Uses and Administration

Citalopram, a phthalane derivative, is an SSRI with actions and uses similar to those of fluoxetine (p.397). Citalopram is given orally as the hydrobromide or hydrochloride, usually as a single daily dose. Doses are expressed in terms of citalopram; citalopram hydrobromide 25.0 mg and citalopram hydrochloride 22.3 mg are each equivalent to about 20.0 mg of citalopram.

In the treatment of **depression**, the initial dose (given as tablets or a liquid) is the equivalent of 20 mg daily by mouth. After at least one week, the dose may be increased to 40 mg daily; a dose of 60 mg daily may be necessary in some patients. In the UK citalopram is also given as the hydrochloride in the form of concentrated oral drops containing the equivalent of 40 mg/mL of citalopram. The bioavailability of the drops is about 25% greater than that of the tablets and consequently daily doses appear to be lower: a 20-mg tablet dose is equivalent to a 16-mg (8 drops) dose of the concentrate. In some countries, citalopram hydrochloride has also been given by intravenous infusion in doses of 20 to 40 mg when the oral route is impracticable.

In the treatment of **panic disorder** with or without agoraphobia, the initial oral dose is 10 mg (or the equivalent as the concentrate) daily increasing to 20 mg daily after one week. The dose may be increased thereafter as required up to a maximum of 60 mg daily. In some countries citalopram is also used in the treatment of **obsessive-compulsive disorder** in doses similar to those used in depression (see above).

A dose of 20 mg daily, up to a maximum of 40 mg (or their equivalents as the concentrate), should be used in elderly patients. For dosage in hepatic and renal impairment see below.

Citalopram should be withdrawn gradually to reduce the risk of withdrawal symptoms.

The *S*-enantiomer of citalopram, escitalopram (p.391) is given for the treatment of depression and some anxiety disorders.

◊ Reviews.

1. Milne RJ, Goa KL. Citalopram: a review of its pharmacodynamic and pharmacokinetic properties, and therapeutic potential in depressive illness. *Drugs* 1991; **41**: 450–77.

Administration in hepatic or renal impairment. Licensed drug information suggests that dosage of citalopram should be restricted to the lower end of the dose range in patients with hepatic impairment. A usual oral dose for depression in this group would be 20 mg daily although the dose may be increased up to 40 mg daily, if necessary.

There is no need for dose adjustment in mild to moderate renal impairment although information is lacking on appropriate dosage in severe impairment.

Anxiety disorders. Citalopram has been given in anxiety disorders (p.952) including panic disorder (p.952), obsessive-compulsive disorder (p.952), post-traumatic stress disorder (p.953), and social anxiety disorder (see under Phobic Disorders, p.953).

References.

1. Bouwer C, Skin DJ. Use of the selective serotonin reuptake inhibitor citalopram in the treatment of generalized social phobia. *J Affect Disord* 1998; **49:** 79–82.
2. Lepola UM, *et al.* A controlled, prospective, 1-year trial of citalopram in the treatment of panic disorder. *J Clin Psychiatry* 1998; **59:** 528–34.
3. Seedat S, *et al.* Open trial of citalopram in adults with post-traumatic stress disorder. *Int J Neuropsychopharmacol* 2000; **3:** 135–40.
4. Montgomery SA, *et al.* Citalopram 20 mg, 40 mg and 60 mg are all effective and well tolerated compared with placebo in obsessive-compulsive disorder. *Int Clin Psychopharmacol* 2001; **16:** 75–86.
5. Perna G, *et al.* A comparison of citalopram and paroxetine in the treatment of panic disorder: a randomized, single-blind study. *Pharmacopsychiatry* 2001; **34:** 85–90.
6. Marazziti D, *et al.* Citalopram in refractory obsessive-compulsive disorder: an open study. *Int Clin Psychopharmacol* 2001; **16:** 215–19.
7. Atmaca M, *et al.* Efficacy of citalopram and moclobemide in patients with social phobia: some preliminary findings. *Hum Psychopharmacol* 2002; **17:** 401–5.
8. Varia I, Rauscher F. Treatment of generalized anxiety disorder with citalopram. *Int Clin Psychopharmacol* 2002; **17:** 103–7.
9. Mukaddes NM, *et al.* Citalopram treatment of children and adolescents with obsessive-compulsive disorder: a preliminary report. *Psychiatry Clin Neurosci* 2003; **57:** 405–8.
10. Lenze EJ, *et al.* Efficacy and tolerability of citalopram in the treatment of late-life anxiety disorders: results from an 8-week randomized, placebo-controlled trial. *Am J Psychiatry* 2005; **162:** 146–50.

Depression. As discussed on p.373, there is very little difference in efficacy between the different groups of antidepressant drugs. SSRIs such as citalopram are widely used as an alternative to the older tricyclics as they have fewer adverse effects and are safer in overdosage.

References.

1. Montgomery SA, *et al.* The optimal dosing regimen for citalopram—a meta-analysis of nine placebo-controlled studies. *Int Clin Psychopharmacol* 1994; **9** (suppl 1): 35–40.
2. Keller MB. Citalopram therapy for depression: a review of 10 years of European experience and data from US trials. *J Clin Psychiatry* 2000; **61:** 896–908.
3. Parker NG, Brown CS. Citalopram in the treatment of depression. *Ann Pharmacother* 2000; **34:** 761–71.
4. Guelfi JD, *et al.* Efficacy of intravenous citalopram compared with oral citalopram for severe depression. Safety and efficacy data from a double-blind, double-dummy trial. *J Affect Disord* 2000; **58:** 201–9.
5. Hochstrasser B, *et al.* Prophylactic effect of citalopram in unipolar, recurrent depression: placebo-controlled study of maintenance therapy. *Br J Psychiatry* 2001; **178:** 304–10.
6. Klysner R, *et al.* Efficacy of citalopram in the prevention of recurrent depression in elderly patients: placebo-controlled study of maintenance therapy. *Br J Psychiatry* 2002; **181:** 29–35.
7. Roose SP, *et al.* Antidepressant pharmacotherapy in the treatment of depression in the very old: a randomized, placebo-controlled trial. *Am J Psychiatry* 2004; **161:** 2050–9.
8. Trivedi MH, *et al.* The STAR*D Study Team. Evaluation of outcomes with citalopram for depression using measurement-based care in STAR*D: implications for clinical practice. *Am J Psychiatry* 2006; **163:** 28–40.

Pathological crying or laughing. Inappropriate or uncontrolled crying or laughing can occur in patients with lesions in certain areas of the brain. Attempts at treatment have mostly been with antidepressant drugs, including SSRIs. Favourable results with citalopram have been reported in a double-blind placebo-controlled study[1] and in case reports.[2,3]

1. Andersen G, *et al.* Citalopram for post-stroke pathological crying. *Lancet* 1993; **342:** 837–9.
2. Andersen G, *et al.* Citalopram treatment of traumatic brain damage in a 6-year-old boy. *J Neurotrauma* 1999; **16:** 341–4.
3. Kaschka WP, *et al.* Treatment of pathological crying with citalopram. *Pharmacopsychiatry* 2001; **34:** 254–8.

Schizophrenia. The treatment of schizophrenia consists mainly of a combination of social therapy and antipsychotic drugs (see p.955). Like other antidepressants, citalopram has been examined for its potential value as an adjuvant in schizophrenia.[1-4] In a preliminary placebo-controlled study[1] in 15 patients with chronic schizophrenia who exhibited signs of impulsive aggression, adding citalopram to existing antipsychotic therapy significantly reduced the frequency, but not the average severity, of aggressive incidents. In a subsequent study involving 90 patients, citalopram appeared to improve subjective well-being but had no clear effect on psychopathological symptoms.[2]

1. Vartiainen H, *et al.* Citalopram, a selective serotonin reuptake inhibitor, in the treatment of aggression in schizophrenia. *Acta Psychiatr Scand* 1995; **91:** 348–51.
2. Salokangas RKR, *et al.* Citalopram as an adjuvant in chronic schizophrenia: a double-blind placebo-controlled study. *Acta Psychiatr Scand* 1996; **94:** 175–80.
3. Taiminen TJ, *et al.* Citalopram as an adjuvant in schizophrenia: further evidence for a serotonergic dimension in schizophrenia. *Int Clin Psychopharmacol* 1997; **12:** 31–5.
4. Kasckow JW, *et al.* Citalopram augmentation of antipsychotic treatment in older schizophrenia patients. *Int J Geriatr Psychiatry* 2001; **16:** 1163–7.

Sexual dysfunction. SSRIs have been tried in the treatment of premature ejaculation, but results with citalopram have been conflicting, see under Fluoxetine, p.399.

Preparations

USP 31: Citalopram Tablets.

Proprietary Preparations (details are given in Part 3)

Arg.: Humorap; Psiconor; Seropram; Zentius; ***Austral.:*** Celapram; Ciazil; Cipramil; Talam; Talohexal; ***Austria:*** Apertia†; Cipram†; Citalhexal†; Citalon†; Citalostad; Citarcana; Citor; Eostar; Pram; Sepram†; Seropram; ***Belg.:*** Cipramil; ***Braz.:*** Alcytam; Cipramil; Citta; Denyl; Procimax; ***Canad.:*** Celexa; ***Chile:*** Actipram; Cimal; Cipramil; Cortran; Finap; Pramcil; Prisma; Semax†; Setronil; Temperax; Zebrak; Zentius; ***Cz.:*** Apertia†; Apo-Cital; Cerotor; Cipram; Cita; Citalec; Citalon; Citaratio; Dalsan; Pram; Sepram†; Seropram; Zyloram; ***Denm.:*** Akarin; Cipramil; Citadur; Citaham; ***Fin.:*** Cipramil; Emocal†; Sepram; ***Fr.:*** Seropram; ***Ger.:*** Cilex†; Cipramil; Citadura; CitaLich; Citalo-Q; Citalon; Sepram†; Serital; ***Gr.:*** A-Depress-Therapy; Acelopram; Atinorm; Bibien; Celius; Cilopress; Cinapen; Cipram; Erlicon; Espinal; Goldamit; Lodeprem; Lopracil; Lopraxer; Malicon; Pralotam; Prefucet; Pricital; Ropramin; Selon; Seproc; Seretover; Seropram; Seror; Siloam; Sotovon; Talopram; Talopron; Taprocil; Tasonade; Verus; Vesema; Xadorek; Zanipram; ***Hong Kong:*** Cipram; Cital; ***Hung.:*** Citagen; Citalodep; Citalon; Citalowin; Citapram; Dalsan; Oropram; Seropram; Serotor; Zyloram; ***India:*** Citadep; Citopam; ***Indon.:*** Cipram; ***Irl.:*** Ciprager; Cipramil; Ciprapine; Ciprotan; Citrol; ***Israel:*** Cipramil; Recital; ***Ital.:*** Elopram; Felipram; Feliximir; Frimaind; Kaidor; Lampopram; Marpram; Percital; Pramexyl; Ricap; Seropram; Verisan; ***Malaysia:*** Cipram; ***Mex.:*** Citox; Seropram; Xylorane; ***Neth.:*** Cipramil; Ciprapine; Lontax; ***Norw.:*** Cipramil; Desital†; ***NZ:*** Celapram; Cipramil; ***Philipp.:*** Lupram; ***Pol.:*** Aurex; Cilon; Cipramil; Cital; Citaratio; Citaxin; ***Rus.:*** Cipramil (Ципрамил); Citol (Цитол); Opra (Опра); Pram (Прам); ***S.Afr.:*** Adco-Talomil; Cilift; Cipramil; CitaloHexal; Depramil; Talomil†; ***Singapore:*** Cipram; ***Spain:*** Citalvir; Genprol; Presar; Prisdal; Relapaz; Seropram; Somac; ***Swed.:*** Cipramil; Citavie; ***Switz.:*** Alutan; Claropram; Rudopram; Seropram; ***Thai.:*** Cipram; ***Turk.:*** Cipram; Citara; Citol; Citolap; ***UK:*** Cipramil; ***USA:*** Celexa; ***Venez.:*** Seropram.

Clomipramine Hydrochloride

(BANM, USAN, rINNM)

Chlorimipramine Hydrochloride; Clomipramine, chlorhydrate de; Clomipramini hydrochloridum; G-34586; Hidrocloruro de clomipramina; Klomipramiinihydrokloridi; Klomipramin Hidroklorür; Klomipramin hydrochlorid; Klomipramin-hidroklorid; Klomipraminhydroklorid; Klomipramino hidrochloridas; Monochlorimipramine Hydrochloride. 3-(3-Chloro-10,11-dihydro-5*H*-dibenz[*b,f*]azepin-5-yl)propyldimethylamine hydrochloride.

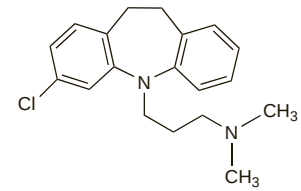
Кломипрамина Гидрохлорид

$C_{19}H_{23}ClN_2,HCl$ = 351.3.

CAS — 303-49-1 (clomipramine); 17321-77-6 (clomipramine hydrochloride).

ATC — N06AA04.

ATC Vet — QN06AA04.



(clomipramine)

Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), *Jpn*, and *US*.

Ph. Eur. 6.2 (Clomipramine Hydrochloride). A white or slightly yellow, slightly hygroscopic, crystalline powder. Freely soluble in water and in dichloromethane; soluble in alcohol. A 10% solution in water has a pH of 3.5 to 5.0. Protect from light.

USP 31 (Clomipramine Hydrochloride). A white to faintly yellow crystalline powder. Very soluble in water. pH of a 10% solution in water is between 3.5 and 5.0.

Adverse Effects, Treatment, and Precautions

As for tricyclic antidepressants in general (see Amitriptyline, p.376).

Breast feeding. For comments on the use of tricyclic antidepressants in breast feeding patients, see under Precautions for Amitriptyline, p.378.

Porphyria. Clomipramine is considered to be unsafe in patients with porphyria because it has been shown to be porphyrinogenic in *in-vitro* systems, although there is conflicting evidence of porphyrinogenicity.

Interactions

For interactions associated with tricyclic antidepressants, see Amitriptyline, p.379.

MAOIs. The combination of clomipramine and *tranylcypromine* is considered particularly hazardous.

The serotonin syndrome (p.416) has occurred in patients receiving clomipramine and *moclobemide* (see under Interactions of Antidepressants in Phenelzine, p.418).

Pharmacokinetics

Clomipramine is readily absorbed from the gastrointestinal tract, and extensively demethylated during first-pass metabolism in the liver to its primary active metabolite, desmethylclomipramine.

Clomipramine and desmethylclomipramine are widely distributed throughout the body and are extensively bound to plasma and tissue protein. Clomipramine has been estimated to have a plasma elimination half-life of about 21 hours, which may be considerably extended in overdosage; that of desmethylclomipramine is longer (about 36 hours).

Paths of metabolism of both clomipramine and desmethylclomipramine include hydroxylation and *N*-oxidation. About two-thirds of a single dose of clomipramine is excreted in the urine, mainly in the form of its metabolites, either free or in conjugated form; the remainder of the dose is excreted in the faeces. Clomipramine crosses the placenta and is distributed into breast milk.

◊ References.

1. Gex-Fabry M, *et al.* Clomipramine metabolism: model-based analysis of variability factors from drug monitoring data. *Clin Pharmacokinet* 1990; **19:** 241–55.

2. Balant-Gorgia AE, *et al.* Clinical pharmacokinetics of clomipramine. *Clin Pharmacokinet* 1991; **20:** 447–62.
3. Nielsen KK, *et al.* Single-dose kinetics of clomipramine: relationship to the sparteine and S-mephenytoin oxidation polymorphisms. *Clin Pharmacol Ther* 1994; **55:** 518–27.
4. Herrera D, *et al.* Pharmacokinetics of a sustained-release dosage form of clomipramine. *J Clin Pharmacol* 2000; **40:** 1488–93.

Uses and Administration

Clomipramine is a dibenzazepine tricyclic antidepressant with actions and uses similar to those of amitriptyline (p.381). It has antimuscarinic properties and is also a potent serotonin reuptake inhibitor. Clomipramine is one of the more sedating tricyclics. It is used as the hydrochloride.

In the treatment of **depression** in adults, clomipramine hydrochloride is given in oral doses of 10 mg daily initially, increasing gradually to 30 to 150 mg daily if required; up to 250 mg daily or higher may be given in severe cases. A suggested initial dose for the elderly is 10 mg daily increasing gradually over 10 days to 30 to 75 mg daily if required. Clomipramine may be given in divided doses throughout the day, but since it has a prolonged half-life, once-daily dosage regimens are also suitable, usually given at night.

In the treatment of **obsessive-compulsive disorder** and **phobias**, clomipramine hydrochloride may be given in an initial oral dose of 25 mg daily (or 10 mg daily for elderly patients or those sensitive to tricyclics) increased gradually over two weeks to 100 to 150 mg daily. In some countries, maximum doses of 250 mg daily have been used. Similar doses have also been used in the management of **panic disorder**. In some countries clomipramine hydrochloride is also used for the treatment of obsessive-compulsive disorder in children and adolescents aged 10 years and over (see below for doses).

In some countries clomipramine may be given for depression or obsessive-compulsive disorder by the intramuscular or intravenous routes if giving it orally is impracticable or inadvisable. The initial dose of clomipramine hydrochloride by intramuscular injection is 25 to 50 mg daily, increasing to a maximum of 100 to 150 mg daily; oral dosage should be substituted as soon as possible. Clomipramine hydrochloride may also be given by intravenous infusion in doses of 50 to 75 mg daily diluted in 250 to 500 mL of sodium chloride 0.9% or glucose 5% and infused over 1.5 to 3 hours. When a satisfactory response to parenteral doses has been obtained oral therapy should be substituted, initially giving double the parenteral dose by mouth and subsequently adjusting if necessary. Patients must be carefully supervised during intravenous infusion of clomipramine hydrochloride and the blood pressure carefully monitored owing to the risk of hypotension.

In the adjunctive treatment of **cataplexy associated with narcolepsy**, clomipramine hydrochloride is given in an initial oral dose of 10 mg daily and gradually increased until a satisfactory response occurs, usually within the range of 10 to 75 mg daily.

Clomipramine should be withdrawn gradually to reduce the risk of withdrawal symptoms.

Administration in children. In the UK, the use of clomipramine in children under 18 years is not recommended in the treatment of depressive states, phobias, or cataplexy associated with narcolepsy. However, in some countries clomipramine hydrochloride is used for the treatment of *obsessive-compulsive disorder* in children and adolescents aged 10 years and over. Initial oral doses are 25 mg daily, increased gradually during the first 2 weeks to a maximum daily dose of 3 mg/kg or 100 mg, whichever is smaller, and given in divided doses. Further increases are permitted, over several weeks to a maximum daily dose of 3 mg/kg or 200 mg, whichever is smaller. Once titration has been achieved the dose may be given as a single dose at bedtime.

Clomipramine hydrochloride is also licensed for oral use in the management of *nocturnal enuresis* in some countries (for a discussion of tricyclic use in nocturnal enuresis see Micturition Disorders under Amitriptyline, p.381). The age ranges and licensed doses vary somewhat from country to country, however. For example, in *France*, use is licensed in children over 6 years of age, at a daily dose of 10 to 30 mg, or 0.5 to 1 mg/kg, whereas in *Austria* and *Switzerland* the licensed dose is: 6 to 8 years, 20 to 30 mg; 9 to 12 years, 25 to 50 mg; over 12 years, 25 to 75 mg.

Anxiety disorders. Tricyclic antidepressants that inhibit serotonin reuptake, such as clomipramine and imipramine, have been given in the management of anxiety disorders (p.952) including obsessive-compulsive disorder (p.952), panic disorder (p.952), post-traumatic stress disorder (p.953), and trichotillomania.

References.

1. Swedo SE, *et al.* A double-blind comparison of clomipramine and desipramine in the treatment of trichotillomania (hair pulling). *N Engl J Med* 1989; **321:** 497–501.
2. McTavish D, Benfield P. Clomipramine: an overview of its pharmacological properties and a review of its therapeutic use in obsessive compulsive disorder and panic disorder. *Drugs* 1990; **39:** 136–53.
3. Kelly MW, Myers CW. Clomipramine: a tricyclic antidepressant effective in obsessive compulsive disorder. *DICP Ann Pharmacother* 1990; **24:** 739–44.
4. Papp LA, *et al.* Clomipramine treatment of panic disorder: pros and cons. *J Clin Psychiatry* 1997; **58:** 423–5.
5. Fallon BA, *et al.* Intravenous clomipramine for obsessive-compulsive disorder refractory to oral clomipramine: a placebo-controlled study. *Arch Gen Psychiatry* 1998; **55:** 918–24.
6. Sasson Y, *et al.* A double-blind crossover comparison of clomipramine and desipramine in the treatment of panic disorder. *Eur Neuropsychopharmacol* 1999; **9:** 191–6.

Autism. Clomipramine reduced adventitious movements when tried in 5 boys with autistic disorder.[1] However, in a small study in 7 children no improvement in symptoms was noted and adverse effects were common and serious.[2] In another study,[3] although clomipramine was found to be as effective as haloperidol in the treatment of some autistic symptoms, patients on clomipramine were significantly less likely to complete the trial for reasons that included the onset of adverse effects.

1. Brasic JR, *et al.* Clomipramine ameliorates adventitious movements and compulsions in prepubertal boys with autistic disorder and severe mental retardation. *Neurology* 1994; **44:** 1309–12.
2. Sanchez LE, *et al.* A pilot study of clomipramine in young autistic children. *J Am Acad Child Adolesc Psychiatry* 1996; **35:** 537–44.
3. Remington G, *et al.* Clomipramine versus haloperidol in the treatment of autistic disorder: a double-blind, placebo-controlled, crossover study. *J Clin Psychopharmacol* 2001; **21:** 440–4.

Micturition disorders. In some countries, clomipramine is used in children for the treatment of nocturnal enuresis; for further details, see Administration in Children, above.

Pain. Antidepressants, usually amitriptyline or another tricyclic, are useful in alleviating some types of pain (see Choice of Analgesic, p.2). In a number of countries, clomipramine hydrochloride is licensed for the treatment of chronic pain; oral doses range from 10 to 150 mg daily. Parenteral doses are licensed in some countries.

Premenstrual syndrome. Clomipramine reduced premenstrual irritability and depressed mood when given during the luteal phase;[1] doses of clomipramine ranged from 25 to 75 mg daily. It was postulated that the efficacy of clomipramine in relieving premenstrual symptoms is related to its serotonin reuptake inhibitor activity. For the overall management of premenstrual syndrome, see p.2099.

1. Sundblad C, *et al.* Clomipramine administered during the luteal phase reduces the symptoms of premenstrual syndrome: a placebo-controlled trial. *Neuropsychopharmacology* 1993; **9:** 133–45.

Sexual dysfunction. Clomipramine has been used for its inhibitory effect on ejaculation in the management of premature ejaculation[1-5] (p.2181). In some men with very short latencies (less than 1 minute) continuous therapy with a low daily dose of clomipramine, typically 20 or 30 mg, may be more effective than taking 25 mg as required.[5] Any benefits may relate to its effect as a serotonin reuptake inhibitor; other antidepressants with serotonin reuptake inhibiting actions, such as fluoxetine and sertraline, have also been tried in this condition.[4]

1. Hawton K. Erectile dysfunction and premature ejaculation. *Br J Hosp Med* 1988; **40:** 428–36.
2. Althof SE, *et al.* A double-blind crossover trial of clomipramine for rapid ejaculation in 15 couples. *J Clin Psychiatry* 1995; **56:** 402–7.
3. Haensel SM, *et al.* Clomipramine and sexual function in men with premature ejaculation and controls. *J Urol (Baltimore)* 1996; **156:** 1310–15.
4. Kim SC, Seo KK. Efficacy and safety of fluoxetine, sertraline and clomipramine in patients with premature ejaculation: a double-blind, placebo controlled study. *J Urol (Baltimore)* 1998; **159:** 425–7.
5. Rowland DL, *et al.* Effective daily treatment with clomipramine in men with premature ejaculation when 25 mg (as required) is ineffective. *BJU Int* 2001; **87:** 357–60.

Stuttering. Clomipramine was of modest success in a controlled study[1] of 17 patients with developmental stuttering (p.1001). It was suggested that its efficacy may be related to its serotonin reuptake inhibitor activity.

1. Gordon CT, *et al.* A double-blind comparison of clomipramine and desipramine in the treatment of developmental stuttering. *J Clin Psychiatry* 1995; **56:** 238–42.

Preparations

BP 2008: Clomipramine Capsules;
USP 31: Clomipramine Hydrochloride Capsules.

Proprietary Preparations (details are given in Part 3)

Arg.: Anafranil; Clomipram†; ***Austral.:*** Anafranil; Clopram; Placil; ***Austria:*** Anafranil; ***Belg.:*** Anafranil; ***Braz.:*** Anafranil; Clo; Clomipran; ***Canad.:*** Anafranil; Novo-Clopamine†; ***Chile:*** Anafranil; Atenual; Ausentron; Deprelin; ***Cz.:*** Anafranil; Hydiphen†; ***Denm.:*** Anafranil; ***Fin.:*** Anafranil; ***Fr.:*** Anafranil; ***Ger.:*** Anafranil; Hydiphen†; ***Gr.:*** Anafranil; ***Hong Kong:*** Anafranil; Zoiral; ***Hung.:*** Anafranil; ***India:*** Anafranil; ***Indon.:*** Anafranil; ***Irl.:*** Anafranil; ***Israel:*** Anafranil; Maronil; ***Ital.:*** Anafranil; ***Malaysia:*** Anafranil; Clopress†; ***Mex.:*** Anafranil; ***Neth.:*** Anafranil; ***Norw.:*** Anafranil†; Clopress; ***Philipp.:*** Anafranil; ***Pol.:*** Anafranil; Hydiphen; ***Port.:*** Anafranil; ***Rus.:*** Anafranil (Анафранил); Clofranil (Клофранил); ***S.Afr.:*** Anafranil; Clomidep; Equinorm; ***Singapore:*** Anafranil†; ***Spain:*** Anafranil; ***Swed.:*** Anafranil; ***Switz.:*** Anafranil; ***Thai.:*** Anafranil; Clofranil†; ***Turk.:*** Anafranil; ***UK:*** Anafranil; ***USA:*** Anafranil; ***Venez.:*** Anafranil.

Desipramine Hydrochloride *(BANM, USAN, rINNM)*

Desipramiinihydrokloridi; Désipramine, chlorhydrate de; Desipramin-hydrochlorid; Desipraminhydroklorid; Desipramini hydrochloridum; Desmethylimipramine Hydrochloride; Dezipramin-hidroklorid; Dezipramino hidrocloridas; Dezypraminy chlorowodorek; DMI; EX-4355; G-35020; Hidrocloruro de desipramina; JB-8181; NSC-114901; RMI-9384A. 3-(10,11-Dihydro-5*H*-dibenz[*b,f*]azepin-5-yl)propyl(methyl)amine hydrochloride.

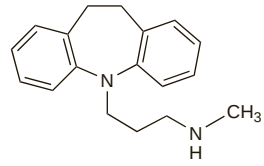
Дезипрамина Гидрохлорид

$C_{18}H_{22}N_2.HCl = 302.8$.

CAS — 50-47-5 (desipramine); 58-28-6 (desipramine hydrochloride).

ATC — N06AA01.

ATC Vet — QN06AA01.



(desipramine)

Pharmacopoeias. In *Eur.* (see p.vii) and *US.*

Ph. Eur. 6.2 (Desipramine Hydrochloride). A white or almost white crystalline powder. Soluble in water and in alcohol. Protect from light.

USP 31 (Desipramine Hydrochloride). A white to off-white crystalline powder. Soluble 1 in 12 of water, 1 in 14 of alcohol, and 1 in 3.5 of chloroform; insoluble in ether; freely soluble in methyl alcohol. Store in airtight containers.

Adverse Effects, Treatment, and Precautions

As for tricyclic antidepressants in general (see Amitriptyline, p.376).

Breast feeding. For comments on the use of tricyclic antidepressants in breast feeding patients, see under Precautions for Amitriptyline, p.378.

Interactions

For interactions associated with tricyclic antidepressants, see Amitriptyline, p.379.

Pharmacokinetics

Desipramine is the principal active metabolite of imipramine (p.400).

Uses and Administration

Desipramine, the principal active metabolite of imipramine (p.400), is a dibenzazepine tricyclic antidepressant with actions and uses similar to those of amitriptyline (p.381). It is one of the less sedating tricyclics and its antimuscarinic effects are mild. Desipramine is used as the hydrochloride.

In the treatment of depression, desipramine hydrochloride is given orally in daily doses of 100 to 200 mg; higher doses of up to 300 mg daily may be required in severely depressed patients in hospital. Lower doses should be used in adolescents and the elderly and are usually 25 to 100 mg daily; up to 150 mg daily may be required for severe depression. Initial doses should be low and gradually increased according to tolerance and clinical response. Therapy may initially be given as a single daily dose or in divided doses; maintenance therapy may be given as a single daily dose usually at night.

Desipramine should be withdrawn gradually to reduce the risk of withdrawal symptoms.

Cocaine dependence. Since dopamine depletion may be the cause of the depression often associated with cocaine craving and with relapse, drugs such as desipramine that interact with dopaminergic systems have been tried in managing cocaine