

**Haemorrhagic cystitis.** Dinoprostone instilled into the bladder for 4 hours and repeated for 4 days successfully improved severe cyclophosphamide-induced haemorrhagic cystitis (p.702) in a bone marrow transplant recipient.<sup>1</sup> Similar results were obtained in another series of 10 patients.<sup>2</sup>

1. Mohiuddin J, *et al.* Treatment of cyclophosphamide-induced cystitis with prostaglandin E. *Ann Intern Med* 1984; **101**: 142.
2. Laszlo D, *et al.* Prostaglandin E2 bladder instillation for the treatment of haemorrhagic cystitis after allogeneic bone marrow transplantation. *Haematologica* 1995; **80**: 421–5.

**Hepatic disorders.** See under Alprostadil, p.2184, for reference to the use of prostaglandins, including dinoprostone, in the treatment of viral hepatitis.

**Patent ductus arteriosus.** Prostaglandins, particularly alprostadil (p.2184) and dinoprostone, may be used to maintain the patency of the ductus arteriosus in infants with congenital heart disease until surgery can be performed to correct the malformation. Treatment for a longer period, especially with oral dinoprostone, may facilitate later surgery by allowing growth of the infants and their pulmonary arteries.

Beneficial responses to long-term use of dinoprostone have been reported.<sup>1,2</sup> Dinoprostone has been given orally in an initial dose of 20 to 25 micrograms/kg hourly, decreasing the frequency of doses after the first week; it was suggested that treatment should be continued for up to 4 weeks initially and a decision then made whether to proceed with surgery or to plan a longer course of treatment to encourage further growth. When gastrointestinal absorption is expected to be poor or when oral treatment is ineffective, dinoprostone has been given by intravenous infusion. The *BNFC* recommends an initial dose of 5 to 10 nanograms/kg per minute increased as necessary, in steps of 5 nanograms/kg per minute, to 20 nanograms/kg per minute; further increases may be needed and doses of up to 100 nanograms/kg per minute have been used, however, these are associated with an increased risk of adverse effects.

1. Silove ED, *et al.* Evaluation of oral and low dose intravenous prostaglandin E in management of ductus dependent congenital heart disease. *Arch Dis Child* 1985; **60**: 1025–30.
2. Thanopoulos BD, *et al.* Prostaglandin E administration in infants with ductus-dependent cyanotic congenital heart disease. *Eur J Pediatr* 1987; **146**: 279–82.

**Pemphigus.** Erosive oral lesions in 3 patients<sup>1</sup> with pemphigus vulgaris (p.1582), that had previously been refractory to standard corticosteroid therapy, resolved on sucking oral dinoprostone tablets 1.5 to 3 mg daily. Symptoms recurred within weeks of ceasing dinoprostone but could be controlled by courses of 0.5 to 1 mg daily for 1 to 2 weeks, when required. In a group of 10 patients,<sup>2</sup> topical dinoprostone produced similar results in 6 patients, but disease was exacerbated in the others; the dinoprostone was applied twice daily, but details of the dosage form and dose were not reported.

1. Morita H, *et al.* Clinical trial of prostaglandin E on the oral lesions of pemphigus vulgaris. *Br J Dermatol* 1995; **132**: 165–6.
2. Kumaran MS, Kanwar AJ. Efficacy of topical PGE2 in recalcitrant oral lesions of pemphigus vulgaris: a clinical trial. *J Eur Acad Dermatol Venerol* 2006; **20**: 898–9.

**Peripheral vascular disease.** Various prostaglandins have been used in the treatment of peripheral vascular disease (p.1178), particularly in severe Raynaud's syndrome (see Vaso-spastic Arterial Disorders, p.1188), but do not constitute mainline therapy.

**Postpartum haemorrhage.** Dinoprostone and other prostaglandins have been used to control severe postpartum haemorrhage (p.2003) unresponsive to ergometrine and oxytocin.

Beneficial response to continuous intra-uterine irrigation with dinoprostone solution 1.5 micrograms/mL was seen in 22 patients with postpartum haemorrhage unresponsive to other treatment.<sup>1</sup> Postpartum haemorrhage was controlled in another patient using a dinoprostone 3-mg vaginal suppository held against the uterine wall.<sup>2</sup>

1. Peyser MR, Kupfermine MJ. Management of severe postpartum hemorrhage by intrauterine irrigation with prostaglandin E. *Am J Obstet Gynecol* 1990; **162**: 694–6.
2. Markos AR. Prostaglandin E intrauterine suppositories in the treatment of secondary postpartum hemorrhage. *J R Soc Med* 1989; **82**: 504–5.

## Preparations

**Proprietary Preparations** (details are given in Part 3)

**Arg.:** Prolisina E2; **Propp.** **Austral.:** Cervidil; **Prostin E2; Austria:** Prepidil; **Propp.** **Prostin E2; Belg.:** Prepidil; **Prostin E2; Canad.:** Cervidil; **Prepidil; Prostin E2; Cz.:** Prepidil; **Propp.** **Prostin E2; Denm.:** Minprostin; **Fin.:** Minprostin; **Propp.** **Fr.:** Prepidil; **Propp.** **Prostin E2; Ger.:** Minprostin E; **Prepidil; Propp.** **Gr.:** Minprostin; **Propp.** **Prostin E2; Hong Kong:** Prostin E2; **Hung.:** Prepidil; **Propp.** **Prostin E2; India:** Cerviprime; **Primiprost; Indon.:** Prostin E2; **Irl.:** Prostin E2; **Israel:** Prepidil; **Propp.** **Prostin E2; Ital.:** Prepidil; **Propp.** **Prostin E2; Malaysia:** Prostin E2; **Mex.:** Prepidil; **Propp.** **Neth.:** Prepidil; **Propp.** **Prostin E2; Norw.:** Minprostin; **NZ:** Cervidil; **Prostin E2; Pol.:** Prepidil; **Propp.** **Port.:** Propp.; **Prostin E2; Rus.:** Prepidil (Препидил); **Prostin E2 (Простин Е2); S.Afr.:** Prandin E; **Prepidil; Propp.** **Prostin E2; Singapore:** Prostin E2; **Spain:** Prepidil; **Propp.** **Swed.:** Minprostin; **Propp.** **Switz.:** Prepidil; **Propp.** **Prostin E2; Thai.:** Prostin E2; **UK:** Propp.; **Prostin E2; USA:** Cervidil; **Prepidil; Prostin E2.**

## Ergometrine Maleate (BANM, rINN)

Ergobasine Maleate; Ergometriinmaleaatti; Ergométrine, maléate d'; Ergometrinhydrogenmaleat; Ergometrinmaleas; Ergometrinmaleat; Ergometrinmaleat; Ergometrinmaleinát; Ergometrinmaleat; Ergonovine Bimaleate; Ergonovine Maleate; Ergostetrine Maleate; Ergotocine Maleate; Maleato de ergobasina; Maleato de ergometrina; Maleato de Ergonovina. *N*-[(5*S*)-2-Hydroxy-1-methylethyl]-D-lysergamide hydrogen maleate; 9,10-Didehydro-*N*-[(5*S*)-2-hydroxy-1-methylethyl]-6-methylergoline-8 $\beta$ -carboxamide hydrogen maleate.

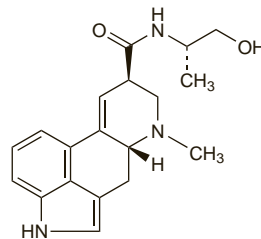
Эргометрина Малеат

$C_{19}H_{23}N_3O_2 \cdot C_4H_4O_4 = 441.5$ .

CAS — 60-79-7 (ergometrine); 129-51-1 (ergometrine maleate).

ATC — G02AB03.

ATC Vet — QG02AB03.



(ergometrine)

**Pharmacopoeias.** In *Chin.*, *Eur.* (see p.vii), *Int.*, *Jpn.* and *US*. **Ph. Eur. 6.2** (Ergometrine Maleate). A white or almost white or slightly coloured, crystalline powder. Sparingly soluble in water; slightly soluble in alcohol. A 1% solution in water has a pH of 3.6 to 4.4. Store in airtight glass containers at a temperature of 2° to 8°. Protect from light.

**USP 31** (Ergonovine Maleate). A white to greyish-white or faintly yellow, odourless, microcrystalline powder. It darkens with age and on exposure to light. Sparingly soluble in water; slightly soluble in alcohol; insoluble in chloroform and in ether. Store in airtight containers at a temperature not exceeding 8°. Protect from light.

**Stability.** Deterioration and degradation of ergometrine-containing injections has been seen when exposed to high temperatures in the tropics.<sup>1-4</sup> The mean loss in one study<sup>3</sup> of ergometrine injection under shipment to the tropics was 5.8%, but in some individual samples the loss was more marked: 18 of 80 test samples contained less than 80% of the stated content, and in 3 cases the content was less than 60%. A similar but much less significant pattern was seen with methylergometrine: the content varied from 98.6 to 99.5% of the labelled amount. Tablets of ergometrine and methylergometrine were also shown to be unstable under simulated tropical conditions, with humidity as the main adverse factor.<sup>5</sup>

1. Walker GJA, *et al.* Potency of ergometrine in tropical countries. *Lancet* 1988; **ii**: 393.
2. Abu-Reid IO, *et al.* Stability of drugs in the tropics. *Int Pharm J* 1990; **4**: 6–10.
3. Hogerzeil HV, *et al.* Stability of essential drugs during shipment to the tropics. *BMJ* 1992; **304**: 210–12.
4. Hogerzeil HV, Walker GJ. Instability of (methyl)ergometrine in tropical climates: an overview. *Eur J Obstet Gynecol Reprod Biol* 1996; **69**: 25–9.
5. de Groot ANJA, *et al.* Ergometrine and methylergometrine tablets are not stable under simulated tropical conditions. *J Clin Pharm Ther* 1995; **20**: 109–13.

## Adverse Effects and Treatment

Nausea and vomiting, abdominal pain, diarrhoea, headache, dizziness, tinnitus, chest pain, palpitations, bradycardia and other cardiac arrhythmias, coronary artery vasospasm, myocardial infarction, dyspnoea, and pulmonary oedema have been reported after use of ergometrine. Hypertension may occur, particularly after rapid intravenous dosage; hypotension has also been reported. Hypersensitivity reactions, including shock, have occurred. Ergometrine shows less tendency to produce gangrene than ergotamine, but ergotism has been reported and symptoms of acute poisoning are similar (see p.620).

Adverse effects should be treated as for ergotamine, p.620.

**Effects on the respiratory system.** Bronchospasm has been reported after use of ergometrine.<sup>1</sup> Although studies *in vitro* on canine bronchi have suggested a direct action on smooth muscle, this could not be confirmed in studies using human bronchi.

1. Hill H, *et al.* Ergometrine and bronchospasm. *Anaesthesia* 1987; **42**: 1115–16.

**Overdosage.** Ergometrine maleate has been given accidentally in adult doses to neonates,<sup>1-5</sup> sometimes instead of vitamin K. Symptoms have included peripheral vasoconstriction, encephalopathy, convulsions, respiratory failure, acute renal failure, and temporary lactose intolerance. When given with oxytocin, water intoxication has also been reported.<sup>1</sup> In all of these cases, recovery occurred after intensive symptomatic treatment including assisted ventilation and anticonvulsants. However, deaths have also been recorded.<sup>5</sup> The long-term outcome of ergometrine overdosage has been reported for 6 infants.<sup>5</sup> Their ages at follow-up ranged from 18 months to 5 years; all had normal physical and behavioural development and neurological outcomes.

1. Whitfield MF, Salfeld SAW. Accidental administration of Syntometrine in adult dosage to the newborn. *Arch Dis Child* 1980; **55**: 68–70.
2. Pandey SK, Haines CI. Accidental administration of ergometrine to newborn infant. *BMJ* 1982; **285**: 693.
3. Mitchell AA, *et al.* Accidental administration of ergonovine to a newborn. *JAMA* 1983; **250**: 730–1.
4. Donatini B, *et al.* Inadvertent administration of uterotonics to neonates. *Lancet* 1993; **341**: 839–40.
5. Dargaville PA, Campbell NT. Overdose of ergometrine in the newborn infant: acute symptomatology and long-term outcome. *J Paediatr Child Health* 1998; **34**: 83–9.

## Precautions

As for Ergotamine Tartrate, p.620. Ergometrine should also be used with caution in patients with veno-atrial shunts or mitral valve stenosis. Ergometrine is contraindicated for the induction of labour or for use during the first stage of labour. If used at the end of the second stage of labour, before delivery of the placenta, there must be expert obstetric supervision. Its use should be avoided in patients with pre-eclampsia, eclampsia, or threatened spontaneous abortion.

**Porphyria.** Ergometrine maleate has been associated with acute attacks of porphyria and is considered unsafe in porphyric patients.

## Interactions

As for Ergotamine Tartrate, p.621. Halothane has been considered to diminish the effects of ergometrine on the uterus.

**Sympathomimetics.** Use of *dopamine* in a patient treated with ergometrine was associated with subsequent development of gangrene in both hands and feet.<sup>1</sup> In another case,<sup>2</sup> the use of ergometrine with *noradrenaline* resulted in cyanosis of the hands and necrosis in some of the fingers.

1. Buchanan N, *et al.* Symmetrical gangrene of the extremities associated with the use of dopamine subsequent to ergometrine administration. *Intensive Care Med* 1977; **3**: 55–6.
2. Chuang S-S. Finger ischemia secondary to the synergistic agonist effect of norepinephrine and ergonovine and in a burn patient. *Burns* 2003; **29**: 92–4.

## Pharmacokinetics

Ergometrine is reported to be rapidly absorbed after doses by mouth and by intramuscular injection, with onset of uterine contractions in about 5 to 15 minutes and 2 to 7 minutes, respectively. Elimination appears to be principally by hepatic metabolism.

## Uses and Administration

Ergometrine has a much more powerful action on the uterus than most other ergot alkaloids, especially on the puerperal uterus. Its main action is the production of intense contractions, which at higher doses are sustained, in contrast to the more physiological rhythmic uterine contractions induced by oxytocin; its action is more prolonged than that of oxytocin.

Ergometrine maleate is used in the active management of the third stage of labour, and to prevent or treat postpartum or postabortal haemorrhage (p.2003) caused by uterine atony; by maintaining uterine contraction and tone, blood vessels in the uterine wall are compressed, and blood flow reduced.

**In the active management of the third stage of labour,** ergometrine maleate and oxytocin are given together under full obstetric supervision. A dose of ergometrine maleate 500 micrograms and oxytocin 5 units is injected intramuscularly after delivery of the anterior shoulder, or, at the latest, immediately after de-

livery of the infant; contractions are reported to occur within 2 to 7 minutes. Delivery of the placenta is actively assisted while the uterus is firmly contracted.

In the prevention or treatment of **postpartum haemorrhage**, a similar dose of ergometrine maleate with oxytocin is given intramuscularly following delivery of the placenta or when bleeding occurs. A combined intravenous preparation of ergometrine maleate with oxytocin has been used but is no longer recommended. Ergometrine maleate alone is used for prevention or treatment of postpartum or postabortal haemorrhage in a usual intramuscular dose of 200 micrograms. The dose may be repeated in severe bleeding, but is rarely needed more often than once in 2 to 4 hours. In emergencies such as excessive uterine bleeding, ergometrine maleate has been given intravenously in a dose of 200 micrograms; single doses of 250 to 500 micrograms have also been used. Intravenous doses should be given over at least 1 minute to reduce the risk of adverse effects, particularly hypertension. Parenteral treatment of haemorrhage may be followed by ergometrine maleate 200 to 400 micrograms orally 2 to 4 times daily until the danger of atony and haemorrhage has passed, which is usually 48 hours. Tablets have also been given sublingually.

In the treatment of mild secondary postpartum haemorrhage, ergometrine maleate has been given orally.

Ergometrine tartrate was formerly used.

**Diagnosis and testing.** Ergometrine maleate<sup>1-8</sup> or methyl-ergometrine maleate<sup>9,10</sup> have been used in a provocation test for the diagnosis of Prinzmetal's angina (variant angina) (p.1157).

1. Waters DD, *et al.* Ergonovine testing in a coronary care unit. *Am J Cardiol* 1980; **46**: 922-30.
2. Health and Public Policy Committee, American College of Physicians. Performance of ergonovine provocative testing for coronary artery spasm. *Ann Intern Med* 1984; **100**: 151-2.
3. Song J-K, *et al.* Safety and clinical impact of ergonovine stress echocardiography for diagnosis of coronary vasospasm. *J Am Coll Cardiol* 2000; **35**: 1850-6.
4. Kashima K, *et al.* Long-term outcome of patients with ergonovine induced coronary constriction not associated with ischemic electrocardiographic changes. *J Cardiol* 2001; **37**: 301-8.
5. Palinkas A, *et al.* Safety of ergot stress echocardiography for non-invasive detection of coronary vasospasm. *Coron Artery Dis* 2001; **12**: 649-54.
6. Song JK, *et al.* Prognostic implication of ergonovine echocardiography in patients with near normal coronary angiogram or negative stress test for significant fixed stenosis. *J Am Soc Echocardiogr* 2002; **15**: 1346-52.
7. Sueda S, *et al.* Clinical impact of selective spasm provocation tests: comparisons between acetylcholine and ergonovine in 1508 examinations. *Coron Artery Dis* 2004; **15**: 491-7.
8. Coma-Canella I, *et al.* Ergonovine test in angina with normal coronary arteries: is it worth doing it? *Int J Cardiol* 2006; **107**: 200-6.
9. Bertrand ME, *et al.* Frequency of provoked coronary arterial spasm in 1089 consecutive patients undergoing coronary arteriography. *Circulation* 1982; **65**: 1299-1306.
10. Lablanch JM, *et al.* Réflexions d'un comité d'experts de la Société française de cardiologie concernant l'usage du maléate de méthyle-ergométrine (Methergin) dans la détection d'une vasomotricité coronaire anormale. *Arch Mal Coeur Vaiss* 1995; **88**: 247-53.

## Preparations

**BP 2008:** Ergometrine and Oxytocin Injection; Ergometrine Injection; Ergometrine Tablets.

**USP 31:** Ergonovine Maleate Injection; Ergonovine Maleate Tablets.

**Proprietary Preparations** (details are given in Part 3)

**Arg.:** Evina; Metregrina; **Braz.:** Ergotrate; **Gr.:** Mitrotran; **Mex.:** Ergotrate; **Thai.:** Gynaemine; **USA:** Ergotrate.

**Multi-ingredient:** **Austral.:** Syntometrine; **Hong Kong:** Syntometrine; **Irl.:** Syntometrine; **Malaysia:** Syntometrine; **NZ:** Syntometrine; **S.Afr.:** Syntometrine; **UK:** Syntometrine.

## Ergot

Comezuelo del centeno; Secale Cornutum.

Спорынья

**Description.** Ergot consists of the sclerotium of the fungus *Claviceps purpurea* (Hypocreaceae) developed in the ovary of the rye, *Secale cereale* (Gramineae). It contains not less than 0.15% of total alkaloids, calculated as ergotoxine, and not less than 0.01% of water-soluble alkaloids, calculated as ergometrine. Some authorities have expressed alkaloidal content in terms of ergotamine and ergometrine.

## Adverse Effects and Treatment

As for Ergotamine Tartrate, p.620.

Epidemic ergot poisoning, arising from the ingestion of ergotised rye bread, is now seldom seen. Two forms of epidemic toxicity, which rarely occur together, have been described: a gangrenous form characterised by agonising pain of the extremities of the body followed by dry gangrene of the peripheral parts, and a rar-

er nervous type giving rise to paroxysmal epileptiform convulsions.

**Poisoning.** A report of an outbreak of ergotism, attributed to the ingestion of infected wild oats (*Avena abyssinica*), in Ethiopia.<sup>1</sup>

1. King B. Outbreak of ergotism in Wollo, Ethiopia. *Lancet* 1979; **ii**: 1411.

## Uses and Administration

Ergot has the vasoconstricting and oxytocic actions of its constituent alkaloids, especially ergotamine (p.620) and ergometrine (above). A liquid extract or tablets of prepared ergot were formerly used as an oxytocic. Preparations containing ergot extracts have been promoted for use in dyspepsia and nervous disorders.

## Preparations

**Proprietary Preparations** (details are given in Part 3)

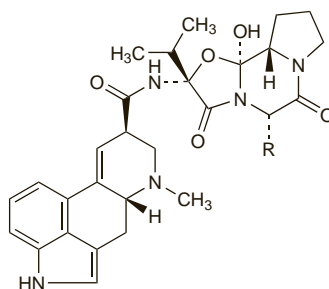
**India:** Ergotab.

## Ergotoxine

Эболоин; Ergotoxina.

ЭРГОТОКСИН

CAS — 8006-25-5 (ergotoxine); 8047-28-7 (ergotoxine esilate); 8047-29-8 (ergotoxine phosphate); 564-36-3 (ergocornine); 511-08-0 (ergocristine); 511-09-1 ( $\alpha$ -ergocryptine); 20315-46-2 ( $\beta$ -ergocryptine).



|                        |   |
|------------------------|---|
| Ergocornine            | R = CH(CH <sub>3</sub> ) <sub>2</sub>                   |
| Ergocristine           | R = CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>       |
| $\alpha$ -Ergocryptine | R = CH <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub>   |
| $\beta$ -Ergocryptine  | R = CH(CH <sub>3</sub> )CH <sub>2</sub> CH <sub>3</sub> |

## Profile

Ergotoxine is a mixture of naturally occurring ergot alkaloids. It contains equal proportions of ergocornine (C<sub>31</sub>H<sub>39</sub>N<sub>5</sub>O<sub>5</sub> = 561.7), ergocristine (C<sub>33</sub>H<sub>39</sub>N<sub>5</sub>O<sub>5</sub> = 609.7), and ergocryptine (C<sub>32</sub>H<sub>41</sub>N<sub>5</sub>O<sub>5</sub> = 575.7) as the  $\alpha$ - and  $\beta$ -isomers. The esilate was formerly used as an oxytocic and in the treatment of migraine. Ergotoxine phosphate has also been used.

## Gemeprost (BAN, USAN, rINN)

16,16-Dimethyl-trans- $\Delta^2$ -prostaglandin E<sub>1</sub> methyl ester; Géméprost; Gemeprost; Gemeprostum; ONO-802; SC-37681. Methyl (2E,13E)-(8R,11R,12R,15R)-11,15-dihydroxy-16,16-dimethyl-9-oxoprostano-2,13-dienoate; Methyl (E)-7-[(1R,2R,3R)-3-hydroxy-2-[(E)-(3R)-3-hydroxy-4,4-dimethyl-1-enyl]-5-oxocyclopentyl]hept-2-enoate.

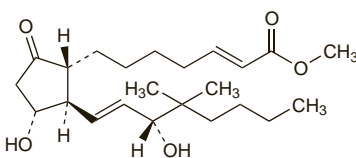
Гемепрост

C<sub>23</sub>H<sub>38</sub>O<sub>5</sub> = 394.5.

CAS — 64318-79-2.

ATC — G02AD03.

ATC Vet — QG02AD03.



## Adverse Effects and Precautions

As for Dinoprostone, p.2007. Vaginal bleeding and mild uterine pain may occur. Pulse and blood pressure should be monitored in patients given gemeprost.

The effects of gemeprost on the fetus are not known. Once a prostaglandin has been given to terminate pregnancy it is essential that termination take place; if the

prostaglandin is unsuccessful other measures should be used.

**Incidence of adverse effects.** The incidence of vomiting (19 or 35%) and diarrhoea (12 or 19%) in 2 studies of patients treated with gemeprost pessaries was similar to that seen with other prostaglandins, but gemeprost was reported to cause less uterine pain.<sup>1,2</sup>

1. Cameron IT, Baird DT. The use of 16,16-dimethyl-trans- $\Delta^2$  prostaglandin E<sub>1</sub> methyl ester (gemeprost) vaginal pessaries for the termination of pregnancy in the early second trimester: a comparison with extra-amniotic prostaglandin E<sub>1</sub>. *Br J Obstet Gynaecol* 1984; **91**: 1136-40.
2. Andersen LF, *et al.* Termination of second trimester pregnancy with gemeprost vaginal pessaries and intra-amniotic PGF<sub>2</sub>: a comparative study. *Eur J Obstet Gynecol Reprod Biol* 1989; **31**: 1-7.

**Effects on the cardiovascular system.** Periods of ventricular standstill of up to 6 seconds were seen in a patient during treatment with gemeprost vaginal pessaries.<sup>1</sup> The patient required temporary cardiac pacing, but no persistent cardiac rhythm disturbances were detected on follow-up. Severe cardiogenic shock due to vasospasm, and subsequent stroke, has been reported in a patient who had received gemeprost pessaries some hours earlier; myocardial infarction ensuing from coronary spasm was reported in a second patient.<sup>2</sup>

1. Kalra PA, *et al.* Cardiac standstill induced by prostaglandin pessaries. *Lancet* 1989; **i**: 1460-1.
2. Schulte-Sasse U. Life threatening myocardial ischaemia associated with the use of prostaglandin E<sub>1</sub> to induce abortion. *Br J Obstet Gynaecol* 2000; **107**: 700-2.

**Effects on the fetus.** Congenital abnormalities have been reported in pregnancies carried to term after failed termination using prostaglandins, including gemeprost (see under Dinoprostone, p.2007).

**Effects on the uterus.** For reference to hyperstimulation and uterine rupture after use of prostaglandins, including gemeprost, for termination of pregnancy or induction of labour, see under Dinoprostone, p.2007.

## Interactions

As for Dinoprostone, p.2008.

## Uses and Administration

Gemeprost is a synthetic analogue of alprostadil (prostaglandin E<sub>1</sub>; p.2183). It is used to soften and dilate the cervix and as a uterine stimulant in the termination of pregnancy (p.2004). In the first trimester, a pessary containing gemeprost 1 mg is inserted into the vagina 3 hours before surgery to ripen the cervix. Gemeprost may also be used for termination of pregnancy in the second trimester when a 1-mg pessary is inserted every 3 hours to a maximum of 5 pessaries. If this is ineffective, one further course may be given starting 24 hours after the beginning of the first course. If termination is not well established after 10 pessaries, alternative treatment should be used to complete uterine evacuation. In the case of intra-uterine fetal death in the second trimester, only one course of up to 5 pessaries should be given. Vaginal gemeprost is also used after oral mifepristone (p.2012) in the termination of pregnancy.

## Preparations

**Proprietary Preparations** (details are given in Part 3)

**Austral.:** Cervagem; **Denm.:** Cervagem; **Fin.:** Cervagem; **Fr.:** Cervagem; **Ger.:** Cervem; **Hong Kong:** Cervagem; **Ital.:** Cervidil; **Jpn:** Preglandin; **Malaysia:** Cervagem; **Norw.:** Cervagem; **NZ:** Cervagem; **Singapore:** Cervagem; **Swed.:** Cervagem.

## Meteneprost (USAN, rINN)

9-Deoxy-16,16-dimethyl-9-methylene-prostaglandin E<sub>2</sub>; Méténéprost; Meteneprostum; U-46785. (5Z,13E)-(8R,11R,12R,15R)-11,15-Dihydroxy-16,16-dimethyl-9-methyleneprostano-5,13-dienoic acid; (Z)-7-[(1R,2R,3R)-3-hydroxy-2-[(E)-(3R)-3-hydroxy-4,4-dimethyl-1-enyl]-5-methylenecyclopentyl]hept-5-enoic acid.

Метенепрост

C<sub>23</sub>H<sub>38</sub>O<sub>4</sub> = 378.5.

CAS — 61263-35-2.

