Chapter 21
Current Advances in the Psychopharmacology of Psychosomatic Medicine

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21.1 Introduction

Psychosomatic medicine is a way of approaching health problems, and psychosomatic disorders in general are pathological expression of biological, psychological, and socioecological parameters of human health.

Psychopharmacology, on the other hand, is one of the rapidly developing disciplines and has become a widely used therapeutic tool in psychosomatic medicine or consultation-liaison psychiatry [1]. Psychopharmacology is moving rapidly from empirical to practical approach. Psychopharmacological treatment in psychosomatic medicine or consultation-liaison psychiatry has expanded greatly in the past decade. A variety of new psychotropic drugs helps to meet patients' specialized needs and enhances the quality of care and then the quality of life [2–5].

Psychopharmacological agents most used in psychosomatic medicine or consultation-liaison psychiatry are antidepressants, anxiolytic agents, hypnotics, antipsychotics, beta-blockers, and mood stabilizers. In particular, this chapter will focus on the use of psychopharmacological agents in (a) anxiety disorders, (b) depressive disorders, (c) primary insomnia, (d) somatization, (e) eating disorders, (f) migraine, and (g) fibromyalgia.

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21.2 Anxiety Disorders

Recent research has confirmed the need of diagnostic subtyping for the appropriate treatment of anxiety disorders. Pharmacotherapy with antianxiety drugs remains the mainstay of treatment, but concomitant nonpharmacological treatment should be considered for all anxiety sufferers.

21.2.1 Panic Disorder

The goal here is to control panic attacks in the short term and then continue long-term maintenance treatment if needed. Recent advances in this area are the utilization of (a) selective serotonin reuptake inhibitor (SSRI) [6] agents, (b) serotonin and noradrenergic reuptake inhibitor (SNRI) [7] agents, and (c) buspirone [8] and atypical antipsychotics such as risperidone [9] and quetiapine.

Venlafaxine XR, paroxetine, sertraline, Cipramil, escitalopram, and fluvoxamine are effective drugs for panic disorder patients. The side effects of SSRI and SNRI in many panic disorder patients necessitate that the starting dose should be usually half of the normal range of dosage. Sexual side effects are one of the most common side effects of the above drugs, particularly on maintenance therapy; hence in these patients, Viagra, if not contraindicated, should be used. These drugs should be gradually tapered to avoid the occurrence of serotonin withdrawal syndrome when they are discontinued. Buspirone has not been successful in panic disorders [8]. However, risperidone, olanzapine, and Seroquel as augmentors of SSRI [9, 10] have shown better results. Carbamazepine and valproic acid have been found to be effective in case reports [11]. 5-Hydroxytryptamine (5HT)2 or also receptor antagonists such as mirtazapine [12] or ondansetron can be used, and reboxetine, a selective noradrenaline reuptake inhibitor (NARI) drug in the dosage of 6–8 mg a day, is known to be markedly effective in this disorder [13].

In acute and moderately severe panic disorder, combined pharmacotherapy of benzodiazepines with SSRI or SNRI should be started. After 4 weeks, the benzodiazepine should be tapered and discontinued within 6 weeks because antidepressant therapy will continue to be effective in the long term. This kind of regimen will prevent the abuse potential of benzodiazepines [14].

21.2.2 Generalized Anxiety Disorder

Venlafaxine XR, paroxetine, escitalopram, sertraline, fluvoxamine, and mirtazapine are the recent drugs known to be significantly effective in generalized anxiety disorder. Partial benzodiazepine receptor agonists such as bretazenil and abecarnil are

also effective while possessing a low risk for dependence. Riluzole, a presynaptic glutamate release inhibitor in a dose of 100 mg, has shown promising results [15].

21.2.3 Obsessive-Compulsive Disorder (OCD)

Drugs that have been significantly effective in OCD are fluoxetine, paroxetine, sertraline, and fluvoxamine [16]. Recent studies on therapeutic effects of SSRIs have revealed that OCD symptoms may improve in 2–3 weeks but their improvement may be delayed after 4–6 weeks; hence, the duration of treatment for control of symptoms usually should be at least 10–12 weeks. The effective doses of SSRIs are in the higher range of 40–60 mg in fluoxetine and paroxetine and 150–200 mg in fluvoxamine and sertraline.

Clomipramine, a tricyclic drug, still remains the drug of choice in difficult and refractory OCD, while fluoxetine is one of the most popular SSRIs for therapeutic use in OCD patients. Augmentation and combination of antidepressants are also worth trying in OCD patients. OCD is a chronic illness; hence, the duration of treatment depends on the clinical condition of individual patients.

21.2.4 Posttraumatic Stress Disorder (PTSD)

SSRIs have been effective in controlling the positive symptoms of PTSD, such as re-experiencing the events and arousal, but not responsive to negative symptoms, such as withdrawal and avoidance [17]. Beta-blockers (e.g., propranolol, pindolol) can be effectively used in controlling persistent symptoms of automatic arousal. Carbamazepine [18] and valproate [19] improve irritability, anger, and aggressive outbursts in PTSD patients.

SSRIs (sertraline and fluoxetine), SNRIs (venlafaxine XR and duloxetine) and NaSSA (mirtazapine) have also shown significant improvement, but long-term treatment (up to 15 months) and gradual reduction of dose are required for controlling arousal, depressive, and withdrawal symptoms. Prazosin, α-1-adrenergic antagonist, has been effective in controlling nightmares and daytime intrusions in PTSD patients.

21.2.5 Social Phobia or Social Anxiety Disorder

SSRIs and SNRIs have replaced benzodiazepines as a first-line treatment in social phobia. Paroxetine [20, 21], fluvoxamine [22], sertraline [23], and venlafaxine

XR [21] are the drugs of choice in this disorder. Gabapentin and pregabalin have also shown significant therapeutic benefit. Atypical antipsychotics, in limited studies, have shown benefits but further studies are needed for defining their future role in social phobia. Long-term treatment for more than 18 months is needed for this chronic disorder.

21.2.6 Specific Phobia

Pharmacotherapies in this disorder need long-term research but at present SSRI drugs have shown significant therapeutic benefits, particularly from paroxetine combined with exposure therapy.

SSRI, SNRI, and noradrenergic and specific serotonergic antidepressant (NaSSA) drugs have shown significant therapeutic benefits and have established a primary role in most anxiety disorder categories and also offer some protection against relapse. However, their side effects limit widespread use of these drugs. The side effects include sexual dysfunction, nausea, vomiting, headache, agitation, insomnia, bleeding, and vivid dreams. Rare side effects are syndrome of inappropriate secretion of antidiuretic hormone, apathy, serotonin syndrome, and discontinuation syndrome.

Medical illnesses such as Parkinson's disease, cancer, seizures, stroke, and thyroid and gastric diseases usually produce symptoms of anxiety disorders, and these patients respond very well to pharmacotherapy. Hence, the suitable medications described above should be used to relieve their suffering. In all anxiety disorder patients, the therapeutic results are enhanced with the addition of cognitive therapy and oriental therapies such as meditation, yoga, Zen therapy, Niakan, acupuncture, bioenergic therapy, Monko therapy, Kenpo therapy, Mo-hezhiguan therapy, transcendental therapy, and Morita therapy [24, 25]. Future success of psychopharmacotherapy will depend on finding a genetic risk factor which coexists with environmental factors, thereby gaining further insight into the epigenetic process.

21.3 Depressive Disorders

Recent advances in the treatment of depression have demonstrated wider therapeutic activities, improved safety, tolerability, selectivity and reduced adverse reaction profiles [26, 27]. These newer antidepressants can be classified as (1) SSRIs, (2) SNRIs, (3) NARIs, (4) NaSSA, and (5) norepinephrine and dopamine modulator (bupropion).

21.3.1 Selective Serotonin Reuptake Inhibitor (SSRI)

The SSRIs are chemically distinct from traditional antidepressants, such as tricyclic, tetracyclic, and monoamine oxidase inhibitors (MAOIs), but share the common route of selective and potent inhibition of neuronal reuptake of serotonin and have none or little effect on neuronal reuptake of norepinephrine, acetylcholine, and histamine. Thus, these drugs have less sedative, anticholinergic, and cardiovascular effects than other antidepressants of tricyclic and tetracyclic class.

Fluoxetine, fluvoxamine, sertraline, indalpine, paroxetine, citalopram alaproclate, escitalopram, and femoxetine belong to the SSRI group of drugs. Overall, SSRIs have equal therapeutic efficacy but possess a better side effect profile, thus becoming more acceptable to patients. The common side effects of SSRIs are diarrhea, nausea, dry mouth, anorexia, sweating, weight gain or loss, agitation, headache, sexual disorders, insomnia, tremor, and dizziness, whereas the rare side effects are hyponatremia, bruising and bleeding due to platelet dysfunction, and inappropriate secretion of antidiuretic hormone. In addition, physicians should keep discontinuation syndrome in mind while using SSRIs except fluoxetine.

21.3.2 Serotonin and Noradrenergic Reuptake Inhibitor (SNRI)

This new class of drugs acts on both noradrenergic and serotonergic neurotransmitters and may have more advantages compared to other antidepressants. They lack actions on adrenergic, muscarinic, or histamine receptors, which are responsible for many of the adverse effects of older antidepressants. This group consists of venlafaxine, duloxetine, and milnacipran. Duloxetine has equal effects on both noradrenergic and serotonergic neurotransmitters, whereas venlafaxine has more serotonergic action and milnacipran more noradrenergic action. The side effect profile of SNRIs is similar to that of SSRIs and discontinuation syndrome should also be taken into account during the use of SNRIs.

21.3.3 Selective Noradrenaline Reuptake Inhibitor (NARI)

Reboxetine belongs to this group and is the first nontricyclic selective noradrenaline reuptake inhibitor. It mediates its therapeutic effect by increasing the action of noradrenaline in the brain without significant interaction with muscarinic, alpha1-adrenergic, and H1-histaminergic receptors that mediate the classic side effects of the tricyclic antidepressant (TCAs). The side effect profile of reboxetine is consistent with a noradrenergic agent that possesses weak anticholinergic and serotonergic activity.

21.3.4 Noradrenergic and Specific Serotonergic Antidepressant (NaSSA)

Mirtazapine represents this group. The antidepressant effect of the drug is a result of increased neurotransmission of both noradrenergic and serotonergic neurotransmitters. Its efficacy has been reported to be similar to that of older antidepressants. Mirtazapine develops reversible type of neutropenia which is nonprogressive in nature and dose-related. The adverse effects related to the anticholinergic system and cardiac effects are low. It does not usually cause nausea, sexual dysfunction, or anorexia. Its side effects include weight gain and sedation.

21.3.5 Norepinephrine and Dopamine Modulator (e.g., Bupropion)

Bupropion is not a drug causing sedation or sexual dysfunction. It has little cardiotoxicity and is a stimulating drug for retarded depression or fatigue. It is also used for augmentative purposes with SSRIs, SNRIs, and NaSSA. Its side effects are agitation in some cases and seizures in higher doses. The usual dose range is 150–300 mg a day.

21.3.6 Cautions in the use of SSRIs and Genetic Tests

An increase of suicidal ideation in patients who use SSRIs has been cautioned by the FDA. They advised that children and adolescents should avoid the use of paroxetine. On the whole, since 2004, a label of this drug has warned that pediatric and adolescent patients should be closely observed due to worsening depression or suicidality.

Recent genetic researchers have helped us to develop the concept of drug therapy tailored to patients' genetic makeup [5, 27], thereby finding the best treatment on an individual basis for depressed patients [28]. At the present time, genetic tests are commercially available to screen for allelic variation in the CYP-450 gene which gives a clue to individual variation of drug metabolism. However, these tests have limitations due to factors such as smoking, diet, and genetic makeup. Other tests are with the help of variation in the gene for spermine/spermidine *N* (1)-acetyltransferase (SSAT) and variation in corticotropin-releasing hormone (CRH) [29]. However, of all the tests available, the most widely studied test is 5-HTT (serotonin transporter) [28–31], which is used to choose the class of antidepressant to start treatment. Besides, this test helps in determining the patients' vulnerability to side effects of antidepressants.

21.4 Primary Insomnia

Therapeutic use of benzodiazepine hypnotics for insomnia has become limited due to the development of tolerance, dependence, and rebound phenomenon. Recent advances in the treatment of insomnia lie in the discovery of "non-benzodiazepine hypnotics" [32].

21.4.1 Non-benzodiazepine Hypnotics

This group of drugs is non-benzodiazepine receptor agonists and chemically unrelated to benzodiazepines. However, these drugs act through benzodiazepine receptors. Three drugs belonging to this group are changing the pharmacotherapy of insomnia. These drugs are as follows: (1) cyclopyrrolone (zopiclone, eszopiclone), (2) imidazopyridine (zolpidem), and (3) pyrazolopyrimidine (zaleplon).

21.4.1.1 Zopiclone

Zopiclone modulates the action of the neurotransmitter, GABA, to produce its hypnotic effect. It also binds only to a distinct site on the GABA/chloride ion channel complexes located in the cerebral cortex, cerebellum, and hippocampus and not to peripherally located complexes. The efficacy of this drug is to enhance sleep induction and maintenance, reduce sleep latency and nocturnal awakening, and enhance the quality of stage 3 and 4 sleep and produce sleep which mimics natural sleep. The therapeutic advantages of zopiclone over benzodiazepine hypnotics are as follows:

(i) Predominantly primary action-orientated drug; no significant secondary action (no receptor affinities to serotonin, dopamine, peripheral benzodiazepine sites, α-1, α-2 adrenergic receptors)
(ii) Markedly reduced activity for amnesia or memory disturbance
(iii) Reduced affinities for tolerance and dependence
(iv) Markedly reduced effect on psychomotor activities and cognition
(v) Absence of confusion in the elderly
(vi) Lack of accumulation
(vii) Stage 3 of sleep is increased; thus, the only hypnotic which increases the total duration of deep sleep
(viii) No effect on stage 4 and little or no effect on REM sleep

These drugs require no reduction of dose for elderly patients. Eszopiclone is a newer cyclopyrrolone agent approved by the FDA for primary insomnia without limitation of the duration of use which is different from other approved non-benzodiazepine hypnotics. Individual testing for 5HT7 genetic variation may help us to know the patients' vulnerability to side effect of the drugs.

21.4.1.2 Zolpidem

This drug is active at omega-1 benzodiazepine receptor. This drug shortens the sleep latency, prolongs total sleep time, but has little or no effect on sleep stages. The development of tolerance and physical dependence has rarely been observed.

Absorption of zolpidem with food shows lower oral bioavailability in comparison to that taken without food; about 70 % of oral bioavailability is found. Its elimination half-life is 1.5–2.4 h, but unlike zopiclone, zolpidem has a longer half-life in the elderly and a shorter half-life in children. Zolpidem ER has no limitation in the duration of use like eszopiclone and has a slightly longer half-life than zolpidem. Discontinuation of this drug often causes rebound insomnia and infrequently produces daytime sedation or amnesia.

21.4.1.3 Zaleplon

Zaleplon is chemically unrelated to benzodiazepines and binds differently to the benzodiazepine type I site on the gamma-aminobutyric acid (GABA) subtype A/chloride ion channel complex. Zaleplon is rapidly absorbed and reaches peak plasma concentration in about 1 h, which is also its half-life. The adverse reactions of this drug are minimal; no rebound insomnia and no psychomotor retardation in daytime. Neither tolerance nor dependence has been observed after discontinuation of this drug. The sleep latency is decreased by the use of this drug, which enhances the quality of sleep.

The other newer drug released by the FDA is ramelteon, a melatonin MT_1 and MT_2 receptor agonist. Ramelteon influences homeostatic sleep signaling mediated by suprachiasmatic nucleus. It is mostly used in elderly patients in a dose of 4–8 mg. Gaboxadol as elective extrasynaptic $GABA_A$ has a mechanism of action different from other GABA agents. This drug also involves $GABA_A$ receptor in thalamus.

21.5 Somatization

In recent years, the number of somatizing patients is increasing. These patients complain of many physical symptoms, but no organic basis is found, thus leaving the physician to investigate the presence of psychosocial stressors [33]. Somatoform disorders are frequently comorbid with depressive and anxiety disorders [34]. Somatization is regarded as a general process by which bodily symptoms may be used as a culturally sanctioned idiom of distress to implicate problems of family, work, school, financial, or other problems [33].

Pharmacotherapy is an adjunct treatment for somatization. Illness behaviors are to be addressed with psychotherapy such as insight-orientated psychotherapy and cognitive therapy.

Family therapy and behavior therapy can be also used. However, ruling out medical conditions with nonspecific symptoms and planning to care rather than cure should be the objective of the therapy. Establishing a primary therapist with regular visits to

educate, to remove the coexisting anxiety and depression, and finally to enhance effective coping is the first step for success of the treatment of somatizing patients.

However, SSRI (e.g., fluoxetine) improves the presenting symptoms in patients with body dysmorphic disorder [35, 36]. Hypochondriasis also improves markedly with SSRIs. However, psychopharmacological intervention has been unsuccessful in conversion disorder. In pain disorder, tricyclic, SSRI, and SNRI agents augment analgesic effects. SSRIs are also beneficial to the obsessional cluster of somatoform disorders, but in the somatic cluster, less is known about the response of pharmacotherapy [36]. Further studies are needed for improving the horizon of success in somatoform disorders.

21.6 Eating Disorders

21.6.1 Anorexia Nervosa

In anorexia nervosa, the main therapeutic goals are threefold: (1) to stimulate appetite and increase weight, (2) dietary advice, and (3) treating underlying disorders which precipitate anorexic tendencies such as depression, obsessive-compulsive disorder, personality disorder, and substance abuse.

Drugs chosen for the treatment of anorexia nervosa promote weight gain and also resolve underlying precipitating causes. Tricyclic antidepressants, such as amitriptyline, clomipramine, trimipramine, and Norpramin, and tetracyclic antidepressants, such as maprotiline, remain the favored drugs, while antipsychotics such as olanzapine, risperidone, and quetiapine (Seroquel) have shown significant improvement; the most convincing result came from the use of olanzapine [37].

Benzodiazepines in small doses during the weight gain are beneficial to controlling reactive anxiety. The benzodiazepines most appropriate for this phase are sublingual lorazepam and alprazolam but should be used in the short term, e.g., 4–6 weeks, with antidepressants which will then continue for a long-term treatment. SSRIs and SNRIs have therapeutic effects for controlling relapses in anorexia nervosa. Cyproheptadine, a serotonin antagonist, which increases weight, has also been used in daily doses of 12–32 mg with a significant result.

NaSSA agent, mirtazapine [2, 3], has shown significant therapeutic efficacy in patients with anorexia nervosa. Individual psychotherapy and family therapy have also been tried with success. Overall, the recent trend for better management of anorexia nervosa has been the combination of pharmacotherapy with individual psychotherapy, family therapy, and dietary advice.

21.6.2 Bulimia Nervosa

In the treatment of bulimia nervosa, antidepressants [38, 39], particularly fluoxetine, have been remarkably and significantly successful. In Canada, the Health Protection

Branch has approved fluoxetine as an antibulimic agent. Other newer SSRI drugs, such as fluvoxamine, sertraline, and paroxetine, are also beneficial to bulimia. Naltrexone, a long-acting oral narcotic antagonist, has also been found to be effective in reducing binge eating and vomiting in patients refractory to antidepressants. The dosage of this drug ranges from 200 to 300 mg a day.

In recent studies, topiramate [40] has been found to be an effective drug for bulimia nervosa. In bulimia nervosa, in addition to pharmacotherapy, cognitive behavioral therapy either individually or in group helps to improve eating behavior as well as attitude toward body shape and weight. Recent studies have shown the superiority of combined drug and cognitive behavioral therapy over behavior therapy alone. Thus, the management of bulimia in the future will have to focus on combined therapies which include pharmacotherapy, cognitive behavioral therapy, and dietary advice.

21.6.3 Binge Eating Disorder

Fluoxetine, sertraline, and citalopram have shown significant efficacy in binge eating disorder. Sibutramine, an SNRI [41] in a daily dose of 15 mg, and reboxetine, an NARI drug [42] in a daily dose of 8 mg, are also effective in this disorder.

Night eating syndrome, characterized by morning anorexia, insomnia, and evening hyperphagia, is less studied for treatment purposes, but the drugs used for binge eating disorder are also therapeutically beneficial. On the whole, anorexia nervosa has not responded to psychopharmacotherapy, but relapses are definitely controlled, once weight is recovered in these patients with the use of SSRI and SNRI agents. On the other hand, psychopharmacological management of bulimia nervosa and binge eating disorder has resulted in very satisfactory outcomes.

21.7 Migraine

Recent advances in migraine therapy have been the development of sumatriptan, which is a 5-hydroxytryptamine (5HT)-like receptor agonist [2–5]. Sumatriptan mediates selective vasoconstriction within carotid arterial circulation supplying intracranial and extracranial tissues such as brain and meninges. Mechanism of antimigraine activity could, thus, involve vasoconstriction of dura blood vessels. This drug has remarkable activity in controlling the acute pain of migraine. Imitrex can be given orally in a dose of 100 mg or by subcutaneous injection in a dose of 6 mg. Patients who do not respond to the oral dose should not have any more tablets. The maximum oral dose in 24 h is 300 mg or by injection 12 mg a day. This drug should not be used in patients suffering from heart diseases, cerebrovascular diseases, and hemiplegic and basilar migraine and in patients receiving MAOIs, selective 5-HT reuptake inhibitors, and lithium. Intravenous route causes coronary vasospasm; hence, the route should not be used.

Newer serotonin agonists, triptans, rizatriptans, almotriptans, eletriptans, and frovatriptan, have been shown to be very effective in reducing migraine pain.

21.7.1 Prophylactic Management

Prophylaxis of migraine is still covered by six groups of drugs: beta-blockers (e.g., atenolol, metoprolol, and propranolol), calcium channel blockers (e.g., verapamil and flunarizine), serotonin antagonists (e.g., cyproheptadine and pizotifen), antidepressants (e.g., amitriptyline, doxepin, and phenelzine), antiepileptics (e.g., sodium valproate), and nonsteroidal anti-inflammatory drugs (e.g., naproxen). Recent research has shown that enalapril, an angiotensin-converting enzyme (ACE) inhibitor, may also be effective in preventing migraine. The prophylactic treatment should be on a long-term basis and should be tapered in the light of improvement.

21.8 Fibromyalgia

The following are the main psychopharmacological agents found to be therapeutically beneficial to fibromyalgia.

21.8.1 Tricyclic Antidepressants

Amitriptyline – 10–25 mg to start and titrate up to 100 mg; Nortriptyline – start at 10–25 mg and titrate up to 100 mg.

21.8.2 SNRI

Venlafaxine, duloxetine, and milnacipran possess analgesic effects and have much fewer adverse reactions than TCA. The FDA has approved duloxetine for the treatment of fibromyalgia. However, SSRIs have not produced significant improvement of symptoms in patients with fibromyalgia.

21.8.3 Cyclobenzaprine

Cyclobenzaprine, a muscle relaxant medication, is chemically related to TCA and might be the basis of effectiveness in TCA. In doses of 10–40 mg, this drug is effective for fibromyalgia.

21.8.4 $\alpha_2\delta$-Ligand Anticonvulsants (e.g., Pregabalin, Gabapentin)

In particular, pregabalin is effective for fibromyalgia. The dose range of pregabalin is from 150 to 300 mg a day, while the dose for gabapentin ranges from 1,200 to 2,400 mg a day.

21.8.5 Tramadol

It is given 25–250 mg a day in divided doses. The combination of acetaminophen and tramadol (Tramacet) is more effective than tramadol alone. Pregabalin and duloxetine are considered the first line of treatment in fibromyalgia, and tramadol could be considered the second-line drug of choice.

21.9 Psychopharmacotherapy for Physically Ill Patients

Patients who are physically ill and present with depression or anxiety can be treated successfully with psychopharmacotherapy.

21.9.1 Cardiac Diseases

In coronary artery disorder, depression can be treated with SSRI, NaSSA, and bupropion. The drugs of choice are fluoxetine, paroxetine, sertraline, bupropion, and mirtazapine. Antipsychotics, especially quetiapine, olanzapine, and risperidone, are preferred in schizophrenic patients with cardiac diseases. In the treatment of anxiety disorder patients with cardiac diseases, benzodiazepine anxiolytics are being replaced by SSRIs and buspirone.

21.9.2 Renal Diseases

Most SSRIs can be used in depressive patients with renal diseases. However, paroxetine should be given half of the adult dose, while the other SSRIs do not need a dose adjustment. Bupropion should be avoided in these patients because water-soluble active metabolite may accumulate, whereas mirtazapine and venlafaxine should be used in less than half of the adult dose because renal clearance of both

drugs is decreased by 30–50 %, and particularly the half-life of venlafaxine is prolonged in renal insufficiency. For the use of antipsychotics, quetiapine and olanzapine are preferred, whereas risperidone should be avoided [43]. For the use of anxiolytics and sedatives, most benzodiazepine anxiolytics except chlordiazepoxide can be used, and zolpidem is the drug of choice among hypnotics. Most antidepressants are metabolized by the liver and excreted by the kidneys; thus, reduction of initial doses of antidepressant is a reasonable way to avoid the possibility of potentially active metabolite accumulation.

21.9.3 Cerebrovascular Diseases

In cerebrovascular diseases, antidepressants such as fluoxetine and citalopram are recommended, because other newer antidepressants have not been studied in the diseases. Most antipsychotics, especially atypical antipsychotics, should be avoided in the elderly [44] because of increased cerebrovascular accidents in the elderly by exposure to atypical antipsychotics but lower doses of low-potency drugs such as quetiapine can be used with caution.

21.9.4 Seizure Disorders

Most psychotropic drugs have a lower seizure threshold in a normal dose; hence, lower doses of psychotropic drugs should be tried with caution. Haloperidol, quetiapine, and olanzapine pose lower risks for seizure than other antipsychotics.

21.9.5 Hepatic Diseases

Most of the psychotropic drugs are metabolized in the liver; hence, all psychotropics should be used in lower doses with caution in patients with hepatic diseases.

21.9.6 Gastrointestinal Diseases

A recent report on the association between SSRIs and bleeding has raised concern for its use in patients with peptic ulcer or any other diseases causing bleeding from the gut.

21.9.7 Respiratory Diseases

SSRIs are the preferred drugs of choice for treating depression in patient with respiratory diseases. Atypical antipsychotics except clozapine can be used, if needed, in psychotic patients with respiratory diseases. Buspirone is the safest anxiolytic drug, because it does not depress respiration. However, SSRI with anxiolytic properties can be a better choice.

21.10 Conclusions

Psychopharmacological advances in psychosomatic medicine or consultation-liaison psychiatry have been in the area of anxiety disorders, depressive disorders, insomnia, somatization, eating disorders, migraine, and fibromyalgia. The ultimate goal of psychopharmacological management remains to bring optimal benefits to patients along with minimal adverse reactions which will enhance the quality of care. However, it should be kept in mind that for holistic management of patients with mental disorders including psychosomatic disorders in consultation-liaison psychiatry, nonpharmacological therapies, such as cognitive therapy, behavior therapy, and somatopsychic approaches, are necessary and vital.

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