

# PSYCHIATRIC AND SOMATIC COMPLICATIONS AND PHARMACOLOGICAL TREATMENT IN PATIENTS WITH DEMENTIA

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## SUMMARY

*One hundred and one patients with dementia, treated at Psychiatric department of GH Bjelovar were studied regarding the sort and frequency of complications, the evidence of other psychiatric or physical illnesses and psychopharmacological therapy. Of all the patients diagnosed with dementia, 21.78% were diagnosed with primary dementia, 70.3% with secondary dementia and 7.92% with combined (both primary and secondary) dementia. The number of patients diagnosed with vascular and primary dementia and the number of the registered complications vs. the so called other psychiatric diagnoses accompanying dementia reflects the difficulties in diagnosing Alzheimer's disease and the complications of dementia. The results of therapy are thoroughly discussed.*

**Key words:** dementia - complications - treatment

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## INTRODUCTION

The incidence of dementias ranges between 45.8 and 47.4 cases per 100.000 people aged 75 and older (Riedel-Heller et al. 2001). The prevalence of dementias in persons older than 65 is 6-10% with the domination of Alzheimer's dementia. 1% of total population younger than 65 is affected by irreversible dementias, and the percentage doubles for every 5 years of age (Hotujac 2003, Folnegović-Šmalc 2003). 10% of all patients who had been clinically treated at the Psychiatric department of Bjelovar General Hospital were treated for dementia (Čatipović et al. 2004).

Dementia patients often presents with behavioural and psychological symptoms, with prevalence rates reaching 90% (Hoerr 2003). The

frequency of major depression decreased in severe stages, while agitation, aggression and psychosis were more frequent in late stages. (Lopez et al. 2003)

Polypharmacy due to progression of disease and fluctuation of symptoms among patients might increase risk of overtreatment and/or undertreatment. (Elmstahl et al. 1998).

The aim of this research is to recognise the patients suffering from dementia by analysing the random sample of the psychiatric cases clinically treated in Bjelovar General Hospital as well as to: compare the patients suffering from primary and secondary dementia according to

- the sort and frequency of complications, the evidence of other psychiatric or physical illnesses;
- psychopharmacological treatment.

## METHODS AND PATIENTS

The sample consisted of 1214 patients treated at the Psychiatric department of Bjelovar General Hospital in the period from January 3, 2002 to May 5, 2003. 101 patients were singled out as diagnosed with dementia.

After going through the Psychiatric department register we singled out the data of the patients who had been discharged from hospital with the diagnosis of dementia (diagnostic categories according to ICD-10 from F00 to F02). The data referring to diagnoses on axes I, II, and III and the therapy recommended at the time of discharge.

The patients were divided into 2 groups, those suffering from primary dementia and those suffering from secondary dementia. A small number of the patients were described as suffering from combined dementia. This classification had been chosen for its simplicity, adequate for our

diagnostic possibilities. The different results obtained from the two groups were processed by hi square test.

## RESULTS

8.2% of the analysed patients were treated for dementia. 21.78% of them were diagnosed with primary dementias, 70.3% with secondary dementias and 7.92% with a combination of primary and secondary dementias.

Psychotic and depressive complications occurred in equal numbers in the total sample, while delirium occurred twice less often. The most frequent complication of primary and secondary dementia was depression. The number of complications occurring in the secondary dementia group was significantly higher than the number of complications in the primary dementia group ( $p=0.22$ ). (Table 1).

**Table 1.** The Ratio of Psychiatric Complications in Observed Patients with Dementia (%)

Complications	Primary d.	Secondary d.	Combined d.
Delirium	0(0.00)	7(9.86)	0(0.00)
Psychosis.	1(4.55)	10(14.08)	2(25.00)
Depression	2(9.09)	11(15.49)	0(0.00)
Without complications	19(86.36)	43(60.56)	6(75.00)
<b>Total</b>	<b>22(100.00)</b>	<b>71(100.00)</b>	<b>8(100.00)</b>

The patients participating in this study were also often diagnosed with psychiatric conditions other than dementia. 73.24% of the patients diagnosed with secondary dementia were diagnosed with another psychiatric condition, as opposed to 40.91% of the patients with primary and 12.50% of the patients with combined dementia ( $p=0.005$ ). The most frequently occurring other diagnoses were those belonging to the F10-F19 category (7.92%) and the F30-F39 category (12.87%). 42.25% of the secondary dementia patients had problems with alcohol, as opposed to 9.09% of the primary dementia patients. The differences concerning alcoholism as a cause in the F20-F29 and F30- F39 groups were small, but alcoholism was more often found in

depressive patients.

Three patients diagnosed with secondary dementia had attempted suicide, as well as one of the patients diagnosed with primary dementia. (Table 2).

The psychopharmaceuticals most frequently prescribed to the demented patients were classic antipsychotic (40.63% of all the medications used). Benzodiazepine (33.13%), anti-depressants (11.88%) non-benzodiazepine hypnotics (8.13%) were also used. Atypical anti-psychotics make up 5% of all the medications prescribed, while inhibitors make up 1.25%. Atypical anti-psychotics were used more frequently in the primary than in secondary dementia cases (8.57% opposed to 3.54%). There are no significant

differences in using the psychopharmaceuticals between the contrasted groups of demented patients ( $p=0.72$ ), except when it comes to the cholinesterase inhibitors. Promazine was the most frequently prescribed classic anti- psychotic, then haloperidol; risperidone was the most frequently

prescribed atypical anti-psychotic. Maprotiline was the most used anti-depressant, and SSRIs were used less frequently. Oxazepam was the most commonly prescribed benzodiazepine anxiolytic. (Table 3).

**Table 2.** The Ratio of Another Psychiatric Diagnoses in Observed Patients with Dementia (%)

Psychiatric diagnoses	Primary d.	Secondary d.	Combined d.	Total
F00 - F09	2(8,70)	9(10,71)	1(9,09)	12(10,17)
F10 - F19	2(8,70)	30(35,71)	2(18,18)	34(28,81)
F20 - F29	1(4,35)	7(8,33)	0(0,00)	8(6,78)
F30 - 39	2(8,70)	11(13,10)	0(0,00)	13(11,02)
F40 - 49	2(8,70)	2(2,38)	0(0,00)	4(3,39)
F60	0(0,00)	3(3,57)	1(9,09)	4(3,39)
Suicide attempt	1(4,35)	3(3,57)	0(0,00)	4(3,39)
Without another psychiatric diagnoses	13(56,52)	19(22,62)	7(63,64)	39(33,05)
<b>Total</b>	<b>23(100,00)</b>	<b>84(100,00)</b>	<b>11(100,00)</b>	<b>118(100,00)</b>

**Table 3** The Ratio of Prescribed Psychopharmacotherapy to the Observed Demented Patients (%)

Psychopharmacotherapy	Primary d.	Secondary d.	Combined d.	Total
Benzodiazepine	12(34,29)	38(33,63)	3(25,00)	53(33,13)
Nonbenzodiazepine hypnotics	2(5,71)	10(8,85)	1(8,33)	13(8,13)
Typical antipsychotics	12(34,29)	46(40,71)	7(58,33)	65(40,63)
Atypical antipsychotics	3(8,57)	4(3,54)	1(8,33)	8(5,00)
Antidepressants	4(11,43)	15(13,27)	0(0,00)	19(11,88)
Antiepileptics	0(0,00)	0(0,00)	0(0,00)	0(0,00)
Cholinesterasa inhibitors	2(5,71)	0(0,00)	0(0,00)	2(1,25)
<b>Total</b>	<b>35(100)</b>	<b>113(100)</b>	<b>12(100)</b>	<b>160(100)</b>

Physical conditions were found on axes III in 94 patients (93.07%). One patient from the primary dementia group and seven patients from the secondary dementia group had not been diagnosed with any physical illness. The prevalent conditions were: neurological (27.50%), cardiovascular (20.63%), nephrological (13.75%), gastro-intestinal and pulmonary diseases (10%), diabetes (8.75%), while other conditions were present in smaller percentages. The most frequent cardio-vascular conditions were cardiac decompensations, arrhythmia and hypertension; the most frequent neurological diseases were the conditions following ischemic cerebro-vascular

insult; Chronic obstructive pulmonary disease (COPD) was the most frequent pulmonary disease. The groups compared were not different by the frequency of occurrence of physical conditions. (Table 4).

## DISCUSSION

The occurrence of psychotic complications in demented patients ranges from 40 to 80 %; the occurrence of depression ranges from 20 to 60%; the occurrence of disinhibition and aggression ranges from 35 to 60% (Cummings et al, 2002; Kasper et al, 2002). Anxiety and depression are

**Table 4** The Number of Diagnosis on Axis III

<b>Diseases</b>	<b>Primary d.</b>	<b>Secondary d.</b>	<b>Combined d.</b>	<b>Total</b>
Diabetes mellitus	4(10,81)	8(7,34)	2(14,29)	14(8,75)
Cardiovascular d.	8(21,62)	22(20,18)	3(21,43)	33(20,63)
Neurological d.	8(21,62)	33(30,28)	3(21,43)	44(27,50)
Cerebral contusion	2(5,41)	2(1,83)	1(7,14)	5(3,13)
Gynecological d.	1(2,70)	0(0,00)	0(0,00)	1(0,63)
Nefrological d.	7(18,92)	13(11,93)	2(14,29)	22(13,75)
Abdominal d.	2(5,41)	14(12,84)	0(0,00)	16(10,00)
Pulmonary d.	3(8,11)	10(9,17)	3(21,43)	16(10,00)
Infective d.	1(2,70)	0(0,00)	0(0,00)	1(0,63)
Cancer	0(0,00)	1(0,92)	0(0,00)	1(0,63)
Without somatic complications	1(2,70)	6(5,50)	0(0,00)	7(4,38)
<b>Total</b>	<b>37(100,00)</b>	<b>109(100,00)</b>	<b>14(100,00)</b>	<b>160(100,00)</b>
Diagnoses of somatic disease	21(95,45)	65(91,55)	8(100,00)	94(93,07%)
Without somatic disease	1(4,55)	6(8,45)	0(0,00)	7(6,93)
<b>Total</b>	<b>22(100,00)</b>	<b>71(100,00)</b>	<b>8(100,00)</b>	<b>101(100,00)</b>

more frequently found in the patients suffering from vascular dementia. Psychotic symptoms occur equally in both groups of dementias, and are frequently used for localising the pathological process (Ballard et al, 2000; Simpson et al, 1999; Ballard et al, 1996; Assal et al, 2002). Dementia is often followed by delirium, because the basic brain condition increases the proneness to the confusion induced by medications or by some other general medical conditions (Dein, 2003).

The relation of dementia to other psychological conditions is a complex one. The prodromal symptoms of Alzheimer's dementia may be underlying the late schizophrenia (Brodaty et al, 2003). Vascular depression is said to be a clinical entity connected with cerebrovascular diseases (Baldwin, 2002). Depressive mood increases the risk for developing Alzheimer's dementia and the decline in cognitive abilities in demented patients (Devanand et al, 1996; Gerrlings et al, 2000). The patients diagnosed with unipolar or bipolar affective disorder may be at a higher risk for developing dementia (Kessing et al, 2003). Alcoholism is a common cause of dementia or of the worsening of condition in demented patients, which is confirmed by the results of our research (Marksteiner et al, 2002).

Atypical anti- psychotics are recommended in controlling the behaviour disorders, agitation, aggression and psychoses in patients suffering from severe dementia (Katz et al, 1999; Street et al, 2000). Clozapin is recommended in treating Parkinson's disease and Levi's corpuscles dementia; however, most authors prefer quetiapin (Parkinson study group, 1999; Dewey et al, 2000). Anti-depressants of choice are SSRIs (Lebert, 2003; Mujisers et al, 2002). They are also used in treating anxiety, as is buspiron. The benzodiazepines used are lorazepam and oxazepam. The preferred hypnotic (among those available to us) is zolpidem; trazodon can be bought in Slovenia and Italy. None of the cholinesterase inhibitors are on the Croatian institute for health insurance lists, and memantin is not available at all (Katona, 2000; Scholz et al, 1991; Jarry et al, 2002; Kertesz, 2003).

Somatic conditions are common in elderly people, over 80% of them suffer from at least one chronic condition, which complicates the treatment of demented people even more (Bouman et al, 2002).

## CONCLUSION

The number of the patients suffering from Alzheimer's disease is significantly smaller than the number of the patients with vascular dementia. A small number of the complications was recorded (especially those related with primary dementias) as opposed to a large number and frequency of other psychiatric diagnoses accompanying dementia (especially in secondary dementias); all of which reflects the diagnostic and differentially- diagnostic difficulties encountered by the clinicians. The complications of dementia should be coded on the 5<sup>th</sup> figure according to the ICD-10 and DSM IV instructions, and not as separate diagnostic entities.

The dominant use of haloperidol and other classical anti- psychotics (which are more frequently used for treating primary dementia) results from the attitude of Croatian institute for health insurance that allowed the use of atypical anti-psychotics only for treating the patients belonging to the F20-F29 diagnostic group. A rare use of cholinesterase inhibitors in treating Alzheimer's disease is caused by the high price of donepezil (the only one available in Croatia). Buspiron and trazodon are not found on the Croatian institute for health insurance lists of medications.

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