[6]

Clinical scenarios where lithium is used in elderly

There are few clinical conditions and scenarios where one has to choose or continue lithium in the elderly. The common scenario is where a person with bipolar disorder is on lithium for prophylaxis for many years and now has become elderly.[3,7] The second scenario is treatment of resistant depression where the response is partial or little to antidepressants. In this situation lithium is often chosen as augmenting agent.[8,9] Lithium is also used in the elderly in situations such as high suicidality,[10] and in the prophylaxis of steroid induced psychosis.[11]

Pharmacokinetic changes in elderly:

There are few significant changes in the way lithium is handled in the body with aging. The bioavailability of lithium is not altered with increasing age as lithium is not subject to first-pass metabolism. The composition of the body changes with aging, producing an increase in body fat, and a decrease in total body water. This lead to decrease in volume of distribution of lithium and higher level of serum lithium for a given dose compared to young adults. The clearance of lithium progressively

decreases with age due to decrease in glomerular filtration. This further leads to gradual increase in serum lithium level.[12,13]

Adverse effects in elderly

Lithium can contribute to side effects related to central nervous system, gastrointestinal system, `endocrine system, cardiovascular system and renal system as in young adults. Most of the studies done on tolerability of lithium have shown that elderly were more prone for side effects and toxicity.[3] It is also important to note that these side effects and toxicity can occur at lower doses compared to younger adults. A prospective study of 31 patients aged between 60 and 79 years treated with lithium reported electrocardiogram changes in 58%.[14] In a retrospective study assessing the efficacy and tolerability of lithium therapy in 43 patients aged 65 years and above, lithium toxicity was reported in 26% of patients.[15] Lithium use in elderly has been associated with higher frequency (32%) of elevated thyroid-stimulating hormone levels in elderly aged 65 to 85 years.[16] This is much higher compared to the 19% subclinical hypothyroidism reported in adults with lithium treatment.[17] The prevalence and severity of common side effects like fine hand tremor is also noted to increase with age.[18] However in a cross-sectional study, the frequency of nephrogenic diabetes insipidus in elderly was noted to be similar to young adults.[19]

Dosage requirements in elderly

In elderly lower serum concentrations of lithium should be maintained compared to young adults.[20] A study on the use of lithium in elderly has shown older patients (aged 70–79 years) required a dose 31% lower than those aged <50 years.[21] In an observational study on 110 lithium treated elderly patients, median serum concentration of lithium was 0.55 mmol/l.[22] In the same study mean daily doses of lithium carbonate was 464 ± 196 mg in patients taking angiotensin convertase enzyme (ACE) inhibitors, angiotensin receptor blockers, and/or thiazides, the dose was 384 ± 187. The dosage recommended amongst patients aged between 65 and 75 years ranges from 300 to 600 mg/day and rarely exceeds 900 mg/day. For patients aged more than 80 years or frail elderly, the dosage should range from 150 to 300 mg/day and should rarely exceed 450 mg/day.[13]

Efficacy of lithium in late onset mania/bipolar

The studies on lithium efficacy in elderly started in 1970. The initial studies were retrospective studies done by van der Velde; Hewick et al; and Himmelhoch et al.[23-25] They have used young bipolar patients as a control group and all these studies suggested that lithium efficacy decreases with age. The later retrospective study by stone et al, contrary to the previous studies said lithium use is effective in elderly and it reduced the number of admissions.[15] In the study done by Chen et al, where valproate was used as comparator, found the responsiveness to lithium is better than Valproate.[26] In a recently done retrospective study by Raja et al, included the 10 year follow-up data reported that the improvement in psychopathology is better with lithium compared to oxcarbazepine and lamotrigine.[27]

There only two prospective studies on the lithium use in elderly. In a study done by Murray et al, where lithium use is in elderly is compared with young bipolar patients reported that there is no decline in efficacy of lithium with ageing.[18] In another prospective study done by Schaffer and Garvey on 60 elderly patients who were put on lithium reported good response in most of them.[28]

A controlled double blind study done by Sajatovic et al, where the lithium was compared to placebo and lamotrigine found that lithium increases the time to relapse compared to placebo.[29] In the GERI-BD study by Young et al, lithium was compared to valproate in randomised controlled trial reported that there is significant decrease in YMRS score in two group.[30] The study that said there is no difference between the two groups.

Challenges with lithium in elderly

1. In elderly dehydration is very common due to age-related deficits in thirst mechanism. This will lead to increase in the serum level of lithium in elderly.[31]

2. Elderly patients have medical comorbidity apart from primary psychiatric disorder. Certain conditions such as hypertension, congestive heart failure and chronic kidney disease will alter the serum lithium level.[12]

3. Polypharmacy is very common in elderly for various medical conditions. Some of the drugs used in the elderly like diuretics, ACE inhibitors, calcium antagonists and non-steroidal anti-inflammatory drugs (NSAIDs) will alter the serum levels of lithium.[31,32]

4. Another problem that is commonly encountered in elderly is poor drug compliance. This is very challenging considering the number of medication elderly has to take for the medical conditions. The studies reported that complex regimen and high pill count reduces compliance.[33]

5. The last but not the least is the risk of overdose with lithium in elderly. The overdose might due to cognitive impairment or self-harm/suicidal attempt in the elderly.[34] Overdoses involving lithium could be a serious medical concern.

Recommendations for appropriate use of lithium

1. A thorough physical examination of the elderly patient before starting lithium is necessary. The examination should specifically check for goitre, hypertension and signs of congestive cardiac failure.

2. A review of all the medications taken by the patient is needed. Specifically look for NSAIDS, thiazide diuretics and ACE inhibitors.

Table 1: Studies done on lithium efficacy in elderly bipolar disorder

Sl No	Author	Study design	Mean age	Sample size	Lithium level	Comparator	Duration	Result
1	Sajatovic et al, 2005.[29]	Placebo controlled, double-blind trial	61.2	98	0.8–1.1	Placebo, lamotrigine	6-8 weeks	Lithium significantly delayed time-to-intervention for mania /hypomania compared with placebo
2	Young et el, 2010.[38]	Randomized controlled trial, double-blind parallel group clinical trial (geri-BD)	>60	224	0.80–0.99	Valproate	9 weeks	After 3 weeks of therapy, the YMRS scale scores for those who completed the study improved significantly. No significant differences between the two groups
3	Murray et al, 1983.[18]	Prospective	69	37	NA	Young bipolar patients	2 weeks	No decline in efficacy of lithium with age
4	Schaffer and Garvey, 1984.[28]	Prospective	69	14	0.50 to 0.90	NA	2 weeks	Most elderly patients responded to lithium
5	van der Velde, 1970.[24]	Retrospective	67	12	0.60-2.00	Younger bipolar patients	2 weeks	Lithium efficacy was inversely related to age
6	Hewick et al, 1977.[25]	Retrospective	50-84	46	NA	Younger bipolar patients	12 weeks	Efficacy was obtained at lower levels in elderly
7	Himmelhoch et al, 1980.[23]	Retrospective	63	81	NA	Younger bipolar patients	3-8 weeks	Advanced age has no effect on course or outcome
8	Stone, 1989.[15]	Retrospective	>65	43	0.50-1.00	Non lithium group	3.2 weeks	Decrease in no. of admissions in lithium group
9	Chen et al, 1999.[26]	Retrospective	69	59	0.30-1.30	Valproate group	2.3 weeks	Response rates better with lithium than valproate
10	Raja and Raja, 2014.[27]	Retrospective study	>75	NA	NA	Oxcarbazepine and lamotrigine	480 weeks	The improvement in psychopathology is greater with lithium than comparators

3. Few blood investigations are recommended prior to starting lithium, which include estimated glomerular filtration rate (eGFR) and thyroid stimulating hormone.[35] A baseline electrocardiogram to rule out heart blocks and bradyarrthymias should be done prior to starting lithium.[36]

4. Start at low dose and titrate gradually. It is safe to keep the dose between 300mg and 600mg. It is particularly not recommended to increase the dose beyond 900mg in elderly.[13,37]

5. Supervise medication intake in elderly especially with cognitive impairment.

6. Regularly monitor serum lithium level every 3 months, renal functions and serum electrolytes every 6 months.[36]

7. In lithium treated patients, during the acute medical emergencies, it is advised to liaise with psychiatry team in handling lithium use.

Conclusion

Lithium is the gold standard drug for patient not only in young onset bipolar patients but also a very effective drug in late onset bipolar disorder. Lithium does not lose its efficacy with aging. The usual rule of start low and go slow when comes to prescribing in elderly should be followed when using lithium. One should aim for slightly lesser dosage and serum level in elderly compared to younger patients. Regular monitoring and proper education of patients for signs of toxicity will ensure safety in elderly.

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Short Review

Antipsychotics in older people without dementia

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Abstract

Antipsychotic use in older adults, although debated, has an important role to play when treating illnesses such as schizophrenia and mood disorders. Risk-benefits need to be considered in view of multiple comorbidities and polypharmacy which are common in older patients. It appears that in patients appropriately treated with adequate doses, there is evidence to support the use of antipsychotic drugs.

Key words

Antipsychotic drugs, mood disorder, older adults, psychosis, risk

Introduction

The use of antipsychotic drugs in the older adults is a debated topic however they are commonly prescribed in the management of psychotic disorders. This is likely to increase in the future due to the expanding use of antipsychotic drugs in depression and bipolar disorders.

The challenge continues to be the effective and safe use of this class of psychotropic drugs in the context of polypharmacy, co-morbidity, pharmacokinetic and the pharmacodynamic changes that occur with age, and which increase the risk of side effects. A number of reports confirm that there is increased risk of death and cardiovascular side effects when antipsychotic drugs are prescribed for the management of behavioural and psychological symptoms in dementia. The use of antipsychotic drugs in dementia needs to be proportionate to risks and the distress associated with symptoms.[1]

The prevalence of psychotic symptoms in older people without dementia varies in community studies from 0.2% to 13.7%. Such symptoms can be associated with aggressive behaviour,[2] carer distress, neglect and even abuse of older adults.

Psychotic disorders in late life, including schizophrenia and bipolar affective disorders, can be divided into two groups - those who develop the illness as an older person and those who have had the illness for many years and have grown older with it.[2] There is need to consider people with long standing psychotic illnesses who are growing older and frailer on complex psychotropic regimes which may become riskier as age advances.

Efficacy and use of antipsychotic drugs in older people

Older adults, in general, show variable responses and increased sensitivity to medications.[3] Conventional and older typical antipsychotic drugs such as haloperidol, trifluoperazine, chlorpromazine and thioridazine improve psychotic symptoms in older adults but the data is limited.[2,4]

Atypical antipsychotic drugs like olanzapine, quetiapine and aripiprazole may also be effective for the treatment of psychotic disturbances in older adults.[5] A review focussing on the use of atypical antipsychotic drugs in elderly patients with dementia or schizophrenia showed that the use of atypical antipsychotic drugs is associated with significant improvement in psychopathology. Olanzapine, risperidone, quetiapine and aripiprazole have been shown to be effective in the management of both positive and negative symptoms in older adults with schizophrenia.[2] Clozapine, used in treatment resistant schizophrenia, is also effective at low doses for psychosis in Parkinson's disease.[4,5] Anecdotally its use is much less in the older than amongst younger adults due to risks associated with agranulocytosis and other side effects.[6]

Functional disorders in older adults, such as depression, are generally managed following the same guidance,[7,8] and regimes as those advised for younger adults. Despite vast expenditure on research in the area for younger adults, there is limited evidence in older people. Atypical antipsychotic drugs such as quetiapine, olanzapine and aripiprazole are licensed for use in the U.K. for different mood disorders. Quetiapine is used as an adjunctive treatment of major depression.[9] A recent review showed that a combination of antipsychotic and antidepressant drugs should be used as first line treatment in depression with psychosis.[10] Olanzapine showed good remission rates when used with sertraline for the treatment of psychotic depression in older people as did a combination of citalopram and risperidone in treatment resistant depression.[5,11]

Atypical antipsychotic drugs are used in bipolar affective disorder in younger people for the management of acute

presentations and as a mood stabiliser.[12] Clozapine, risperidone, olanzapine and quetiapine have also been found to be of benefit in older people with bipolar disorder.[13]

The National Institute of Clinical Excellence (NICE) recommends using haloperidol or olanzapine for the treatment of agitation in delirium.[14] Once again one needs to be aware of risks such as cerebrovascular events associated with prescribing these medications in the older people.

Problems associated with the use of antipsychotic drugs in older people

Older adults are more prone to side effects due age related changes in metabolism and physiology which could be made worse by co-morbidity and polypharmacy. The risks of using antipsychotic drugs in older people with dementia have been well established including an increase in cerebrovascular events and increased mortality. Older people with dementia have an increased risk of cerebrovascular disease, hip fractures, sedation and extrapyramidal side effects as well as falls, hypotension and impaired cognition.[4,15]

A retrospective cohort study showed a strong risk associated with ischaemic stroke with haloperidol and chlorpromazine compared to risperidone. This indicates that older, typical antipsychotic drugs are not immune from the cardiovascular risks usually associated with the newer atypical antipsychotic drugs.[16]

Another retrospective, observational cohort study among older people living in the community suggested the selection and dosing of certain antipsychotic drugs could affect their survival; haloperidol, olanzapine and risperidone showed a dose-response relation to mortality risk.[17]

Weight gain has been associated with clozapine and olanzapine as well as an increased incidence of type 2 diabetes mellitus and dyslipidaemia with risperidone. QT interval corrected for heart rate (QTc) increases in duration with increasing age. QTc prolongation is a well-known cause of life threatening arrhythmias and is associated with antipsychotic drugs.[18] This risk becomes greater when other non-psychotropic drugs are used to treat co-morbid illnesses that are common in older adults. The risk of agranulocytosis also can increase with the use of clozapine in older adults.[4,5]

Discussion

The use of antipsychotic medications continues to be a challenge in the older person, given the evidence of side effects and increased mortality and morbidity, especially when used in older people with dementia. However, unresolved symptoms of psychosis, depression or bipolar disorder cause great distress to the older person and their families and can result in physical ill-health, suicidal thinking and actions, and early institutionalisation.[2] Antipsychotic drugs when used appropriately can improve the older people's quality of life including their ability to function and should be considered when managing psychotic disorders.[5]

Trials such as the use of amisulpiride in late onset schizophrenia (ATLAS) which are currently in the stage of analysing data will provide much needed additional evidence on the risks and benefits of antipsychotics in this group of patients.[19] In the meantime however, it is appropriate to use antipsychotic drugs in older adults in the management of acute psychotic symptoms and the long-term management of psychotic disorders.

Antipsychotic drugs should be prescribed at the lowest possible effective dose for the shortest period of time after a carefully considered review of risks and benefits in the individual patient. For people who are stable on antipsychotics for more than 3 months, cautious withdrawal may be considered.[2]

Conclusion

It is important to be aware that there is not a blanket ban on the use of antipsychotics in the treatment of psychotic symptoms in the older adults. However, there is a need for a cautious approach and consideration of the appropriate antipsychotic drug after a careful analysis of the risks and benefits given the well documented adverse effects of such drugs.

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Research article

Factors affecting quality of life of older persons – a qualitative study from Bhubaneswar, India

Brajaballav Kar

Abstract

Background: The demographic pyramid of India is changing fast with a proportionately greater increase in the elderly population. It appears that the socio-economic and socio cultural transformation to higher individual freedom, hedonism, nuclear family, feminism, materialism etc. is catching older generation unaware. **Aims:** In the above context, the objective of the study was to identify the themes that are associated with the quality of life (QoL) of home-dwelling elderly. **Method:** In a qualitative study, a focus group discussion was conducted involving a group of elderly persons from different parts of Bhubaneswar, a city in Eastern India. The discussion was recorded and themes were analysed. **Results:** The observations indicated various themes which were influencing the QoL of older persons. Some of them were: physical mobility, financial issues, concerns regarding availability of appropriate care, expectations from family, changing family systems and traditional values, safety in the community, environment and legal issues. The discomfort in adjusting to the changes in societal attitude and behaviour and continued expectations from younger generations were having negative impact. Lack of appropriate services and care for the older persons was another concern. **Conclusion:** Specific factors identified in the study may help in finding appropriate remedial measures and instituting them. It appears that these concerns would need long-term, multi-dimensional and socio-cultural approach for their amelioration.

Key words

care, culture, elderly, factors, family, community, old age, quality of life

Introduction

India is aging fast; the age pyramid is undergoing a change with reduction in birth rate and increase in life expectancy. The decadal growth rate of elderly (above 60 years) between years 2001 to 2011 was 35.5 percent whereas during the same period the total population grew 17.7 per cent[1] The proportions of elderly population in 2011 census is given in Table 1.

Scenario in Odisha

Odisha, a state in India has higher proportion of elderly population compared to the national average. According to the 2011 census, 9.5 per cent of Odisha's population consists of the elderly. Table 2 indicates that decadal percentage distribution of elderly compared to India. It can be noticed that proportion of elderly in Odisha is consistently higher in all years except for male in 1981.

Programmes to improve the status of elderly

There are many efforts by various governmental and nongovernmental organisations to improve the status of the older persons. Government of India has promulgated several laws to ameliorate the difficulties faced by senior people. National Policy on Older Persons was announced by the Government of India in the year 1999. In the year 2007, Maintenance and Welfare of Parents and Senior Citizens Act, made it a legal obligation for children and heirs to provide maintenance to senior citizens and parents; provided simple, speedy and inexpensive mechanism for the protection of life and property of the older persons.[2] The National Policy of Senior Citizens was declared in the year 2011 identifying various areas for intervention.[3] Income security, pension scheme, public distribution system, microfinance, healthcare, safety, security, housing, productive aging, multigenerational bonding etc. were identified as primary focus areas. There are also e-governance initiatives dedicated for older persons with details of schemes for each state.[4]

The Government of Odisha promulgated Maintenance of Parents and Senior Citizens Rules in the year 2009 and State Senior Citizens Policy in the year 2016.[5] The state policy seeks to support financial security, healthcare, shelter, welfare, protect against abuse and provide services that can improve the QoL among elderly. Promotion of gerontology and geriatrics in the curriculum of social science departments in the universities, free of cost annual health check-up for all senior citizens above 70 years, programme to develop family values, sensitisation of young, old age homes in all cities and district headquarters, building short stay homes and a state council for senior citizens are some of the policy measures indicated.[6,7]

Table 1: 2011 census data for elderly (age 60+ years) in India									
Age group	60–64	65–69	70–74	75–79	80–84	85–89	90–94	95–99	100+
Male	1.54	1.07	0.80	0.37	0.24	0.09	0.05	0.02	0.02
Female	1.57	1.12	0.79	0.39	0.27	0.10	0.07	0.03	0.03
Total	3.11	2.18	1.59	0.76	0.51	0.20	0.12	0.05	0.05
Note: the numbers indicate percentages of total population in the age group.									

Table 2: Percentage distribution of adults aged 60+ years in different decades												
	Male				Female				Total			
	1981	1991	2001	2011	1981	1991	2001	2011	1981	1991	2001	2011
Odisha	6.13	7.15	8.05	9.40	6.66	7.23	8.47	9.59	6.39	7.20	8.26	9.49
India	6.40	6.69	7.10	8.20	6.38	6.71	7.83	8.93	6.49	6.70	7.45	8.58
Source: Census of India 1981, 1991, 2001, 2011												

The effectiveness of these actions towards the actual change in quality of life (QoL) of the elderly is to be evaluated.

Quality of life in the context of old age

There are numerous definitions of QoL, as well as methods of measuring it.[8] Literature indicates that the elderly people evaluate their QoL based on health, dependency, social contacts, material circumstances and social comparisons.[9] Health, financial situation, limitation in mobility, ability to perform everyday activity, trusting relationship with family and friends, good neighbourhoods etc. have been indicated to be impacting the QoL among elderly.[10] Along with these factors, other factors like social comparisons and expectations, personality and psychological characteristics (optimism-pessimism)have also been found to influence QoL; however, the socio-economic factors are found to contribute comparatively less to overall QoL.[11] Another research finds four dimensions (incorporating seven factors) that influence the QoL among elderly: quality of neighbourhood (availability of local amenities, and problems with crime and the physical environment); social networks and community participation (strength of family networks, and community participation); material conditions (income, wealth and housing conditions) and health.[12] One of the popular models to measure QoL takes control, autonomy, pleasure and self-realization (CASP-19 Model) as variables with 19 items.[13] The model and its variants have been used extensively for quantitative analysis in various studies. The usage of these models, however, is not without criticism.[14,15] QoL is also shown to be a context variant socio-economic dependent concept.[16]

Ageism is another distinct dimension which impacts QoL.[17] It is considered as the prejudice against future self.[18] The attitudinal difference between young and elder towards elderly is also documented in research.[19] While there is a moral obligation of younger generation to look after their older generation, the existence of ageism is an antithesis.

Appropriate care for the elderly is an extremely important aspect influencing their QoL. While normative role of women in family as primary caregiver is being challenged,[20] the issues related to provision of appropriate care for elderly is being seriously considered and discussed. Unfortunately abuse of elders at home and care settings and suicide are common knowledge and are major public health concerns.[21,22] Some of these could be linked to caregiving. Especially the caregiver role is stressful, which may lead to burden, burnout and elder abuse.[23,24]

Most of the Indian studies related to QoL in case of elderly persons are health related.[25,26,27] The few that are related to QoL in general have tried to investigate the concept in a specific context.[28,29,30] In general, most Indian elderly live at home rather than institutions for elderly such as old age homes. Although most elderly prefer to stay in their own homes, families may have issues and challenges to meet their needs. While living in own home may not reflect a better QoL; many factors including social ostracism of the family may preclude the choice of old age homes.[31] There are pros and cons for both family home or care home for elderly. A research indicates that home-dwelling elders have deficits of physical and cognitive functions, higher obesity etc., which decreases their QoL;[32] care home residents may miss their home and family. It is believed that a supportive community positively influences lives of elderly, at the same time it is claimed that mental health may not be influenced positively by neighbourhood social capital.[33]

There is much scope for improvement for the QoL of the aged in India. India ranks 73 out of 91 countries in QoL for the aged as per the 'global age watch index 2015' by Help Age International.[34] According to the report only fifty two per cent of the people feel socially connected wherein they have friends or relatives to count on in case of a problem; sixty six per cent of the elderly feel safe walking alone at night in their locality. Similarly factors like income security, pension income coverage, access to public transport and health etc. are well below the regional average.

There is scant literature on Indian studies on QoL of elderly persons especially focusing their perception

beyond the health related QoL. In a qualitative study, it was intended to find out the themes associated with the overall QoL of elderly persons living at home with their families. It was expected that this may improve the understanding of overall QoL beyond the specific health related issues.

Method

The focus group discussion (FGD) methodology was used to elicit themes related to QoL of older adults. Older persons from various parts of the city were invited. All of them were living with their family in their own homes. Some of them were community leaders and active in a range of social-charitable activities. There was no refusal to participate. The discussion group was formed with the participation of twelve older persons. The average age of the participants was 70 years and the standard deviation was 6.8 years. Participants communicated mostly in their mother tongue Odia. The discussion was moderated and facilitated by the Geriatric Care and Research Organisation (GeriCaRe) research team.

At the outset objectives of the discussion, basic ground rules and concept of QoL were explained. It was conveyed that the focus of the discussion was the perception of the older persons about their QoL and that of the community, the factors influencing it and what can be done to improve. The discussion was encouraged to be free-flowing without much of interruption to allow the themes to emerge and attended to. However, the first half of discussion was moderated to generate the themes and second half was for reflection regarding possible solutions to the hindrances to achieve a better QoL. No time limit was set for discussion so that it can be exhaustive and content saturation could be expected. The real life experiences, examples were explored.

The FGD was video recorded; it lasted for around 90 minutes. Transcripts of the discussion were prepared from the videotape, which was analysed for different themes, by individuals not part of the meeting to avoid any subjective influence.

Results

Various factors affecting the QoL were communicated by the older persons during the FGD. These were mentioned below arranged in two major sections: themes and suggestions for improvement. At the outset, a response of 5 in a scale of 1 to 10 of QoL from a participant set the tone of the discussion.

Themes related to QoL as emerged in the FGD

Physical mobility

Mobility was one of the major issues in older years, (some felt it specifically after around 70), although some people have the problem earlier. It was observed that lot of people now suffer from osteoarthritis. Difficulty in movements and dependence on others were dreaded. Some commented, “It is better to die when one is still mobile, rather than depend on others.” They felt a sense of helplessness to depend upon others for their mobility issues.

Financial issues

It was stated that financial security in old age is important; although many people may not have that, considering the increasing cost of living and health care, and have to depend upon their children. This emerged as an important theme for QoL in elderly. It is well known that many elderly struggle financially due to loss of income during later stages of life.

In addition to above, a diametric opposite scenario is the burden of wealth management in later life, if the elderly had to deal with these themselves. Lack of actual or perceived support from the younger generation in looking after the property and their management; or the dispute over the wealth were observed as worrisome for the elderly people. Forward financial planning, wills and other options are not yet common for most elderly.

Care provision

It is obvious that the care needs increase in the older age. Availability of the care and expectations of care from the family members had a great impact on the QoL of the elderly. Some participants described that at an advanced age ‘older adults behave like a child’, highlighting the changing care needs and the specific understanding that is needed from the carers. Many elderly rued that they are not getting same degree of care as they had given to their parents.

Traditionally women are considered to be the prime care giver in family. More specifically it is actually the daughters-in-law who took care of the elderly at home. However these are not being possible in many households for the fact that either they are working outside or living far away. Besides, there may be attitudinal issues was discussed which were frequently encountered according to the elders. Interestingly some participants felt that ‘daughters are more sensitive and caring towards the parents than the daughters-in-law’; and this view was obviously challenged by some other participants! Some lamented about the chasm that sometimes develops between sons and parents, following their marriage; and that they move away from the caring roles and responsibilities.

Besides above points, there was the issue of lack of paid carers. Sometimes nursing assistants were available, but many of them are not trained appropriately and are not regulated. The confidence level of the older persons on these carers was low.

Expectations from family

Many elders felt that when it is time for them to relax and enjoy their life as they always wished to, they realised that expectations are growing for them to keep contributing to the chores of daily life. The list seemed

long and examples included babysitting to attend family or social functions as a required do; while these activities were considered enjoyable but the responsibilities and expectations were burdensome which took away time from the activities that they would have loved to do. Sometimes it is just being at the family home to maintain and look after it, as children have moved out to live elsewhere for work or even comfort. These expectations increase the burden and make them feel bound to these activities; at the cost of their health and wellbeing.

Changing family systems

While the older persons acknowledged various factor leading the change of family structure from joint to nuclear, they were not at ease with it. They felt there was a drop in the level of communication amongst members and the emotional distance has increased. In the newer systems, they observed that the needs of elderly people get less priority and they feel neglected. This has led to a perception of insecurity among the older persons. Mismatch of priorities of younger generation and needs of the older people was apparent. Many misunderstandings were sourced at the generation gap in thoughts and actions.

Changing traditional values

Many participants were concerned that the values in the society are changing. One of them was that the respect for older persons is vanishing. Many were actually worried about the attitude of younger people towards the elderly.

Some of the elderly blamed the education system for the deterioration in the values of the younger generation. They perceived that the current education is unduly skewed towards orientating the youth to employment without having an appropriate emphasis developing human values and morality. It has increased the sense of competition, ambition and all that material attainments. They felt in the current form education has reduced the respect towards older adults; through the influence of external cultures. A balanced approach providing value education in the system would be an answer, but participants acknowledged helplessness to influence the education system in anyway.

With advancement of science and technology it is natural that the older adults would have lesser technological skills and education compared to younger generation; which is leading to a feeling of being left out or at times to humiliating dependence. The skill-gap is leading to a greater generational distance and probably contributing to disrespect for older persons. These can be dealt with moral and value based educational system which is not happening.

Safety in the community

The participants felt that the safety of the older persons outside has been massively compromised. Some felt it is even true in their own homes. They felt that the community ties are weakened, which is leading to a perception of insecurity even in one's own neighbourhood. People do not spontaneously help someone in distress. They opined as many people migrate to cities, the interaction between people living nearby, their social unity and responsiveness are becoming very limited. Interdependence is less these days. People are more formal and like to depend upon available services rather than seeking help from the community. There is a growing sense of insecurity among the older persons which is affecting their QoL. It was opined that the community must be cohesive, responsive and sensitive about the needs of elderly.

Environment

There were many concerns about the neighbourhood environment and civic amenities which were raised by the participants which affect their daily life. Uneven and unsafe roads, irregular water supply, traffic etc. were mentioned in FGD. While the basic support systems were not available, people did not mention any amenities which should be available specifically for the older persons.

Legal issues

Litigation processes are long drawn in India. Any pending litigation related to previous job role, property or family matters is a constant strain that continues long and reduces the feeling of wellbeing. Many times the litigations are due to lack of transparency, information, involvement of multiple parties and involvement of criminal elements. Litigation is anyway worrisome irrespective of age, but it is particularly difficult for elderly who have waited years to see an end to these processes.

Box 1: Major themes related to Quality of Life as emerged in the study

1. Physical mobility
2. Financial issues
3. Care giver issue
4. Expectations from family
5. Changing family systems
6. Changing traditional values
7. Safety in the community
8. Environment
9. Legal issues

Suggestions for improvement

Although participants were aware that there are no quick-fix solutions to these issues, some reflections were evident during FGD. The measures were rather broad than specific in nature.

Few participants indicated that a change in the "mind-set of younger generation" may help. Most felt that a simple act of regular and empathetic communication would make them happy. A higher degree of understanding between younger people as carer and the elderly was felt as a requisite for a better QoL. The role of moral education was repetitively stressed, suggesting that young people

should imbibe and display basic ethical and moral behaviour.

There was expressed helplessness to deal with the socio-economic changes. Activities such as regular communication among family members, giving priority to the needs of the elderly persons in the family etc. were suggested in the FGD to deal with family related factors of QoL. Participants felt a more cohesive and responsive community with greater degree of socialisation can help older people and improve their safety feeling.

The role of state was also highlighted. There were many expectations from the government. As financial security is one of the prime needs of elderly, the participants suggested that there should be no or less taxation on the pension of the elderly. Along with the need for specific policies, participants felt that different government departments need to coordinate activities for effective implementation of existing facilities, laws and safeguards. Services for senior citizens should be delivered in a time bound manner. Personnel of different departments should be empathetic towards the need and constraints of senior citizens. For example, many older persons felt that frequent representation for their pension related issues, creates a frustrating experience.

Discussion

The study used a focus group discussion method to evaluate factors that are affecting the QoL of older persons. Qualitative approaches like this are scant and they provide depth in the understanding the local issues. This approach may pick up themes that may not be apparent in the questionnaire based studies, with predetermined items. In addition, results from this method can form the basis of hypothesis formation and for further study in the emerged areas.

Use of FGD as an exploratory methodology is well established in literature. It is indicated that FGD does not distinguish between literate and non-literate or between verbose and reticent.[35] Specifically, this methodology has also been used in many studies involving older adults about their QoL,[36,37] describing successful aging,[38] perception of older adults.[39] social needs of elderly,[40] community structure and neighbourhood characteristics,[41] etc.

Elderly persons are experiencing social change, complexities in relationships and filial apathy in an unanticipated manner. Apathy of the family members influences a feeling of remorse among the elderly and they blame themselves for their plight. The helplessness is aptly captured when one participant says "Only God can change".

At a stage in old age where physical difficulties become more pronounced, dependency needs grow, the sense of helplessness becomes more acute. This specific feeling has a multi factorial contribution beyond just age. Complicated family dynamics, lack of communication, financial issues, insecure feelings in communities, inadequate social cohesion, and many other factors are often associated with a negative impact on QoL.

It is well known that boredom among elderly is also found to be a major concern.[42] They should have the scope of activities they like, rather than working to meet the expectations of family members as observed in this FGD by some of the participants. This may be addressed by older persons having a clear idea about what they would like to do, having opportunities for those activities, identifying the time for it and preparing for these well in advance. Having a wide ranging interest from personal to social activities will help. Younger generation may be able to help the older persons facilitating the process and reviewing their own expectations when relevant.

One of the interesting observations was that some of the older persons were hanging on to the roles and behaviours of the working life. They were acting and behaving with others as though they still hold the authority and responsibility. Many retired persons continued to live their earlier professional role and anticipated other people in larger community to treat them that way. For example, a retired secretary would feel, behave and expect to be treated as a secretary. This inertia of social and professional status creates tacit conflict and prevents effective socialization. Understanding the change and accepting the ageing process with grace, and being with others at an equal level will help socialisation more enjoyable and meaningful. Holding the previous work-related identity tightly may not allow the adjustment process to follow smoothly. Literature suggests that individuals have temporal orientation, get stuck in the past, which influences their general health;[43,44] and this may further extend affecting their recovery from any related trauma.[45] There is a scope of further research into the influence of status inertia on socialization. Strategies may be developed to support elders to deal with these issues for a better adjustment post retirement.

This FGD also brings out reverse dependency factor to the fore. In this case, family members, children who are not well-settled seem to live on the income of elderly person. It is in contrast to the existing concept of financial dependence of elderly on their children. A country based study indicates that elders with more resource capacities are more likely to give affective and nonfinancial support.[46] However this FGD suggested that children without financial independence were constant source of worry for the parents, irrespective of the existing resource.

Limitations

The views expressed by the participants are not generalizable to those from other regions or rural communities. Besides most participants were retired government officials so there was less of diversity in the background in relation to education and economic strata. Similar studies in other localities including rural areas and involving individuals from varied backgrounds will be helpful. As some of the participants had earlier familiarity and stayed in a particular locality, a social expectation

bias and social cognitive processes might have influenced the interaction,[47,48] which could be different if the group had no association beforehand.

Conclusion

Many of the factors influencing QoL reported in earlier research were substantiated by this study. Factors such as physical mobility, financial security, environment, care related issues, are well known. Factors like perception of lack of safety in community, legal issues, and changing family dynamics were negatively impacting on the QoL. It was observed that the discomfort and inability to adjust the changes in societal attitude and behaviour; and being stuck in past roles and expectations were other elements which were affecting the older persons.

Identification of these factors can help in considering appropriate remedial measures and instituting them. There is a need to develop the role of carers involving informal carers such as family members, to professional carers like nursing assistants to geriatric nurses, along with volunteers, as dependence on family members only is not helpful. Having opportunity for different activities to contribute meaningfully, community involvement, and providing the support in day-to-day life in a structured manner appropriate for the elderly will definitely improve the current status. Implementation of already existing policies and laws appropriately should be prioritised and the gap between service expectations and actual delivery should be minimized by the administration and government.

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Short report

English to Tamil translation and linguistic validation of Recovering Quality of Life scale (ReQoL)

Hema Tharoor, Subhashini Gopal, Nilamadhab Kar

Abstract

The linguistic validation process of the Recovering Quality of Life (ReQoL) scale to the Indian language Tamil was undertaken by a team of mental health professionals at Schizophrenia Research Foundation, Chennai. The process involved the recommended forward and backward translation and review. A pilot testing was done involving Tamil speaking patients using the self-administered ReQoL. The translated Tamil version of ReQoL was considered acceptable. A detailed summary of the process is presented in the paper.

Key words

English, Pilot testing, Quality of Life, ReQoL, Tamil, Translation,

Introduction

Quality of Life (QoL) is an important parameter frequently used in the health research.[1,2] There is a dearth of QoL measures in different languages, especially when it is rated by the patients.

Recovering Quality of Life (ReQoL) is a patient rated scale to assess the quality of life for patients with mental health conditions. It has been recently developed by the team in the UK.[3,4] It is a brief scale to assess the quality of life of people with various mental health conditions. It is used as an outcome measure which focusses on the process of recovery for users of mental health services. ReQoL has two versions, a brief 10 item measure and a 20-item measure. The scale is a self-rated tool suitable for persons aged 16 and above.

This scale was developed in English language. It is being translated into different Indian languages coordinated by Quality of Life Research and Development Foundation. This paper describes in detail the translation and the linguistic validation process of the brief 10 item ReQoL to Tamil language. Tamil is the local vernacular language spoken by people of Tamil Nadu State in India, Sri Lanka, and Tamil diaspora in many countries. Tamil is the first language for more than 70 million people and around 8 million use it as second language.[5]

Methodology

The translation from English to Tamil was carried out based on Translation and Linguistic Validation Process suggested by Oxford University Innovation.[6] The team included in-country investigator, coinvestigator, four independent translators, a proof reader all of whom were bilingual (Tamil /English). Five patients participated in the pilot testing phase.

The translation work commenced in July 2017. The translators were asked to focus on conceptual rather than literal equivalence, neutral wording and phraseology. The forward translators worked independently report no difficulties related to the translation process.

Reconciliation of the two forward translations into a single merged document was carried out and this consensus version was then translated back into English by two independent translators. Comparison of the back translation with the original English scale highlighted any discrepancies in the back translation which were then revised through discussion amongst the main project team.

Five Tamil speaking patients (three males and two females) aged between 24-38 years were then recruited from the outpatient services of Schizophrenia Research Foundation (SCARF), Chennai for pilot testing of the Tamil language scale. Following their completing the form, a detailed discussion regarding their comprehension and interpretation of the scale was carried out. The cultural relevance of translation was also discussed. These interpretations were studied against the original version of the measure and any remaining discrepancies were addressed through consensus. The process led to an agreement on the final Tamil version of the scale.

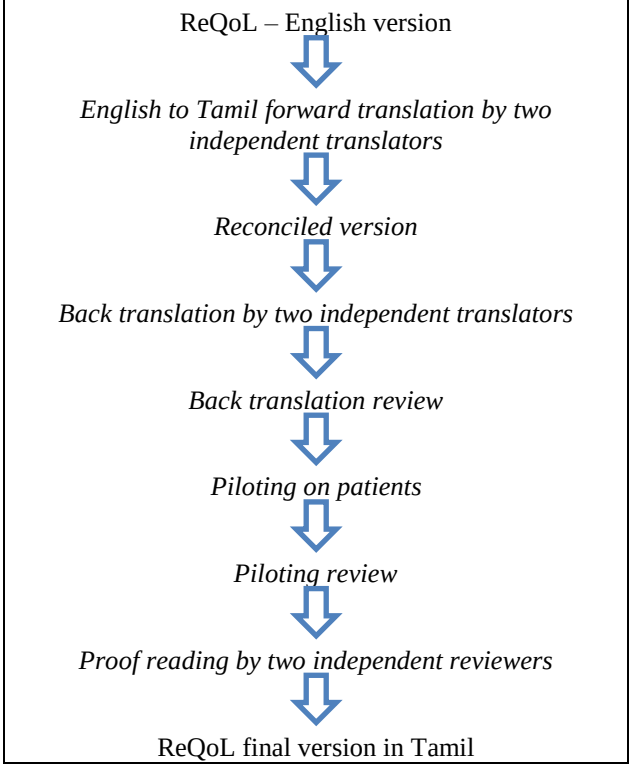
Results

A process diagram of the validation process is outlined in Figure 1. In line with the guidelines, all 10 items of the QOL scale along with the instructions for completing the measure were translated in to Tamil initially by two

independent translators. A detailed comparison of these two versions at Step Two revealed a total of 13 differences (excluding duplications) and these offered a basis for discussions at the reconciliation meeting at Step Three. Most of these differences were attributed to the choice of different synonyms of the same concept; i.e., a simple substitution of a word or phrase with another with the same meaning. For example, "*Santhosham*" and "*Magizhchi*" both words in Tamil were correct translation for "happy" but "*Santhosham*" was favoured as it was considered to be more suitable and understandable in the given context.

The reconciled version was back translated to English by two independent translators. There were 8 differences that were observed and these were addressed through discussion. Following this a consensus version was agreed for the pilot testing.

Figure 1: A process diagram of the translation process



Pilot testing

The Tamil version of the ReQoL was formatted into the approved layout. This was field tested in the outpatient department of SCARF on five patients. Three of them had a diagnosis of schizophrenia and two with a diagnosis of schizoaffective disorder and depression respectively. The range of time taken to complete the tool was 4-6 minutes. Two subjects felt the response option 'most or all of the time' in Tamil was difficult to understand as there is 'most or all' which was confusing. They suggested it to be as either 'most of the time' or 'all the time'. One subject felt sixth question "I thought my life was not worth living" was difficult to comprehend as it was asked in a negative way and suggested it can be changed as 'worth living' instead of 'not worth living' in Tamil. One subject suggested an alternative word for "enjoyed" in Tamil in question no 7.

The suggestions were discussed amongst the research team. It was felt that the change suggested by two patients regarding the responses was sensible and it was changed to "all the time". The second suggestion regarding question no 6 was not considered; as it would change the original meaning of the question. The suggestion regarding alternative word for "enjoyed" was accepted and replaced by "*Migavum Santhoshamaga"* a more suitable and culturally appropriate. The changes were further discussed and the version was submitted for proof reading.

Proof reading

Proof reading was conducted by an independent professional, who was a psychiatrist, fluent in Tamil, with adequate experience in translation related work and an author of a book on psychiatry in Tamil. The proof reader suggested two further changes, which are: in Question No 4 a change for the word "things" as *"Velaigalai"* instead of *"Seyalgalai"* and in Question no 10 to change the order of the words in the sentence.

Following discussion the final version of the tool was developed incorporating the changes through consensus and it was agreed that it was an acceptable translation of ReQoL in Tamil which can be used for patients in psychiatry. The final version of the tool was typed in to the original format of the ReQoL.

Conclusion

The entire process of forward translation, back translations, piloting and proof reading was found to be a meaningful exercise in achieving an acceptable QOL scale for Tamil speaking patients with mental illness. Based on the patient's feedback and multiple reviews developing a consensus it appears that the final version is a refined and clinically useful measure. Further work of validating the translated version in a larger sample of psychiatric patients with different diagnostic profile is recommended.

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Case report

Clozapine versus other neuroleptics induced tardive dyskinesia in an elderly patient

Javed Ather Siddiqui, Shazia Farheen Qureshi, Khider Abdel Rahim

Abstract

Tardive dyskinesia (TD) is one of the most troublesome extrapyramidal side effects of neuroleptic medicine. The development of TD on clozapine, a second generation antipsychotics is rare. There are some case reports of TD induced or worsened by clozapine therapy, but clozapine still remains a viable treatment option for patients with antipsychotic induced TD as well as withdrawal dyskinesia. We report a case of 60 year old male patient with the diagnosis of schizophrenia for 25 years who developed TD, around one year after the initiation of clozapine therapy. Clozapine was replaced by amisulpride however it has to be reintroduced as psychotic symptoms continued. It was not clear if clozapine had a direct effect on inducing TD or it was the effect of prolonged exposure to previous antipsychotics. It is probable that clozapine may induce TD in rare cases; however treatment goals need to be balanced between symptom control and side effect management.

Key words

Clozapine, extrapyramidal side effect, neuroleptics, tardive dyskinesia

Introduction

Tardive dyskinesia (TD) is described as stereotypic, choreiform or athetoid involuntary repetitive and purposeless movements. It prominently affects head, neck, shoulders and trunk. TD was coined by Faurbye and colleagues in 1964; it has been associated with use of classical antipsychotics in treatment of schizophrenia since 1950s.[1]

The second generation antipsychotics are less associated with TD as compared to first generation antipsychotics because of their "atypical" effect on dopamine receptors.[2,3] The well-known risk factor for TD is age; and other than age, gender, race, neurological disease, high dose of antipsychotics, mood disorders, negative symptoms, alcohol and other drug use and diabetes mellitus and prolonged use of antipsychotics are also known to contribute towards development of TD.[4-6] There are some studies which suggest that atypical antipsychotics are less risky in terms of TD; but there are issues with comparators, which have used high doses of haloperidol in comparisons.[7,8] The prevalence of TD increases with increasing age, it is 29% in elderly patients receiving dopamine antagonist treatment for 3 months and 26-67% in patients undergoing long-term treatment.[9,10]

The criteria of TD is the symptoms must develop after at least 3 months of exposure to dopamine antagonist (or 1 month in patients with age 60 or more) or within 4 weeks of withdrawal from oral medication (or 8 weeks of withdrawal from depot medication) and should persist for at least 4 weeks after discontinuation of offending drug.[11]

Pathophysiology of TD is poorly elucidated. The different mechanisms postulated are; prolonged blockade of post synaptic dopamine receptor,[12,13] dopaminergic hypersensitivity,[14] gamma-aminobutyric acid (GABA) dysfunction,[15] cholinergic hypofunction and excitotoxicity.

In psychiatry commonest cause of TD is antipsychotics and other causes are antidepressants, anticholinergic, lithium.[16] Other medications that can cause TD are antiemetics, antiepileptics, calcium channel blockers, sympathomimetics and antiparkinsonians.[16]

Clozapine is a diabenzodiazepine derivative, is less likely to cause TD due to low affinity for striatal D2 receptors and to the inhibition of the presynaptic 5HT2A receptors;[17] and it may even ameliorate existing TD.[18]

Although there are many studies regarding the improvement of TD following introduction of clozapine; but few cases report a development or worsening of TD during clozapine treatment.[19] Clozapine has been reported to be effective in suppressing nearly 60 percent of TD syndrome especially those with dystonic features and considered as effective treatment for it.[20] Most of the reported dyskinesia seems to be related to the withdrawal of previous medications rather than the beginning of clozapine treatment.[21,22] TD is a group of disorders which are due to prolonged use of neuroleptics, occurring during on medication or shortly after cessation of medication.[23]

We report a case where TD was observed after around a year of starting clozapine. However the patient had prolonged use of other antipsychotic drugs for many years. The possibility of clozapine inducing TD and the contributing factor of other neuroleptic contributing to it are discussed.

Case report

A 60-year old, married male patient, diagnosed with schizophrenia was admitted to a chronic rehabilitation ward for 25 years. There was no significant past or family history of psychiatric illness. His medical history is unremarkable. He was treated with multiple typical and atypical antipsychotics. More recently these were chlorpromazine 500 mg per day which was changed to haloperidol up to 15 mg per day along with benztropine 2 mg once daily. He had anger outburst, irritability, hearing voices and persecutory delusions. In addition to this, he was also given sodium valproate 1000 mg per day and fluphenazine decanoate 25 mg IM two weekly last 4 years to control his psychosis. Above all treatments led to minimal response, so haloperidol was slowly tapered and stopped along with fluphenazine over two weeks. All routine investigations such as complete blood count, liver and kidney function tests and electrocardiogram were carried out as a pre-clozapine work up.

It was decided to start clozapine because symptoms were resistant with previous medications. The dose of clozapine was gradually titrated to 600 mg per day over a period of two months as per guidelines; and continued over a one year period. Patient had a significant improvement in his delusion and his aggression. One year after initiation of clozapine mild repetitive involuntary movement of jaw and both hands was observed. The abnormal movements continued and gradually worsened. His abnormal involuntary movement scale[24] (AIMS) score was 24. Patient was also assessed on Naranjo adverse drug reaction probability scale;[25] and the score was 6, suggestive of possible adverse drug reaction. Clozapine gradually tapered and stopped over a 2 months. He was commenced on amisulpride and increased up to 600 mg per day along with sodium valproate 1000 mg per day. Over a 5-6 months period revealed an improvement of his TD and its AIMS score came down to 14; but no improvement was observed in his psychosis; he continued remain deluded with frequent aggression. Clozapine was restarted. Amisulpiride was tapered and stopped. Clozapine was increased up to 300 mg within two months. Patient was improved in his psychosis and TD movements were greatly reduced.

Discussion

Tardive dyskinesia is an important clinical problem which has been shown to have a relationship with the dopamine hypersensitivity in basal ganglia. TD can be hard to diagnose and the symptoms might not appear until months or years after start of antipsychotics. TD can be prevented by early recognition and discontinua tion of the antipsychotic medication if this is clinically possible. Atypical antipsychotics like amisulpride and olanzapine have a reduced liability for inducing TD. Our patient did not have any dyskinetic movements until one year of initiation of clozapine when he developed dyskinesia of moderate severity. One of the reasons for worsening of TD in clozapine treated patients could be due to previous treatment with typical antipsychotics like haloperidol and long acting fluphenazine decanoate. Although rarely reported, there is a probability of clozapine inducing and worsening TD, which has been reported.[26,27] Other possible contributing factor in this case could be advanced age, exposure to high neuroleptic dose, long history of antipsychotic use and mood disorder.[5] Greater illness severity at baseline and poor response to typical antipsychotics are also reported to be predictors of risk of TD.[28] In this reported case the patient was an elderly male who had been exposed to multiple typical and atypical antipsychotics with high dosage and had a long history of antipsychotics use spanning more than 25 years, along with mood stabilizer. These risk factors may have increased the vulnerability of the patient towards development of TD.

Conclusion

This article suggests that long term treatment of neuroleptic medications may lead to TD even after change of antipsychotic drug to clozapine. Atypical antipsychotic drugs and clozapine may have decreased risk for TD, but it appears that they do not completely eliminate the risk. However, the prevalence of clozapine induced TD is very low, its severity is relatively mild, with no or mild self-reported discomfort; suggesting that clozapine should still be considered in patients with risk of TD. Based on the above it may be recommended that regular examination for TD should be performed in all patients taking antipsychotics including clozapine on a long-term basis.

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Insight

Introducing the PHE National Prevention Concordat for Better Mental Health

John Hudson

Introduction

Just over a month ago, Public Health England (PHE) released the Prevention Concordat for Better Mental Health.[1] This "concordat" aims to help local authorities, Health and Wellbeing Boards, Clinical Commissioning Groups (CCGs) and Sustainability and Transformation Plans (STPs) take practical steps to prevent mental health problems and promote better mental health; these commitments were featured earlier in the NHS England Five Year Forward View for Mental Health.[2]

This Concordat represents a very ambitious programme of work with a prodigious scope, and is not one single document. It instead comprises an inter-related collection of evidence-based research and tools from the UK's leading authorities on the various aspects and causes of mental health problems and mental health inequalities. As such, all that can be attempted here is to present a brief "potted summary" introducing the huge compass of this body of work, with links to the original documents and tools. Certain items of particular local interest will be noted in passing. Inevitably, any such quick summary will do the full work some injustice.

Evidence Summaries

Where to begin? There are several high-level summaries of the best available evidence:

The University College London (UCL)'s Institute of Health Equity, as led by led by Professor Sir Michael Marmot, has compiled a broad overview of the many and various determinants (socio-economic, environmental, psychological and psychobiological etc.) behind mental health outcomes and inequalities.[3]

Local examples: the Sandwell model of reducing health inequalities (p.39) and the Coventry Acting Early programme (p.43).

The King's Fund contribution to the collection represents an audit of transferable best practice, derived from examination of work in 35 local areas on mental health promotion and / or prevention of mental ill-health.[4]

A JSNA Toolkit: Supported By Mental Health Data

In tandem with examination of local health and wellbeing strategies, there is the PHE's Better Mental Health: Joint Strategic Needs Assessment (JSNA) Toolkit. This draws on national data about mental health prevalence, risk, preventive or protective factors and planning the availability of healthcare services. There are numerous components in this toolkit, each involving different approaches to the data:

- A top-level introduction.[5]
- Concerning the social and contextual determinants of mental health inequalities.[6]
- Concerning the identification of specific population groups and their needs / unmet needs.[7]
- Concerning maternal / perinatal mental health problems.[8]
- Concerning the mental health of children and young people.[9]
- Concerning the mental health needs of the working age population.[10]
- Concerning the mental health problems of older people.[11]

Local interest: links to copious local-level data from the National Mental Health Intelligence Network (NMHIN).

Return on Investment Resources to Support Cost-Effective Commissioning of Local Mental Health Services

The London School of Economics and Political Science's Personal Social Services Research Unit has been largely responsible for producing the following tools. There is, firstly, a theoretical exploration of the barriers (and the facilitators) in commissioning cost-effective services to improve mental health and wellbeing.[12] The main report, is about return on investment (ROI) as a guide for local commissioning.[13] There is also a practical user guide, explaining how to operate the mental health ROI toolkit.[14]

Local interest: links to copious local-level data from PHE's National Mental Health Intelligence Network (NMHIN).

Prevention Planning for Local Areas

There is an overview of guidance to local organisations on prevention strategies for improving mental health in the community.[15] The full prevention planning report goes into greater depth.[16]

Local examples: the Thrive West Midlands: an action plan to drive better mental health and wellbeing in the West-Midlands, from West Midlands Combined Authority (2016) (p.33) and the Warwickshire Public Mental Health and Wellbeing Strategy regarding measuring success in Warwickshire using the Warwick-Edinburgh Mental Well-being scale (WEMWBS) (p.41).

Concluding remarks

The PHE National Prevention Concordat for Better Mental Health defies simplified description, which may account for why so little has been written on the subject to-date despite the importance of the topics covered. Mental health problems are estimated to cost the economy £105 billion per year.[2] It is hoped that the above summary, and supporting links to the full-text (below), will provide an easily accessible gateway into the components of this somewhat complex body of work. There is an infographic which clarifies the concordat's general aims.[17] The reader wishing to pursue the above-mentioned components from a different angle might find no better "launch pad" for their explorations than the PHE's own press-release.[18]

Acknowledgement

This "mini-update" is the first of a series of brief current awareness pieces, from the Oak Library, based at the Beeches Education Centre, Penn Hospital. Wolverhampton, UK.

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Creative Expressions

Dreamy Scotland

Subhalaxmi Das

After retiring from active working life, I have taken a lot of hobbies and charity work, painting is one of them. Depending upon the weather condition, I spend a little time with this hobby.

Painting is relaxing, therapeutic, inspiring and an enjoyment of life. This is a good way of spending time, helping in some way to reduce mental stress and tension, anxiety and worries of modern life. It also helps to overcome the psychological depression and gives a new zest to life.

Experiencing the beautiful countryside and surrounding environment, like changeable Scottish weather, the beauty of gardens, lochs, mountains, rivers, seas and wild life are the sources of my creative art.

My emotive paintings are in response to the landscapes around me, they are accentuated by the use of acrylic colours in an experimental way. Landscape paintings have more connection with the world that we live in, whether they are urban or rural. Landscapes are the painter's vision of what the world is. They might not show the world the way others see – sometimes it is as if you are creating your own universe. This painting is one of many famous lochs and castles, situated in the middle of Scotland.

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Creative Expressions

On the way to haat

Arati Mishra

The evening mood with people going to haat (market) on a serpentine path in the village is captured in this picture. Haat are not just for trading goods or purchasing essentials, it is a meeting place, a time for fellowship and building connections. Sometime people make up for the lost time. There is certain nostalgia about these village markets. Although they still continue in many parts of the world as lively as before; some may have lost their enchanting idleness.

Artist information: Arati Mishra. Artistic style: Oil on canvas.

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Health Information Capsule

Know your numbers for metabolic disorders: obesity, diabetes, hypertension, high cholesterol

Body Mass Index (BMI) kg/m^2

- Severe underweight: < 16
- Moderate underweight: 16·0 – 16·9
- Mild underweight: 17·0 – 18·49
- Normal range: 18·5 – 24·9
- Overweight: ≥ 25
- Pre-obese: 25 – 29·9
- Obesity: ≥ 30

Categories for Asian population[1]

- Underweight: < 18·5
- Increasing but acceptable risk: 18·5 – 23
- Increased risk: 23 – 27·5
- high risk: ≥ 27·5

Waist circumference (WC)

(Central / abdominal obesity)
Cut off values for increased risk[2]

- Men:
  European: 94 cm
  Asian: 90 cm
- Women: 80 cm

Blood Pressure (BP)

- Normal: < 120 and < 80:
- Prehypertension: 120 – 139 or 80 – 89
- Stage 1 hypertension: 140 – 159 or 90 – 99
- Stage 2 hypertension ≥ 160 or ≥ 100

Glucose

Fasting glucose[3]

- Normal: < 108 mg/dL [< 6.1 mmol/l]
- Prediabetes: 108-125 mg/dL [6.1 – 6.9 mmol/l]
- Diabetes: ≥ 126 mg/dL [≥ 7.0 mmol/l]

2-Hour post-load glucose

- Normal: < 140 mg/dL [< 7.8 mmol/l]
- Prediabetes: 140-199 mg/dL [7.8 – 11.0 mmol/l]
- Diabetes: ≥ 200 mg/dL [≥ 11.1 mmol/l]

Random glucose

- Normal: < 200 mg/dL [< 11.1 mmol/l]
- Diabetes: ≥ 200 mg/dL [≥ 11.1 mmol/l]

Lipid profile

Total cholesterol

- Desirable; < 200 mg/dL [≤ 5mmol/L for healthy or ≤ 4mmol/L for those at high risk][4]
- Borderline high: 200-239 mg/dL
- High: > 240 mg/dL

Triglycerides:

- Normal: 10-150 mg/dL
- Borderline high: 150-199 mg/dL[5]
- High: 200-499 mg/dL
- Very high: 500 mg/dL

LDL cholesterol:

- Desirable: < 130 mg/dL [≤ 3mmol/L or 2mmol/L for those at high risk]
- Borderline high: 130-159 mg/dL
- High: 160-189 mg/dL

HDL cholesterol: > 40 – 60 mg/dL [≥ 1mmol/L]

VLDL: 2-30 mg/dL[6]

Cholesterol: HDL ratio: ≤ 4

Values may vary depending upon laboratory, method, clinical risk profile and reference studies.

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Manuscript Preparation

Instructions for authors

Introduction

The *Journal of Geriatric Care and Research (JGCR)* is the official publication of Geriatric Care and Research Organisation (GeriCaRe). The *JGCR* publishes original work in all fields of geriatrics, contributing to the care of elderly. Theme based special issues focusing one aspect of care are also published periodically. Manuscripts for publication should be submitted via email <jgcr.gericare@gmail.com>.

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The *JGCR* follows in principle the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals by the International Committee of Medical Journal Editors (ICMJE) and the Committee on Publication Ethics (COPE).

Contributions for *JGCR* are accepted for publication on the condition that their substance (whole or part) has not been published or submitted for publication elsewhere, including internet. If there are other papers from same database, then the authors must send all details of previous or simultaneous submissions.

All submitted articles are peer reviewed. At the first step, the articles are assessed by the editorial board for its suitability for the formal review.

If found suitable, the manuscripts undergo a double-blind peer review. The suggestions received from reviewers are conveyed to the corresponding author. When appropriate, the author is requested to provide a point by point response to reviewers' comments and submit a revised version of the manuscript.

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Authorship

Authorship credit should be based only on substantial contribution to:

- Conception and design, or analysis and interpretation of data
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All these conditions must be met. Participation solely in the collection of data or the acquisition of funding does not justify authorship. In addition, the corresponding author must ensure that there is no one else who fulfils the criteria but has not been included as an author.

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The corresponding author must sign the contributors form on behalf of all the authors, once a manuscript has been accepted. This author must take responsibility for keeping all other named authors informed of the paper's progress.

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All submissions to the *JGCR* (including editorials and letters to the Editor) require a declaration of competing interest. This should list fees and grants from, employment by, consultancy for, shared ownership in, or any close relationship with, at any time over the preceding three years, an organisation whose interests may be affected by the publication of the paper.

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Patient consent and confidentiality

A statement regarding informed consent must be included in the methodology. Studies involving humans must have written informed consent from the patients. Where the individual is not able to give informed consent for lack of mental capacity, it should be obtained from a legal representative or other authorised person. If consent cannot be obtained because the patient cannot be traced then publication will be possible only if the information can be sufficiently anonymised. Anonymisation means that neither the patient nor anyone could identify the patient with certainty. Such anonymisation might, at an extreme, involve making the authors of the article anonymous. If the patient is dead, the authors should seek permission from a legal representative or other authorised person as a matter of medical ethics.

The authors should check the specific laws in their country. Contributors should be aware of the risk of complaint by individuals in respect of breach of confidentiality and defamation; and must archive the signed informed consent form.

The process used to assess the subject's capacity to give informed consent and safeguards included in the study design for protection of human subjects should be mentioned.

Publication Ethics

Authors should consider all ethical issues relevant to publication. This includes (but not restricted to) avoiding multiple submission, plagiarism and manipulation of figures/data. Any concerns in this regard must be brought to the attention of the Editor and these will be investigated by procedures recommended by the Committee on Publication Ethics (COPE). If conclusive evidence of misconduct is found, the *JGCR* undertakes to publish a correction or retraction of article as necessary.

Clinical trial registration

All clinical trials must be registered in a public trials registry. This is a requirement for publications of the trials.

Qualitative research

The *JGCR* welcomes submissions of reports of qualitative research relevant to the scope of the care of elderly.

Type of manuscripts

Research article

The research article should normally be between 3000 and 4000 words in length (excluding references, tables and figure legends). Only the essential references should be given, preferably not more than 25 beyond those describing statistical procedures, psychometric instruments and diagnostic guidelines used in the study. Authors are encouraged to present key data within smaller tables in the appropriate places in the running text. This applies also to review articles and short reports.

A structured abstract not normally exceeding 150 words should be given at the beginning of the article, incorporating the following headings: Background, Aims, Method, Results, and Conclusions.

Key words: Up to six key words should be provided. Please use Medical Subject Headings (MeSH) as key words.

Article should have Introduction, Method, Results and Discussion sections. Authors may use relevant subheadings under these sections. Introductions should normally be no more than one paragraph; longer ones may be allowed for new and unusual subjects. The Discussion should always include limitations of the paper to ensure balance. A paragraph of practical implications of the observations is encouraged.

Short report

Short reports (brief communications) are based on original research, observational or evaluation studies, clinical audits etc. These are structured as research articles and require an unstructured abstract of one paragraph, not exceeding 100 words. The report should not exceed 1500 words (excluding references, tables and figure legends) and contain no more than one figure or table and up to 10 essential references beyond those describing statistical procedures, psychometric instruments and diagnostic guidelines used in the study.

Case report

Case reports and series require up to 100 word abstract, and the length should not exceed 1000 words (excluding references, tables and figure legends). The written informed consent of the individuals must be obtained and submitted with the manuscript. Please refer to patient consent and confidentiality paragraph for further detail. In general, case studies are published in the *JGCR* only if the authors can present evidence that the case report is of fundamental significance and it is unlikely that the scientific value of the communication could be achieved using any other methodology.

Review

Systematic and narrative review articles should be structured in the same way as research article, but the length of these may vary considerably, as will the number

of references. It requires a structured abstract like that of research articles.

Short review

These articles focus on highly topical issues based on evidence. Professional perspectives, viewpoints, commentary and opinion are included here. It can also include clinical review relevant to the practitioners. These articles are usually more broad-based than editorials. They can include tables and figures. Usual length is around 1500 words (excluding references) with an unstructured abstract up to 100 words.

Editorial

Editorials require an unstructured summary of one paragraph, not exceeding 50 words. Editorials should not exceed 1000 words and may contain no more than one figure or table and up to 10 essential references.

Letters to the Editor

Letters may be submitted either as responses to published articles, to inform about particular situation or raise pertinent issues, as expert opinion or as general letters to the Editor. Letters may be up to 400 words in length with a maximum of 5 references.

Insight

These articles include variety of topics which may reflect an individual perception, involvement or contribution to geriatric care. It can include good practice examples, inspirational experiences and highlight neglected areas. Essays in descriptive prose can be submitted on any topic related to geriatric care. These are usually written by a single author but a second author may be included occasionally. The length of the articles may vary considerably depending upon the topic and may be up to 2000 words excluding references. An unstructured summary of around 100 words is preferred but not mandatory. Use of subheadings is encouraged.

First person account

In first person accounts *JGCR* publishes experiences of older persons or their care providers about the care and concerns of the elderly, that can be considered significant and provide learning points for others.

Columns

These comprise a range of materials considered to be of interest to readers of the *JGCR*. This section includes reviews on book, film or web resources as short articles up to 400 words. Some other examples include News regarding developments that can influence the care of elderly, poems, paintings, photographs, quotations, information about important internet links, etc. These articles are published individually or as fillers at the end of other articles where space allows.

Preparation of Manuscripts

Prepare article in Word, A4 size page, with 1 inch margin, double spaced throughout.

Article information page

1. Type of manuscript:
2. Title of the article: Brief and relevant
3. Running title: not more than 50 characters;
4. Name of the authors: (underline Last name)
5. Details of authors: academic degrees and institutional affiliations, professional address, email
6. Corresponding author: name, address, phone, fax, and e-mail
7. Contributions of each author:
8. Word count for abstract:
9. Word count for the text (excluding references):
10. Number of photographs/images (to be provided separately in JPEG files):
11. Acknowledgement:
12. Competing interests:

No identifiable details beyond this page.

Article Text pages

The article text pages do not contain any identifiable information, for a blind review. It should contain: Title of the article, Abstract and Key words (depending upon the article type) and the Text of the article.

References

Authors are responsible for checking all references for accuracy and relevance in advance of submission. All references should be given in superscripted number in the order they appear in the text. Place superscript reference number after commas and full stops, unless the superscript is attached to authors name or title of book/database. At the end of the article the full list of references should follow the ICMJE style. If there are more than six authors, the first six should be named, followed by 'et al'.

Example of journal articles:

The authors' names are followed by the full title of the article; the journal title abbreviated according to the PubMed; the year of publication; the volume number; (issue number in bracket); and the first and last page numbers.

1. Singh SP, Singh V, Kar N, Chan K. Efficacy of antidepressants in treating the negative symptoms of chronic schizophrenia: meta-analysis. Br J Psychiatry. 2010; 197(3): 174-9.

References to books should give the names of any editors, place of publication, editor, and year. Examples are shown below.

2. Murray PR, Rosenthal KS, Kobayashi GS, Pfaller MA. Medical microbiology. 4th ed. St. Louis: Mosby; 2002.

3. Meltzer PS, Kallioniemi A, Trent JM. Chromosome alterations in human solid tumors. In: Vogelstein B, Kinzler KW, editors. The genetic basis of human cancer. New York: McGraw-Hill; 2002. p. 93-113.

4. Foley KM, Gelband H, editors. Improving palliative care for cancer [Internet]. Washington: National Academy Press; 2001 [cited 2002 Jul 9]. Available from: http://www.nap.edu/books/0309074029/html/.

5. Cancer-Pain.org [Internet]. New York: Association of Cancer Online Resources, Inc.; c2000-01 [updated 2002 May 16; cited 2002 Jul 9]. Available from: http://www.cancer-pain.org/.

Personal communications need written authorisation (email is acceptable); they should not be included in the reference list. Unpublished doctoral theses may be cited (please state department or faculty, university and degree). No other citation of unpublished work, including unpublished conference presentations, is permissible. Further information about the references can be availed from http://www.nlm.nih.gov/bsd/uniform_requirements.html

Tables

Tables should be numbered and have an appropriate heading. The tables should be mentioned in the text but must not duplicate information. The heading of the table, together with any footnotes or comments, should be self-explanatory. The table should be placed at the desired position of the manuscript. Authors must obtain permission from the original publisher if they intend to use tables from other sources, and due acknowledgement should be made in a footnote to the table.

Figures

Figures should be clearly numbered and include an explanatory legend. All figures should be mentioned in the text and the desired position of the figure in the manuscript should be indicated. Authors must obtain permission from the original publisher if they intend to use figures from other sources, and due acknowledgement should be made in the legend.

Abbreviations, units and footnotes

All abbreviations must be spelt out on first usage and only widely recognized abbreviations will be permitted. Abbreviations usage should be consistent throughout the article. Use abbreviations sparingly; consider using one if it is repeated more than three times.

The generic names of drugs should be used.

Generally, SI units should be used; where they are not, the SI equivalent should be included in parentheses.

Footnotes are not allowed, except table footnotes.

Statistics

Methods of statistical analysis should be described in language that is comprehensible to most readers. Raw data for the studies may be asked at any time up to 5 years after publication of research in the *JGCR* and the authors are suggested to keep these safe.

Proofs

A proof will be sent to the corresponding author of an article which should be sent back within 7 days.

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On acceptance of the paper for publication, all authors should submit a contributor's form to the Geriatric Care and Research Organisation (GeriCaRe) regarding adherence to publication ethics.

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