# 60 Analgesics Anti-inflammatory Drugs and Antipyretics

sia after caesarean section confirmed an additive analgesic effect for the combination, there was no demonstrable clinical benefit compared with fentanyl alone in this patient group who expect early mobilisation. However, the combination may be of greater benefit in patients for whom early ambulation is not routine. Fentanyl has also been given by epidural injection to children for postoperative analgesia.

Fentanyl has been tried by intrathecal injection for postoperative pain.8

As mentioned in Administration, Transdermal Route, above, an iontophoretic transdermal system for postoperative pain is also available.

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   Koo PJ. Postoperative pain management with a patient-control-led transdermal delivery system for fentanyl. Am J Health-Syst Pharm 2005; **62**: 1171–6.
   Mayes S, Ferrone M. Fentanyl HCl patient-controlled ionto-phoenic transdermal of extended the management of extu poet.
- phoretic transdermal system for the management of acute post-operative pain. Ann Pharmacother 2006; **40:** 2178-86.

#### Preparations

# BP 2008: Fentanyl Injection; USP 31: Fentanyl Citrate Injection.

Proprietary Preparations (details are given in Part 3) Arg: Durogesic; Fentax, Gray-F; Nafluvent; Sublimaze; Tahur; Austral.: Ac-tiq: Durogesic; Sublimaze; Austria: Durogesic; Belg: Durogesic; Braz: Durogesic; Fentabott; Fentanest; Fentalik; Canad.: Duragesic; Chile: Du-rogesic; Cas: Durogesic; Fentaleska], Fentalik; Ionsys; Matrifen; Wintaryl; Denm: Actig: Durogesic; Fentaleka], Fentalik; Ionsys; Matrifen; Durogesic; Fentalov; Matrifen; Hong Kong: Durogesic; Hung: Durogesic; Matrifen; Sedaton; India: Durogesic; Fentale-Hameln; Gr.: Actig; Durogesic; Fentale; Sublimaze; IrofentyL Indon:: Durogesic; Int: Ac-tiq: Durogesic; Fentale; Sublimaze; IrofentyL Indon:: Durogesic; Int: Ac-tiq: Durogesic; Fentale; Sublimaze; IrofentyL Indon:: Durogesic; Sub-Iimaze; Pol.: Durotep: Maloysia: Durogesic; Talgesii; Mex:: Du-rogesic; Fentale; Sublimaze; Isofe: Durogesic; Talgesii; Mex:: Du-rogesic; Fentale; Sublimaze; Isofe: Durogesic; Talgesii; Mex:: Du-rogesic; Fentale; Matrifen; Jong Ketta; Durogesic; Sub-Iimaze; Pol.: Durogesic; Sublimaze; Fentales; Ionsys; Nilfene; Rus:: Durogesic; Guopersawib; SAfr:: Durogesic; Subri Durogesic; Leptanal; Matrifen; Switz:: Actig: Durogesic; Siter, Ital; Durogesic; Turk:: Durogesic; USA: Actig: Durogesic; Siter, Ital; Durogesic; Turk:: Durogesic; USA: Actig: Durogesic; Siter, Ital; Durogesic; Turk:: Durogesic; USA: Actig: Durogesic; Siter, Ital; Nurogesic; Turk:: Durogesic; USA: Actig: Durogesic; Siter, Ital; Nurogesic; Turk:: Durogesic; USA: Actig: Durogesic; Fentale; Ionsys; Matrifen; Osmach; Sublimaze; Tilofy; USA: Actig: Durogesic; Fentanes; Ionsys; Matrifen; Osmach; Sublimaze; Tilofy; USA: Actig: Duragesic; Fentane; Ionsys; Matrifen; Osmach; Sublimaze; Tilofy; USA: Actig: Duragesic; Fentane; Ionsys; Matrifen; Camada; Sublimaze; Tilofy; USA: Actig: Duragesic; Fentane; Ionsys; Matrifen; Camada; Sublimaze; Tilofy; USA: Actig: Duragesic; Fentane; Ionsys; Matrifen; Camada; Sublimaze; Tilofy; USA: Actig: Duragesic; Fentane; Ionsys; Matrifen; Osmach; Subli Proprietary Preparations (details are given in Part 3)

Multi-ingredient: Arg.: Disifelit; Austral.: Marcain with Fentanyl; Naro-pin with Fentanyl; Braz.: Nilperidol; Ital.: Leptofen; NZ: Bupafen; Marcain with Fentanyl; Naropin with Fentanyl.

#### Fentiazac (BAN, USAN, HNN)

BR-700; Fentiazaco; Fentiazacum; Wy-21894. [4-(4-Chlorophenyl)-2-phenylthiazol-5-yl]acetic acid.

Фентиазак  $C_{17}H_{12}CINO_2S = 329.8.$ CAS — 18046-21-4. ATC — M01AB10; M02AA14. ATC Vet — QM01AB10; QM02AA14.



#### Profile

Fentiazac is an NSAID (p.96) that has been used for the relief of pain and inflammation associated with musculoskeletal, joint, peri-articular, and soft-tissue disorders. It has also been used in the treatment of fever. Fentiazac has been given in usual oral doses of 200 mg once or twice daily. Fentiazac has also been applied topically and has been given rectally as the calcium salt.

# Preparations

Proprietary Preparations (details are given in Part 3) Ital.: O-Flam; Port.: Donorest†; IDR†; Norvedan†

# Fepradinol (rINN)

Fépradinol; Fepradinolum. (±)- $\alpha$ -{[(2-Hydroxy-1,1-dimethylethyl)amino]methyl}benzyl alcohol.

Фепрадинол  $C_{12}H_{19}NO_2 = 209.3.$ CAS - 63075-47-8.



## Profile

Fepradinol is an NSAID (p.96) that has been used topically in a concentration of 6% for the relief of pain and inflammation. The hydrochloride has been used similarly.

#### Preparations

Proprietary Preparations (details are given in Part 3) Chile: Sinalgia†; Mex.: Sinalgia; Spain: Dalgen; Flexidol†.

#### Feprazone (BAN, rINN)

DA-2370; Feprazona; Féprazone; Feprazonum; Phenylprenazone; Prenazone. 4-(3-Methylbut-2-enyl)-1,2-diphenylpyrazolidine-3,5-dione.

Фепразон

 $C_{20}H_{20}N_2O_2 = 320.4.$ 

CÁS — 30748-29-9 (feprazone); 57148-60-4 (feprazone piperazine salt 1:1).

ATC — MOIAXI8; MO2AAI6.

ATC Vet - QM01AX18; QM02AA16.



#### Profile

Feprazone, a phenylbutazone (p.117) derivative, is an NSAID (p.96). It has been given orally in the treatment of mild to moderate pain, fever, and inflammation associated with musculoskeletal and joint disorders. Feprazone has also been given rectally and used topically as a 5% cream.

Pinazone, the piperazine salt of feprazone, has been used similar-

#### Preparations

Proprietary Preparations (details are given in Part 3) Ital.: Zepelin; Spain: Brotazona; Venez.: Vapesin.

## Firocoxib (USAN, rINN)

Firocoxibum; ML-1785713. 3-(Cyclopropylmethoxy)-5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]furan-2(5H)-one.

Фирококсиб  $C_{17}H_{20}O_5S = 336.4.$ CAS - 189954-96-9. ATC Vet - QM01AH90.



#### Profile

Firocoxib, a selective cyclo-oxygenase-2 (COX-2) inhibitor, is an NSAID used in veterinary medicine for the treatment of inflammation and pain associated with osteoarthritis in dogs.

#### Floctafenine (BAN, USAN, rINN)

Floctafenina; Floctafénine; Floctafeninum; R-4318; RU-15750. 2,3-Dihydroxypropyl N-(8-trifluoromethyl-4-quinolyl)anthranilate

Флоктафенин  $C_{20}H_{17}F_{3}N_{2}O_{4} = 406.4.$  CAS - 23779-99-9. ATC - N02BG04.ATC Vet - ON02BG04



#### Adverse Effects, Treatment, and Precautions As for NSAIDs in general, p.96.

Anaphylactic shock has been reported, and may be preceded by minor allergic manifestations; floctafenine should be stopped in any patient who develops signs suggestive of allergy (such as pruritus or urticaria). Reactions may also involve the liver. Floctafenine may cross-react with glafenine (p.62) and should not be given to patients who have had glafenine-associated reactions

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

## Interactions

For interactions associated with NSAIDs, see p.99.

#### Pharmacokinetics

Floctafenine is absorbed from the gastrointestinal tract; peak plasma concentrations are obtained 1 to 2 hours after ingestion. Its plasma half-life is about 8 hours. It is metabolised in the liver to floctafenic acid. It is excreted mainly as glucuronide conjugates in the urine and bile.

#### Uses and Administration

Floctafenine, an anthranilic acid derivative related to glafenine (p.62), is an NSAID (p.99) used in oral doses of up to 1.2 g daily, in divided doses, for the short-term relief of pain.

# Preparations

Proprietary Preparations (details are given in Part 3) Canad.: Idarac†; Fr.: Idarac; Irl.: Idarac†; Thai.: Idarac.

#### Flufenamic Acid (BAN, USAN, rINN)

Acide Flufénamique; Ácido flufenámico; Acidum Flufenamicum; CI-440; CN-27554; Flufenaamihappo; Flufenamsyra; INF-1837; Kwas flufenamowy; NSC-82699. N-(ααα-Trifluoro-m-tolyl)anthranilic acid.

# Флуфенамовая Кислота

C<sub>14</sub>H<sub>10</sub>F<sub>3</sub>NO<sub>2</sub> = 281.2. CAS — 530-78-9 (flufenamic acid); 61891-34-7 (flufenamate aluminium); 16449-54-0 (flufenamate aluminium). ATC — MOIAGÓ3. ATC Vet - QM01AG03.



## Adverse Effects, Treatment, and Precautions As for NSAIDs in general, p.96.

Breast feeding. No adverse effects have been seen in breastfed infants whose mothers were receiving flufenamic acid, and the American Academy of Pediatrics considers1 that it is therefore usually compatible with breast feeding.

An early study<sup>2</sup> found that only very small amounts of flufenamic acid were excreted into breast milk after oral doses.

- American Academy of Pediatrics. The transfer of drugs and oth-er 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 01/11/07)
- Buchanan RA, et al. The breast milk excretion of flufenamic ac-id. Curr Ther Res 1969; 11: 533–8.

## Effects on the gastrointestinal tract. Acute proctocolitis associated with oral flufenamic acid in a patient.1

Ravi S, et al. Colitis caused by non-steroidal anti-inflammatory drugs. Postgrad Med J 1986; 62: 773–6.

Porphyria. Flufenamic acid has been associated with acute attacks of porphyria and is considered unsafe in porphyric patients.