# Somatski komorbiditeti u psihijatrijskih bolesnika

# Somatic Comorbidities in Psychiatric Patients

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**SAŽETAK:** Koncept somatskih bolesti koje bi bile odvojene od duševnih, koncept je koji šteti optimalnom liječenju naših bolesnika. Sve je više argumenata koji u kontekstu dijagnostike i liječenja dokazuju da je duševno nerazdvojno od tjelesnog.

**SUMMARY:** The concept of somatic illnesses that is separate from mental illness is a concept that harms the optimal treatment of our patients. There are more and more arguments showing that the mental is inseparable from the somatic in the context of diagnostics and treatment.

**KLJUČNE RIJEČI:** tjelesno zdravlje, mentalno zdravlje, komorbiditeti, integrativni pristup liječenju.

**KEYWORDS:** physical health, mental health, comorbidities, integrative approach to treatment.

**CITATION:** Cardiol Croat. 2017;12(5-6):275-281. | https://doi.org/10.15836/ccar2017.275

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**RECEIVED:**
**May 18, 2017**
**UPDATED:**
**May 23, 2017**
**ACCEPTED:**
**May 30, 2017**

Među prvim pisanim tragovima koji su na tragu medicine kakvu danas prakticiramo, somatske su bolesti konceptualizirane nerazdvojnima od mentalnih. Tako npr. Asklepijus i Hipokrat ne prave distinkciju između mentalnih i somatskih poremećaja ili bolesti[1,2].

S druge strane, koncept „ludila" kao bolesti koja je znatno različita od drugih tjelesnih bolesti, pojavljuje se tek potkraj 18. stoljeća. Tada se raspravljalo o tome da bi metalne bolesti liječili filozofi, a ne liječnici. No taj koncept nije potrajao u cijelosti, iako termin mentalna bolest ostaje i dalje u upotrebi jednako kao što ostaje i nejasna etiopatogeneza nekih psihičkih bolesti ili poremećaja. Danas još uvijek postoji distinkcija između somatskih i mentalnih poremećaja u laika i u liječnika u postojećim klasifikacijama[3,4]. Posljedice su takve distinkcije i dalje prisutne u kontekstu stigme i diskriminacije duševnih bolesnika[5-7].

Realno svaka bolest ili poremećaj zahvaća cijeli ljudski organizam. Tako je na primjer bol, najbolji primjer takozvanog „čistog", somatskog stanja zapravo psihološki fenomen, a prve su manifestacije brojnih infekcija psihološke i subjektivne (najčešće opći osjećaj slabosti). S druge strane, strah i druge emocije imaju važnu ulogu u nastanku bolesti kao što su infarkt miokarda, povišenoga arterijskoga tlaka ili astme. Istodobno prisutnost somatskih i psihičkih bolesti može znatno smanjiti kvalitetu života te voditi lošijim prognostičkim ishodima svake pojedine bolesti.

In the first written traces that resemble medicine as we practice it today, somatic illnesses were conceptualized as inseparable from mental illness. For instance, Asclepius and Hippocrates do not distinguish between mental and somatic disorders or illnesses[1,2].

On the other hand, the concept of "madness" as a disease that is significantly different from other physical diseases appears only at the end of the 18th century, when it was argued that mental illness should be treated by philosophers, not physicians. But while this concept did not last, the term mental illness continues to be used, just as the etiopathogenesis of some psychiatric diseases or disorders remains unclear. Today there is still a distinction between somatic and mental disorders, both among laymen and physicians in current clasifications[3,4]. The consequences of such a distinction are still present in the context of stigmatization and discrimination against mental patients[5-7].

Realistically speaking, every disease or disorder involves the whole human organism. Pain, for instance, the best example a "pure" somatic condition, is actually a psychological phenomenon, and the first manifestations of many infections are psychological and subjective (usually a general feeling of weakness). On the other hand, fear and other emotions play an important role in the manifestation of diseases such as myocardial infarction, increased arterial pressure, or asthma. The simultaneous presence of somatic and

Ovakav komorbiditet jednako tako uzrokuje i veće troškove liječenja. Razumijevanje povezanosti psihološkog i tjelesnog prvi korak je u razvijanju strategija koje bi smanjile koegzistiranje ovakvih stanja. Naime, i tijelo i psiha pod utjecajem su promjena u fiziološkim i emocionalnim procesima jednako kao što su pod utjecajima socijalnih čimbenika kao što su financijska i stambena situacija. Nijednu osobu ne možemo promatrati izvan biopsihosocijalnog konteksta. Osobe oboljele od psihičkih bolesti imaju brojne tjelesne simptome zbog same bolesti, ali često i zbog nuspojava samog liječenja. Psihičke bolesti mogu biti udružene s poremećenim hormonalnim statusom, cirkadijanim ritmom, a psihofarmaci mogu uzrokovati debljanje ili poremećaje srčanog ritma. Ovakva stanja i nuspojave pojačavaju osjetljivost za razvoj brojnih tjelesnih poremećaja. Jednako tako, način na koji oboljeli doživljavaju psihičku bolest može povećati njihovu osjetljivost na somatske bolesti narušavanjem socijalnih i kognitivnih funkcija te razine energije i motivacije i sl., što sve kompromitira usvajanje zdravih navika. Često su prisutne nezdrave navike i životni stilovi kao što su pretjerano sjedenje, premalo kretanja, konzumacija nikotina, alkohola, kanabisa i sl.[8,9].

Činjenica je da ne postoji specifično obilježje, bilo simptomatsko bilo etiološko, koje bi mentalne bolesti nedvobeno razlikovalo od tjelesnih[10]. Realno gledano, razlike između mentalnih i tjelesnih bolesti u pravilu su kvantitativne prije nego kvalitativne. Zašto se onda još uvijek u klasifikacijama koristimo takvom distinkcijom. Odgovor je ponuđen u uvodu *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) iz 1994.g.: „termin *mentalni poremećaj* na nesreću implicira distinkciju između mentalnih i fizičkih poremećaja, što je redukcionistički anakronizam dualizma tijelo/um. Velika količina literature jasno dokumentira da ima mnogo toga fizičkog u mentalnim poremećajima i obrnuto. Problem koji nastaje zbog takve terminologije mnogo je jasniji od njegova rješenja, ali termin ostaje u uporabi jer još uvijek nismo pronašli odgovarajuću zamjenu."[4]

Osobe koje boluju od psihičkih poremećaja često imaju niska ili nikakva primanja, nezaposlene su te su socijalno izolirane[11]. Takvi socijalni čimbenici pojačavaju njihovu ranjivost za tjelesne poremećaje. Primjerice, u ljudi koji si ne mogu priuštiti zdraviju prehrambenu opciju mogu se razviti razni nutricijski deficiti. Nekvalitetna je prehrana važan čimbenik rizika za razvoj dijabetesa ili bolesti srca[12,13].

Neka kronična tjelesna stanja kao što je hiperglikemija u sklopu dijabetesa mogu kompromitirati mikrocirkulaciju i u samom mozgu, što onda izravno utječe na njegovu funkciju. Postoje dokazi da, što više simptoma ima određeni somatski poremećaj, to je veća vjerojatnost razvoja psihičkih tegoba. Tako ne iznenađuje da osobe s kroničnim somatskim stanjima često same dojavljuju da im je narušeno i mentalno zdravlje[14-16].

Depresivni poremećaj možda najbolje ilustrira nemogućnost razgraničenja somatskog od mentalnog. U posljednje vrijeme sve je više znanstveno utemeljenih dokaza o međusobnim povezanostima između depresivnog poremećaja i raznih somatskih bolesti. Tako je, primjerice, depresivni poremećaj povezan s različitim kardiovaskularnim čimbenicima rizika kao što su pretilost, arterijska hipertenzija, dislipidemija, hiperglikemija, pušenje, prekomjerna uporaba alkohola i drugih psihoaktivnih supstancija[17,18]. Depresija utječe na cijeli ljudski organizam pa možemo reći da je to sustavna bolest jer

psychological diseases can severely reduce the quality of life and lead to poorer prognostic outcomes for any individual illness. Such comorbidity also leads to increased treatment costs. Understanding the link between the physical and mental is the first step in developing strategies to reduce the coexistence of these conditions. Both the body and the mind are under the influence of changes in physiological emotional processes, just as they are under the influence of social factors such as financial or living situations. No single person can be viewed outside the bio-psycho-social context. Persons suffering from psychiatric diseases have numerous physical symptoms due to the illness itself but also often due to the side-effects of treatment. Psychiatric diseases can be linked with disordered hormonal conditions and circadian rhythm, while psychopharmaceuticals can cause weight gain or heart rhythm disorders. Such conditions and side-effects increase sensitivity for the development of many physical disorders. At the same time, the way the patients view their psychiatric illness can increase their sensitivity to somatic diseases by disrupting their social and cognitive functions, reducing levels of energy and motivation, etc., all of which compromises successful adoption of healthy habits. Unhealthy habits and lifestyles are often present, such as an overly sedentary lifestyle, lack of physical activity, consumption of nicotine, alcohol, cannabis, etc.[8,9].

It is a fact that there is no specific characteristic, whether symptomatic or etiological, that would indubitably distinguish mental illness from physical illness[10]. Realistically, the differences between mental and physical illness is generally quantitative rather than qualitative. Why then do we still use such a distinction in classifications? The answer is in the introduction to the IVth (1994) edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV): "The term *mental disorder* unfortunately implies a distinction between 'mental' disorders and 'physical' disorders that is a reductionist anachronism of mind/body dualism. A compelling literature documents that there is much 'physical' in 'mental' disorders and much 'mental' in 'physical' disorders. The problem raised by the term 'mental disorders' has been much clearer than its solution, and, unfortunately, the term persists in the title of DSM-IV because we have not found an appropriate substitute"[4].

Persons suffering from mental disorders often have low or no income and are unemployed and socially isolated[11]. These social factors exacerbate their vulnerability to physical disorders. For instance, people who cannot afford healthier dietary options can develop various nutritional deficits. Poor diet quality is a significant risk factor for the development of diabetes or heart disease[12,13].

Some chronic physical conditions such as hyperglycemia due to diabetes can compromise microcirculation in the brain itself, which will then directly influence its function. There is evidence indicating that the more symptoms a somatic disorder has, the greater the probability of the development of mental difficulties. It is thus not surprising that persons with chronic somatic conditions often self-report that their mental health has deteriorated as well[14-16].

Depressive disorder is perhaps the best illustration of the impossibility of strictly delineating the somatic from the mental. Lately, more and more scientific evidence has emerged on the association between depressive disorder and various somatic diseases. For instance, depressive disorder has been associated with different cardiovascular risk factors such as

se dovodi u vezu s promjenama cirkadijanog ritma, poremećajima sna, promjenama u autonomnome živčanom sustavu, hiperaktivnosti osi hipotalamus – hipofiza – nadbubrežna žlijezda i promjenama u imunosnom sustavu[19-21].

S druge strane, somatskim bolestima, kao što su pretilost, hiperlipidemije, hipertenzija i dijabetes melitus tipa 2 u zadnje se vrijeme daje sve veća pozornost važnim komorbidnim stanjima u bolesnika s težim mentalnim bolestima kao što su shizofrenija i depresivni poremećaj. Jesu li navedeni poremećaji dio samoga patološkog procesa ili su posljedice liječenja, još uvijek nije dokraja jasno[22]. Međutim, sve je više podataka koji pokazuju da teže psihijatrijske bolesti imaju utjecaja i na tjelesno zdravlje.

Patogeneza metaboličkog sindroma kao i depresivnog poremećaja kompleksna je i nedovoljno istražena, međutim, smatra se da interakcije kroničnoga stresa, psihotraume, hiperkortizolemije i poremećenih imunosnih funkcija pridonose razvoju depresivnog poremećaja i metaboličkog sindroma[17,23-25].

Činjenica je (prema studiji kanadskih autora[26]) da:

- osobe s depresivnim simptomima, u usporedbi s općom populacijom, imaju triput češće i kronična somatska stanja
- osobe s kroničnim somatskim stanjima imaju dvostruko povećan rizik od razvoja poremećaja raspoloženja ili anksioznog poremećaja
- jedna od dviju osoba koja boluje od depresivnog poremećaja u komorbiditetu s kroničnim somatskim poremećajem ima jasna ograničenja u svakodnevnom funkcioniranju[27-29].

Očekivano trajanje života u osoba koje boluju od duševnih bolesti u pravilu je kraće u usporedbi s općom populacijom. Takav povećan mortalitet povezuje se s tjelesnim uzrocima/bolestima. Tako se u nekim istraživanjima navode podatci o čak 50 %-tnom povišenju rizika od smrti zbog zdravstvenih uzroka ili 20 % kraćem očekivanom trajanju života[12,14,15]. Takva populacija ima povećan rizik od obolijevanja svih organskih sustava, uključujući neurološki, urološki, ginekološki, kardiovaskularni, dermatološki, metabolički, endokrini, mišićno-koštani i respiratorni[15].

Analizom 20 studija koje su uključivale gotovo 36 000 osoba oboljelih od shizofrenije, ustanovljen je ukupno povećan rizik od smrti s prirodnim uzrokom koji je 1,4 puta povećan[30,31]. Jedna kanadska retrospektivna studija o mortalitetu i očekivanome trajanju života u osoba oboljelih od shizofrenije navodi oko 20 % kraće očekivano trajanje života u oboljelih u usporedbi s općom populacijom[32]. Jedna pak švedska studija procjenjivala je ukupni i specifični mortalitet u novodijagnosticiranih shizofrenih bolesnika koristeći se postojećim registrima[33]. U analizu su bila uključena 7784 bolesnika i ustanovljeno je da su svi uzroci smrtnosti (osim zloćudnih bolesti) povećani. Smrtnost je među shizofrenim bolesnicima u usporedbi s očekivanim stopama bila:

- veća za 2,7 puta zbog dijabetesa (endokrinološka bolest)
- veća za 2,3 puta zbog kardiovaskularnih bolesti
- veća za 3,2 puta zbog respiratornih bolesti
- veća za 3,4 puta zbog infektivnih bolesti.

Najveći apsolutni uzrok smrti u shizofrenih bolesnika bile su kardiovaskularne bolesti[33]. Ovakvi podatci pozivaju na preventivne programe jer se kardiovaskularni pobol može prevenirati.

obesity, arterial hypertension, dyslipidemia, hyperglycemia, smoking, alcohol abuse, and abuse of other psychoactive substances[17,18]. Depression influences the whole of the human organism, and we can say that it is a systemic disease since it has been associated with changes in the circadian rhythm, sleep disorders, changes in the autonomous nervous system, hyperactivity of the hypothalamus-pituitary gland-adrenal gland axis, and changes in the immunological system[19-21].

On the other hand, somatic diseases such as obesity, hyperlipidemia, arterial hypertension, and diabetes mellitus type 2 have recently garnered attention as significant comorbid conditions in patients with severe mental illnesses such as schizophrenia and depressive disorder. Whether these disorders are a part of the pathological process or a consequence of treatment is still not completely clear[22]. However, there is growing evidence showing that severe psychiatric illnesses also influence the physical health.

As with depressive disorder, the pathogenesis of metabolic syndrome is complex and insufficiently studied; it is however believed that the interactions between chronic stress, psychological trauma, hypercortisolemia, and disordered immunological functions contribute to the development of depressive disorder and metabolic syndrome[17,23-25].

It is a fact (according to a study by Canadian authors[26]) that:

- Persons with depressive symptoms are three times as likely to have chronic somatic conditions compared with the general population
- Persons with chronic somatic conditions have twice the risk of developing mood disorders or anxiety disorders
- One out of two persons suffering from depressive disorder comorbid with a chronic somatic disorder is clearly limited in everyday functioning[27-29].

The life expectancy of persons suffering from mental illnesses is generally shorter compared with the general population. This increased mortality is associated with physical causes/diseases. Some studies showed as much as a 50% increase of risk of death from health-related causes or a 20% shorter expected lifespan[12,14,15]. This population has an increased risk of disease in all organs, including the neurological, urological, gynecological, cardiovascular, dermatological, metabolic, endocrine, musculoskeletal, and respiratory systems[15].

Analysis of 20 studies that included almost 36000 participants suffering from schizophrenia found that there the rate of death from natural causes increased by 1.4 times in total for this population[30,31]. One retrospective Canadian study on mortality and life expectancy in persons suffering from schizophrenia showed that the life expectancy in patients was 20% shorter compared with the general population[32]. One Swedish study estimated the total and specific mortality in newly-diagnosed patients with schizophrenia using existing registries[33]. The analysis included 7784 patients and found that rates of all causes of death (except malignant diseases) were increased. Mortality among patients with schizophrenia in comparison with the expected rates was:

- 2.7 times higher for diabetes (endocrine disease)
- 2.3 times higher for cardiovascular disease
- 3.2 times higher for respiratory diseases
- 3.4 times higher for infective diseases.

Povećane stope mortaliteta opservirane su i u bipolarnoj i u unipolarnoj depresiji. *Ösby i suradnici*[33] objavljuju da su u Švedskoj standardizirane stope mortaliteta u bipolarnom poremećaju 1,9 za muškarce i 2,1 za žene, dok su u depresivnih bolesnika 1,5 za muškarce i 1,6 za žene.[33]

Očito, postoje brojne prepreke u optimalnom liječenju psihijatrijskih bolesnika, a bitan dio razloga leži u stigmi i diskriminaciji. Stigma je prisutna u samih bolesnika, ali i u liječnika[11,13,14]. Često se u određenog bolesnika liječi samo jedno (ili mentalno ili tjelesno) stanje. Ograničena novčana sredstva u zdravstvenim sustavima sigurno ne pridonose kvaliteti liječenja. Dio psihijatrijskih bolesnika ne liječi se uopće, a dio se liječi kod specijalista obiteljske medicine koji često nisu dovoljno educirani za pružanje optimalne skrbi takvim bolesnicima. Dostupni podatci jasno sugeriraju potrebu za daljnjim istraživanjima na području životnoga stila i stigme, kao i potrebu za programima prevencije i psihijatrije u zajednici.

Osobe oboljele od shizofrenije imaju posebno lošiji profil čimbenika rizika za kardiovaskularne bolesti u usporedbi s općom populacijom, i to zbog dvaju razloga:

- osobama oboljelima od shizofrenije manje je dostupan zdravstveni sustav (stigma) i
- kada im je zdravstveni sustav dostupan, osobe oboljele od shizofrenije u pravilu su manje suradljive u vezi s provođenjem preventivnih mjera, promjenama u životnome stilu te provođenjem preporučenih intervencija (uzimanje lijekova, pretrage i sl...).

Osobe oboljele od shizofrenije manje traže pomoć i medicinsku skrb čak i pri akutnim kardiovaskularnim incidentima. Kada pomoć i potraže, ta je skrb najčešće suboptimalna (ili im se nudi manje kardiovaskularnih postupaka nego nekomu tko ne boluje od shizofrenije ili se obraćaju za pomoć na mjesta gdje takve procedure nisu dostupne). Važno je napomenuti da neki psihofarmaci sami po sebi nose povećan rizik od razvoja metaboličkog sindroma, što potrebu za primarnom prevencijom kardiovaskularnih incidenata u osoba oboljelih od shizofrenije čini još važnijom[34,35].

Tako je npr. prevalencija metaboličkog sindroma u studiji CATIE (provedenoj na osobama oboljelima od shizofrenije) uspoređivana s kontrolnom skupinom neshizofrenih bolesnika iz studije NHANES III. Skupine su bile usporedive po dobi, spolu i etničkoj pripadnosti[36,37]. Učestalost metaboličkog sindroma bila je veća u studiji CATIE za većinu dobnih skupina te za oba spola. Jednako tako, ispitanici studije CATIE imali su veći opseg struka i veći arterijski tlak u oba spola, veću prevalenciju povišenih vrijednosti triglicerida i sniženog HDL-a za oba spola, dok je GUK bio povišen samo u osoba ženskoga spola. Svaka je pojedinačna sastavnica metaboličkog sindroma, uključujući opseg struka, trigliceride, HDL, arterijski tlak i GUK, bili povišena u ovoj usporedbi.

Zbog svega navedenoga *American Diabetes Association* i *American Psychiatric Association* izdaju *Consensus Statement on Atypical Therapy* u kojemu se navodi da su olanzapin i klozapin povezani s najvećim dobivanjem tjelesne težine jednako kao i s dislipidemijama i dijabetesom. Ziprasidon i aripiprazol nisu povezani sa znatnim dobivanjem na tjelesnoj težini, dijabetesom ili dislipidemijom, a rezultati su u nesuglasju glede risperidona i kvetiapina.

The highest absolute cause of death in patients with schizophrenia was cardiovascular disease[33]. Such data indicate the need for preventive programs, since cardiovascular comorbidity can be prevented.

Increased mortality rates have also been observed for bipolar and unipolar depression. Ösby et al.[33] reported that standardized mortality rates in Sweden for bipolar disorder were 1.9 for men and 2.1 for women, while the rates for depressive patients were 1.5 for men and 1.6 for women.[33]

It is clear that there are many obstacles to optimal treatment of psychiatric patients, an important part of which stems from stigmatization and discrimination. Stigmatization is present in the patients themselves but also in physicians[11,13,14]. A single patient is often treated for only one condition (either mental or physical). Limited financial resources in healthcare institutions certainly do not contribute to the quality of treatment. Some psychiatric patients are not treated at all, and some are treated by family medicine specialists who are often not educated enough to provide optimal care to such patients. Available data clearly suggest a need for further research on lifestyles and stigmatization as well as a need for prevention programs and community psychiatry.

- Persons suffering from schizophrenia have a significantly poorer risk factor profile for cardiovascular diseases in comparison with the general population, for two reasons:
- Persons suffering from schizophrenia have less access to the healthcare system due to stigma, and
- When healthcare is available to them, persons suffering from schizophrenia are usually less cooperative in implementing preventive measures, lifestyle changes, and conducting recommended interventions (taking medication, tests, etc.).

Persons suffering from schizophrenia are less inclined to seek help and medical aid even for acute cardiovascular incidents. Even when they do seek help, the care they receive is usually suboptimal (or they are offered less cardiovascular procedures than someone not suffering from schizophrenia or they seek help in places where these procedures are not available). It is important to note that some psychopharmaceuticals also carry an increased risk of developing metabolic syndrome, which makes the need for primary prevention of cardiovascular incidents in persons suffering from schizophrenia even greater[34,35].

An example of the above is the comparison of the prevalence of metabolic syndrome in the CATIE study (conducted on persons suffering from schizophrenia) with a control group consisting of non-schizophrenic patients from the NHANES III study. The groups were compared by age, sex, and ethnicity[36,37]. The prevalence of metabolic syndrome was greater in the CATIE study for most age groups and for both sexes. Additionally, the participants in the CATIE study had greater waist diameter and higher arterial pressure in both sexes and a higher prevalence of triglyceride values and lowered HDL in both sexes, whereas blood glucose levels were elevated only in female participants. All of the individual components of metabolic syndrome including waist diameter, triglycerides, HDL, arterial pressure, and blood glucose levels were higher in this comparison.

Due to all of the above, the *American Diabetes Association* and the *American Psychiatric Association* published the *Consensus Statement on Atypical Therapy*, which states that olanzapine and clozapine are associated with the greatest weight gain as well as dyslipidemia and diabetes. Ziprasidone

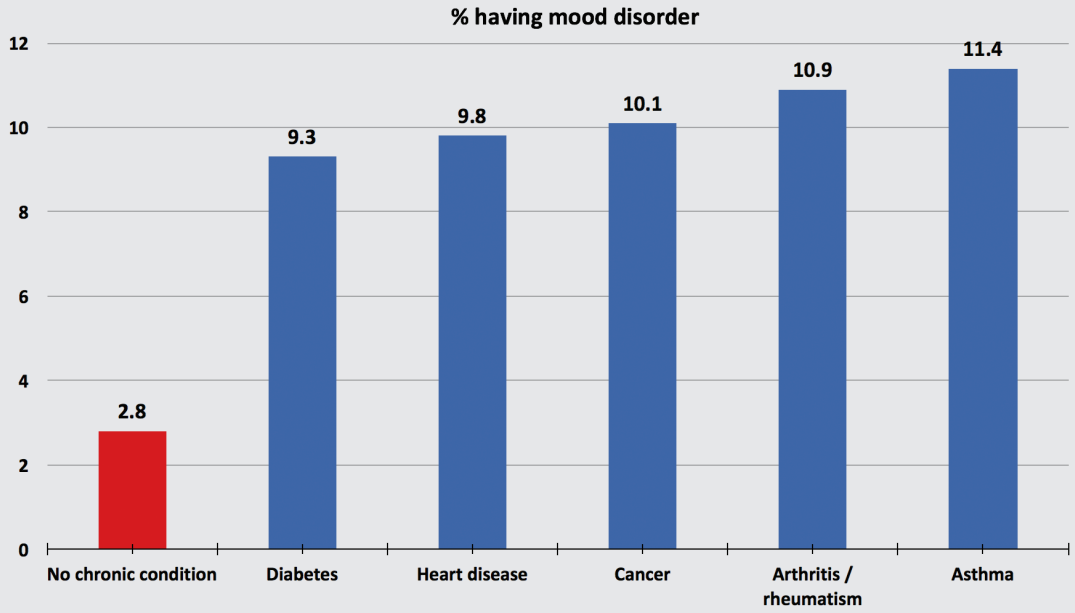


**FIGURE 1. Association of Comorbid Mood Disorders and Chronic Illness (adapted from Chronic Dis Can. 2008;28(4):148-54.).**

Zbog toga se preporučuje pažljivo procijeniti rizik od razvoja metaboličkog sindroma prije uvođenja psihofarmaka u terapiju te pomno odabrati specifični lijek. Preporuka dalje navodi da je potrebno razmotriti promjenu farmaka ako bolesnik dobije 5 % ili više od početne tjelesne težine ili ako se pogorša glikemija ili pak razvije dislipidemija[38].

## Kardiovaskularne i cerebrovaskularne bolesti u osoba oboljelih od psihičkih poremećaja

Osobe koje boluju od psihičkih bolesti ili poremećaja često imaju povišen arterijski tlak, kao i povišene razine hormona stresa i adrenalina koji uzrokuju ubrzan rad srca. Neki su antipsihotici također povezani s poremećajima srčanog ritma (produljenje QTc intervala). Sve navedeno znatno interferira s funkcijom srca i povećava rizik od razvoja bolesti srca u osoba koje boluju od duševnih bolesti[39]. Jednako tako, osobe koje boluju od duševnih bolesti često imaju višu učestalost nekih drugih čimbenika rizika za razvoj kardiovaskularnih bolesti (**Slika 1**) kao što su neadekvatna prehrana, slaba dostupnost preventivnih zdravstvenih programa i pretilost. U Kanadi npr. žena oboljela od depresivnog poremećaja ima 80 % veću šansu za razvoj kardiovaskularne bolesti nego žena koja ne boluje od depresije[40]. Jednako tako, osobe s duševnom bolesti imaju triput veću šansu da dobiju moždani udar[41]. Iz drugoga kuta gledanja, osobe s kardiovaskularnim bolestima imaju mnogo veće šanse za razvoj depresivnog poremećaja[42]. Depresija se često pojavljuje i nakon moždanih udara[43-45].

Zaključno, duševno je nerazdvojno od tjelesnog te je svakom bolesniku potreban integrativni pristup u liječenju, od primarne prevencije do rehabilitacije i resocijalizacije. Sada možemo reći da postoji zadovoljavajuća suradnja između specijalista psihijatara i ostalih specijalista s liječnicima obiteljske medicine kao prvom crtom i koordinatorima zdravstvene zaštite. No, isto tako možemo reći da ima prostora za

and aripiprazole are not associated with significant weight gain, diabetes, or dyslipidemia, and there were disparate results for risperidone and quetiapine.

It is thus recommended to carefully assess the risk for the development of metabolic syndrome before introducing psychopharmaceuticals to therapy and carefully choose the specific medication to be used. The recommendation further states that the use of a pharmaceutical should be reconsidered if the patients gains 5% or more of the baseline body weight, if glycemia is exacerbated, or if the patients develops dyslipidemia[38].

## Cardiovascular and cerebrovascular diseases in persons suffering from psychiatric disorders

Persons suffering from psychiatric diseases or disorders often have increased arterial pressure as well as elevated levels of stress hormone and adrenalin, which cause elevated heart rates. Some antipsychotics are also associated with heart rhythm disorders (lengthening of the QTc interval). All of this significantly interferes with heart function and significantly increases the risk of developing heart disease in persons suffering from mental illnesses[39]. At the same time, persons suffering from mental illnesses often have a higher prevalence of other risk factors for the development of cardiovascular diseases (**Figure 1**) such as inadequate diet, poor access to preventive health programs, and obesity. In Canada for instance, a woman suffering from depressive disorder is 80% more likely to develop cardiovascular disease than a woman not suffering from depression[40]. Persons with mental illness are also three times more likely to suffer a stroke[41]. Viewed from another angle, persons with cardiovascular diseases have significantly greater chances of developing depressive disorder[42]. Depression also commonly occurs after strokes[43-45].

In conclusion, the mental is inseparable from the physical, and every patient needs an integrative approach to treatment

poboljšanje u svakoj spomenutoj grani medicine vezano za skrb za ovu posebno vulnerabilnu skupinu bolesnika.

from primary prevention to rehabilitation and resocialization. We can now say that there is satisfactory cooperation of psychiatry specialists and other specialists with family medicine physicians as coordinators and the first line of healthcare. But we can also say that there is room to improve in each of these branches of medicine regarding the care for this especially vulnerable group of patients.

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