Date: / /
Page No.

1. Precocious Puberty

The puberty is considered as precocious if sexual maturation occurs below 8 years in girls & 9 years in boys. It is associated with appearance of all the secondary sex characters of puberty namely enlargement of breasts, pubic & axillary hair, and menarche in girls & change in voice, appearance of pubic, axillary & facial hairs & in increase in the size of testis & penis in boys.

Etiology

- Central precocity or CNS causes
  - Premature activation of hypothalamic pituitary-gonadal axis because of congenital anomalies.
  - Tumors
  - Post infectious conditions

  It is more common in girls than boys.

- Peripheral precocious puberty

  It is more common in boys than girls. It is due to congenital adrenal hyperplasia

- Pseudoprecocity

  In this type estrogen & testosterone are secreted by tumors in the adrenal glands or in testis or ovaries

Date: / /
Page No.

- Incomplete puberty
It is a condition in which a child has just few signs of early puberty, such as breast development in very young girls & growth of the body hair in girls or boys. Early body hair can appear when adrenal glands produce extra androgens.

Management

The rapidly progressive precocious puberty when the menarche occurs before 6 years of age, is treated by administration of GnRH agonists. In peripheral precocious puberty, the treatment is directed to the underlying cause. Surgical excision is done for treatment of tumors of ovaries, testis and adrenals. Pineal tumors & hCG-producing suprasellar tumors are treated with radiotherapy.

↳ Helminthic infections

Worm infestations are extremely common in children living in poor environmental sanitation conditions & having poor sense of personal hygiene. Infection occurs through fecal-oral route. Infection can also occur by

Date / /
Page No.

taking raw vegetables without proper washing or peeling.
- Eating infected pork and beef without proper cooking may lead to infection by tapeworms.

→ Common helminthes

① Pinworms / Threadworms
(Enterobius Vermicularis)

These worms are most common They are white in colour, small in size & thin like a thread about 10mm long. Pregnant female worms wriggle out of anus at night & cause perianal itching and sleeplessness. It is usually believed that excessive intake of sweets aggravates itching though there is no scientific basis for it. In girls, the worms may enter the vaginal orifice causing the child to suddenly wake up at night with unexplained episodes of shrieking. Mother may be able to see the wriggling threadworms by examining the stretched & exposed anal orifice under bright light at night. The eggs of pinworms are not seen in stools but may be picked up from bottom by affixing a scotch tape at the anal region at night and examining it in the morning under a microscope.

Dated: / /
Page No.

- Treatment
Itching can be relieved by local application of a soothing cream or bland oil (avoid mustard oil which is highly irritant) It is preferable to treat all the members of the family simultaneously to prevent cross infection. A number of medications are available like Albendazole, pyrantel pamoate, & mebendazole.

(2) Roundworms (Ascaris lumbricoides).
These worms may not produce any symptoms or may cause attacks of abdominal pain. The appetite may be increased but still the child may look pale & may not have satisfactory growth. The larvae of worms may travel into the lungs producing wheezing & asthma like symptoms. Teeth grinding at night is not due to worm infestation although it is commonly believed so by the parents. The adult worms may be passed in the stools (male worm 15-20cm long & female worm 25-35cm long) or at times vomited out when infestation is excessive. Heavy infestation may lead to intestinal obstruction due to formation of a ball of worms.

- Treatment
Effective single or multiple-dose

Page No.

medicines (albendazole 400 mg single dose, pyrantel pamoate 11 mg/kg single dose, & mebendazole 100 mg twice a day for 3 days) are available. In susceptible children, regular deworming can be advised for every 6 months.

(3) Hookworms (Ancylostoma duodenale).

These are tiny dark-pink worms which are not visible in the stools on naked eye examination (male worm is 8 mm & female 12 mm in size). The infection occurs by penetration of larvae through feet. These worms are attached to the gut & suck blood. The child looks pale, sickly & puffy. There may be vague upper abdominal discomfort & loss of appetite.

Treatment
Anemia should be treated by administration of iron & intake of iron-rich foods. Specific Antiworm medication such as levamisole, albendazole etc.

(4) Tapeworms
These are extremely long (2-3 m) & flat worms. Infestation occurs by taking improperly cooked or processed pork or beef. Intake of uncrushed

Raw vegetables contaminated with eggs of tapeworms may lead to development of cysticercosis (nodules in the muscles or brain causing convulsions).

- Treatment

Adult tape worm is treated by niclosamide & quinacrine. Cysticercosis of brain is treated with anticonvulsants & specific medications like albendazole & praziquantel.

→ Measures to prevent worm infestations

- Daily bath & strict personal cleanliness should be maintained. The underclothes should be clean & changed daily.
- Children should be taught the habit of washing hands with soap & water after defecation & before taking food.
- Nails should be kept clean & trimmed.
- Salads & raw vegetables should be thoroughly washed in running water & taken after peeling.
- Children should wear shoes while playing outdoors.
- The water used for drinking should be clean.
- Children need supervision to prevent eating of mud. Toys should be kept washed & clean.