cations and its intrinsic toxicity. Treatment of onchocerciasis (p.137) is currently based on continuous suppression of microfilariae by regular use of ivermectin. WHO[1] advises that suramin should only be considered for the curative treatment of individuals in areas without transmission of onchocerciasis and of individuals leaving an endemic area, and for severe hyperreactive onchodermatitis where symptoms are not adequately controlled with ivermectin. WHO[2] also recommends that it should not be used to treat onchocerciasis in the elderly or infirm, in patients with severe liver or renal disease, in totally blind patients (unless they require relief from intensely itchy lesions), or in pregnant women (who should be treated after delivery).

A total dose of 66.7 mg/kg in six incremental weekly doses is recommended.[1,2] The first (test) dose of suramin sodium 3.3 mg/kg should be given very cautiously by slow intravenous injection; this is followed at weekly intervals by incremental doses of 6.7 mg/kg, 10.0 mg/kg, 13.3 mg/kg, 16.7 mg/kg and 16.7 mg/kg.[2]

1. WHO. Onchocerciasis and its control: report of a WHO expert committee. *WHO Tech Rep Ser 852* 1995.
2. WHO. *WHO model formulary.* Geneva: WHO, 2004.

African trypanosomiasis. Suramin is used in the treatment of the early haematolymphatic phase of African trypanosomiasis (p.827) caused by *Trypanosoma brucei rhodesiense* and for *T. b. gambiense* infections which are resistant to pentamidine.[1] In some regions, suramin is used with pentamidine for *T. b. gambiense* infections but it has not been shown to be clinically superior to pentamidine alone.[2] Although suramin does not reach sufficient concentrations in the CSF to produce a cure in the meningoencephalitic phase, it is used to reduce the number of trypanosomes in the blood and lymph before treatment with melarsoprol.[1] Case reports have suggested that suramin with metronidazole[3] or eflornithine[4] could be useful in *T. b. rhodesiense* infections, although response to suramin plus eflornithine was disappointing in a study involving 6 patients.[5]

1. WHO. *WHO model formulary.* Geneva: WHO, 2004.
2. Pépin J, Khonde N. Relapses following treatment of early-stage Trypanosoma brucei gambiense sleeping sickness with a combination of pentamidine and suramin. *Trans R Soc Trop Med Hyg* 1996; **90:** 183–6.
3. Foulkes JR. Metronidazole and suramin combination in the treatment of arsenical refractory rhodesian sleeping sickness—a case study. *Trans R Soc Trop Med Hyg* 1996; **90:** 422.
4. Taelman H, *et al.* Combination treatment with suramin and eflornithine in late stage rhodesian trypanosomiasis: case report. *Trans R Soc Trop Med Hyg* 1996; **90:** 572–3.
5. Clerinx J, *et al.* Treatment of late stage rhodesiense trypanosomiasis using suramin and eflornithine: report of six cases. *Trans R Soc Trop Med Hyg* 1998; **92:** 449–50.

Preparations

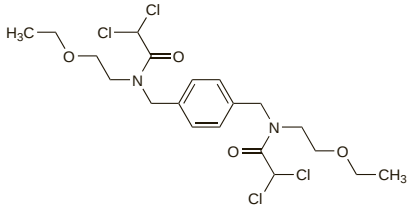
Proprietary Preparations (details are given in Part 3)
Ger.: Germanin.

Teclozan *(USAN, rINN)*

NSC-107433; Téclozan; Teclozán; Teclozanum; Win-13146. *NN′-p*-Phenylenedimethylenebis[2,2-dichloro-*N*-(2-ethoxyethyl)-acetamide].

Теклозан

$C_{20}H_{28}Cl_4N_2O_4$ = 502.3.
CAS — 5560-78-1.
ATC — P01AC04.



Profile
Teclozan, a dichloroacetamide derivative, is a luminal amoebicide with actions and uses similar to those of diloxanide furoate (p.832). It has been given orally in the treatment of intestinal amoebiasis.

Preparations

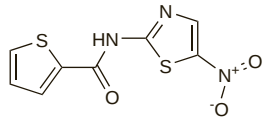
Proprietary Preparations (details are given in Part 3)
Braz.: Falmonox; ***Venez.:*** Falmonox.

Tenonitrozole *(rINN)*

TC-109; Tenonitrozol; Ténonitrozole; Tenonitrozolum; Thenitrazole. *N*-(5-Nitrothiazol-2-yl)thiophene-2-carboxamide.

Тенонитрозол

$C_8H_5N_3O_3S_2$ = 255.3.
CAS — 3810-35-3.
ATC — P01AX08.



Profile
Tenonitrozole is an antiprotozoal given in the treatment of trichomoniasis (p.827). It is given orally in a dose of 250 mg twice daily with meals, for 4 days.

Preparations

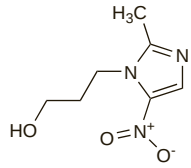
Proprietary Preparations (details are given in Part 3)
Fr.: Atrican; ***Rus.:*** Atrican (Атрикан); ***Venez.:*** Detricant†.

Ternidazole *(rINN)*

Ternidazol; Ternidazolum. 2-Methyl-5-nitroimidazole-1-propanol.

Тернидазол

$C_7H_{11}N_3O_3$ = 185.2.
CAS — 1077-93-6.



Profile
Ternidazole is a 5-nitroimidazole antiprotozoal with properties similar to those of metronidazole (p.837). It has been an ingredient of preparations used for the treatment of vaginitis.

Preparations

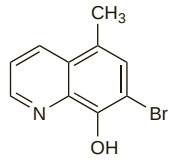
Proprietary Preparations (details are given in Part 3)
Multi-ingredient: ***Rus.:*** Tergynan (Тержинан).

Tilbroquinol *(pINN)*

Tilbroquinolum. 7-Bromo-5-methylquinolin-8-ol.

Тильброхинол

$C_{10}H_8BrNO$ = 238.1.
CAS — 7175-09-9.
ATC — P01AA05.



Profile
Tilbroquinol is a halogenated hydroxyquinoline antiprotozoal with properties similar to those of diiodohydroxyquinoline (p.832). It has been used with tiliquinol (below) in the treatment of intestinal infections including amoebiasis but less toxic drugs are preferred.

Adverse effects. A report of neurotoxicity, considered to be subacute myelo-opticoneuropathy, in a patient who had taken tilbroquinol with tiliquinol for 4 years.[1] Hepatotoxicity has also been reported[2] with this combination.

1. Soffer M, *et al.* Oxyquinoline toxicity. *Lancet* 1983; **i:** 709.
2. Caroli-Bosc F-X, *et al.* Hépatite aiguë due à l'association de tiliquinol et tilbroquinol (Intétrix). *Gastroenterol Clin Biol* 1996; **20:** 605–6.

Preparations

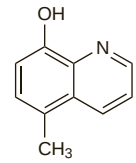
Proprietary Preparations (details are given in Part 3)
Multi-ingredient: ***Fr.:*** Intetrix; ***Rus.:*** Intetrix (Интетрикс).

Tiliquinol *(rINN)*

Tiliquinolum. 5-Methylquinolin-8-ol.

Тилихинол

$C_{10}H_9NO$ = 159.2.
CAS — 5541-67-3.



Profile
Tiliquinol has been used with tilbroquinol (above) in the treatment of intestinal infections including amoebiasis but less toxic drugs are preferred.

Preparations

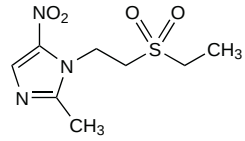
Proprietary Preparations (details are given in Part 3)
Multi-ingredient: ***Fr.:*** Intetrix; ***Rus.:*** Intetrix (Интетрикс).

Tinidazole *(BAN, USAN, rINN)*

CP-12574; Tinidatsoli; Tinidazol; Tinidazolas; Tinidazolum; Tynidazol. 1-[2-(Ethylsulphonyl)ethyl]-2-methyl-5-nitroimidazole.

Тинидазол

$C_8H_{13}N_3O_4S$ = 247.3.
CAS — 19387-91-8.
ATC — J01XD02; P01AB02.
ATC Vet — QJ01XD02; QP51AA02.



Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), *Jpn*, and *US.*
Ph. Eur. 6.2 (Tinidazole). An almost white or pale yellow, crystalline powder. Practically insoluble in water; soluble in acetone and in dichloromethane; sparingly soluble in methyl alcohol. Protect from light.
USP 31 (Tinidazole). An almost white or pale yellow crystalline powder. Practically insoluble in water; soluble in acetone and in dichloromethane; sparingly soluble in methyl alcohol. Store in airtight containers. Protect from light.

Adverse Effects and Precautions

As for Metronidazole, p.837.

Breast feeding. The American Academy of Pediatrics[1] considers that the use of tinidazole by mothers during breast feeding may be of concern, since it is mutagenic *in vitro*. After single-dose therapy, breast feeding may be stopped for 12 to 24 hours to allow excretion of the dose.

1. American Academy of Pediatrics. The transfer of drugs and other chemicals into human milk. *Pediatrics* 2001; **108:** 776–89. Correction. *ibid.*; 1029. Also available at: http://aappolicy.aappublications.org/cgi/content/full/pediatrics%3b108/3/776 (accessed 03/06/04)

Porphyria. Tinidazole is considered to be unsafe in patients with porphyria because it has been shown to be porphyrinogenic in *in-vitro* systems.

Shock. An acute severe toxic reaction, considered not to be allergic, occurred in a healthy subject shortly after the intravenous infusion of tinidazole 1.6 g over 80 minutes.[1] He fainted for about 10 seconds and low blood pressure, nausea, and tiredness persisted for several hours. Spasms in the left arm were also experienced but no generalised convulsions. Anaphylactic shock has also been reported,[2] with severe bronchospasm and subsequent development of Stevens-Johnson syndrome, in a patient who had reactions of increasing severity after 3 separate exposures to tinidazole.

1. Aase S, *et al.* Severe toxic reaction to tinidazole. *Eur J Clin Pharmacol* 1983; **24:** 425–7.
2. Singbal SS, Rataboli PV. Anaphylaxis and hypersensitivity syndrome reactions in increasing severity following repeated exposure to tinidazole. *J Postgrad Med* 2005; **51:** 243–4.

Interactions

Tinidazole may, like metronidazole (p.838), produce a disulfiram-like reaction with alcohol.