18 years (may arrest bone maturation and testicular development)

- **CAUTIONS** Diabetes mellitus · in prostate cancer, severe depression · in prostate cancer, sickle-cell anaemia · ineffective for male hypersexuality in chronic alcoholism (relevance to prostate cancer not known)
- **SIDE-EFFECTS**
  - **Common or very common** Depressed mood · dyspnoea · fatigue · gynaecomastia · hepatic disorders · hot flush · hyperhidrosis · nipple pain · restlessness · weight change
  - **Uncommon** Skin reactions
  - **Rare or very rare** Galactorrhoea · neoplasms
  - **Frequency not known** Adrenocortical suppression · anaemia · azoospermia · hair changes · hypotrichosis · osteoporosis · sebaceous gland underactivity (may clear acne) · thromboembolism

  SIDE-EFFECTS, FURTHER INFORMATION Direct hepatic toxicity including jaundice, hepatitis and hepatic failure have been reported (fatalities reported, usually after several months, at dosages of 100 mg and above). If hepatotoxicity is confirmed, cyproterone should normally be withdrawn unless the hepatotoxicity can be explained by another cause such as metastatic disease (in which case cyproterone should be continued only if the perceived benefit exceeds the risk).
- **HEPATIC IMPAIRMENT** Manufacturer advises avoid.
- **MONITORING REQUIREMENTS**
  - Monitor blood counts initially and throughout treatment.
  - Monitor adrenocortical function regularly.
  - Monitor hepatic function regularly—liver function tests should be performed before and regularly during treatment and whenever symptoms suggestive of hepatotoxicity occur.
- **PATIENT AND CARER ADVICE**

  Driving and skilled tasks Fatigue and lassitude may impair performance of skilled tasks (e.g. driving).

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug. Forms available from special-order manufacturers include: tablet, capsule, oral suspension, oral solution

Tablet

CAUTIONARY AND ADVISORY LABELS 21

- **Cyproterone acetate (Non-proprietary)**
  Cyproterone acetate 50 mg Cyproterone 50mg tablets | 56 tablet PoM £48.95 DT = £30.41
  Cyproterone acetate 100 mg Cyproterone 100mg tablets | 84 tablet PoM £132.57 DT = £57.89
- **Androcur** (Bayer Plc)
  Cyproterone acetate 50 mg Androcur 50mg tablets | 60 tablet PoM £31.34
- **Cyprostat** (Bayer Plc)
  Cyproterone acetate 50 mg Cyprostat 50mg tablets | 160 tablet PoM £82.86
  Cyproterone acetate 100 mg Cyprostat 100mg tablets | 80 tablet PoM £82.86

HORMONE ANTAGONISTS AND RELATED AGENTS › AROMATASE INHIBITORS

Testolactone

- **INDICATIONS AND DOSE**

Gonadotrophin-independent precocious puberty (specialist use only)

- BY MOUTH
- Child: 5 mg/kg 3–4 times a day; increased if necessary up to 10 mg/kg 4 times a day

- **SIDE-EFFECTS**
  - **Common or very common** Appetite decreased · diarrhoea · hair growth abnormal · hypertension · nausea · peripheral neuropathy · vomiting · weight change
  - **Rare or very rare** Hypersensitivity · rash
- **PREGNANCY** Avoid.
- **BREAST FEEDING** No information available.

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Tablet

- **Teslac** (Imported (United States))
  Testolactone 50 mg Teslac 50mg tablets | 100 tablet PoM

8 Thyroid disorders

8.1 Hyperthyroidism

Antithyroid drugs

Overview

Antithyroid drugs are used for hyperthyroidism either to prepare children for thyroidectomy or for long-term management. In the UK carbimazole p. 522 is the most commonly used drug. Propylthiouracil p. 523 should be reserved for children who are intolerant of, or for those who experience sensitivity reactions to carbimazole (sensitivity is not necessarily displayed to both drugs), and for whom other treatments are inappropriate. Both drugs act primarily by interfering with the synthesis of thyroid hormones.

Treatment in children should be undertaken by a specialist.

Carbimazole or propylthiouracil are initially given in large doses to block thyroid function. This dose is continued until the child becomes euthyroid, usually after 4 to 8 weeks, and is then gradually reduced to a maintenance dose of 30–60% of the initial dose. Alternatively high-dose treatment is continued in combination with levothyroxine sodium p. 524 replacement (*blocking-replacement regimen*); this is particularly useful when dose adjustment proves difficult. Treatment is usually continued for 12 to 24 months. The blocking-replacement regimen is **not** suitable during pregnancy. Hypothyroidism should be avoided particularly during pregnancy as it can cause fetal goitre.

Iodine has been used as an adjunct to antithyroid drugs for 10 to 14 days before partial thyroidectomy; however, there is little evidence of a beneficial effect. Iodine should not be used for long-term treatment because its antithyroid action tends to diminish.

Radioactive sodium iodide (^{131}I) solution is used increasingly for the treatment of thyrotoxicosis at all ages, particularly where medical therapy or compliance is a problem, in patients with cardiac disease, and in patients who relapse after thyroidectomy.

Propranolol hydrochloride p. 111 is useful for rapid relief of thyrotoxic symptoms and can be used in conjunction with antithyroid drugs or as an adjunct to radioactive iodine. Beta-blockers are also useful in neonatal thyrotoxicosis and in supraventricular arrhythmias due to hyperthyroidism. Propranolol hydrochloride has been used in conjunction with iodine to prepare mildly thyrotoxic patients for surgery but it is preferable to make the patient euthyroid with carbimazole. Laboratory tests of thyroid function are not altered by beta-blockers. Most experience in treating thyrotoxicosis has been gained with propranolol but atenolol p. 112 is also used.

Thyrotoxic crisis ('thyroid storm') requires emergency treatment with intravenous administration of fluids, propranolol hydrochloride and hydrocortisone p. 476 as sodium succinate, as well as oral iodine solution and carbimazole or propylthiouracil which may need to be administered by nasogastric tube.