

PAEDIATRIC GYNAECOLOGY†

by

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Introduction

Paediatric Gynaecology deals with the diseases of the female genitalia in children upto 13 years of age. During the past several years gynaecologists have shown active interest in genital disorders amongst children. This interest has grown from realisation that immature female genitalia may be the site of a number of pathological states.

The paediatric period of life includes childhood and early adolescence. Thus it is relevant to consider the sequence of events that occur during adolescence. The formation of breast bud, marked by elevation of breast papilla as a small mound and enlargement of areolar diameter occur on average at the age of 11 but it may happen at any times within the range of 8 to 13 years (Tanner 1960). Pubic hair development₁ begins at approximately the same age with approximately the same normal range. At the early stage there is sparse growth of long slightly pigmented downy hair straight or only slightly curved appearing chiefly along the labia.

The age at which first menstruation

occurs depends on economic and nutritional factors. The more favoured social classes have an earlier menarchae than the less favoured one. However, even in a fairly homogenous population, the distribution of age of menarchae shows wide variation. Thus in United States, the limit of normal stretch from the little under 11 years to about 15 years in girls living under reasonable economic circumstances. In Western Europe and United States, there has also been a continuous trend over the last hundred years towards earlier onset of puberty (Tanner 1960).

Material and Results

In the present study the respective age at which the adolescence and menstruation begin in our women was first ascertained. Two hundred medical students between 18 to 24 years were chosen for the study. Early sexual changes of adolescence were recorded on average at an age just over 10 years. But it occurred any time in the range of 9 to 12 years. The age at which first menstruation occurred was on average 12.5 years. The limits of normal however stretched from little under 11 to little over 14 years.

The present study then deals with the gynaecological problems encountered in 75 girls upto 13 years of age.

Vulvo-vaginitis is the commonest problem in Paediatric Gynaecology. This

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constituted 47, 62.5 per cent of all lesions encountered in this series.

Non-specific vulvitis

There were 11 cases in this series. They presented with local soreness and hyperaemia of the external surface of the hymen and of the mucosa around the external urethral meatus.

Faecal contamination was the principal aetiological factor, and the organism identified in 7 was a member of the coli-form group. Better hygiene and local cleanliness cured the disease.

Pyogenic vaginitis

This is the commonest type of inflammation of the lower genital tract in children. Of the 47 inflammatory lesions in this series 19, 23.4 per cent, were caused by pyogenic organisms. The girls were all below 10 years of age and none showed oestrogenic influence in the vaginal epithelium. *Staphylococcus aureus* was the commonly responsible organism and was present in 9, 53 per cent. The other organisms found were streptococcus of one or the other type, *Escherichia coli*, and *Shigella flexneri*. All presented with yellowish discharge, and hyperaemia of the vagina. Generally the inflammation was mild and was treated effectively by local application of oestrogen cream. In 2, the inflammation was marked and required systemic antibiotic along with local oestrogen.

Foreign body

In two girls between 4 to 5 years of age the vulvo-vaginitis was associated with foreign body in the vagina.

The presenting feature was persistent blood stained foul smelling discharge per vaginam. Culture of the discharge showed *Staphylococcus aureus* in both the

cases. The symptoms improved rapidly following removal of the foreign body.

Gonococcal Vulvo vaginitis

There were 2 cases of gonococcal vulvo-vaginitis. Both were below 9 years of age, and presented with copious purulent discharge per vaginam and redness around the vulva and introitus. Smear of the discharge showed gram negative intracellular diplococci. Systemic penicillin and local application of oestrogen gave satisfactory result. In one, the disease recurred due to re-infection from the same source.

Specific vaginitis

There are 2 cases of trichomonal and one case of monilial infection of the vagina. The girls were between 11 to 13 years of age and showed oestrogenic influence in the vagina. They presented with leucorrhoea and pruritus vulvae, and were treated with oral metronidazole and Nystatin vaginal tablets, respectively.

Labial fusion

This is a common lesion in young children and is believed to be the result of mild infection. There were 5 such cases in this series, all aged between 6 months to 3 years. There was no evidence of inflammation and no pathogenic organism was identified in any of them. Adhesion was separated by a probe and oestrogen cream was applied to prevent further adhesion of the raw surface (Fig. 1 a and b).

The Non-inflammatory lesions

Congenital anomalies of the genitourinary tract constitute the most important lesions in this group. Of 9 of them, 3 were vaginal agenesis, 3 imperforate vagina, 2 recto-vaginal fistulae and 1 bladder exstrophy.

Vaginal agenesis

The age of the 3 girls with this lesion ranged between 7-10 years. The lesion was asymptomatic and was detected by chance by their mothers. Construction of the artificial vagina was deferred until the marriagable age.

Imperforate vagina

There were 3 cases of transverse septum of the vagina. Of these, 2 were between 12 to 13 years of age and they presented with haematocolpos. They were treated successfully by excision of the membrane. The other was an infant, 6 months old who was brought for acute retention of urine. There was a thick transverse membrane at the lower end of the vagina which bulged outside the introitus when the baby strained (Fig. 2 a and b). The membrane was excised and 50 c.c. of thin whitish fluid was drained out. This relieved the urinary obstruction.

Rectovaginal fistulae

In one of the 2 such cases in this series, the fistulous communication to the vagina was situated 2 cms. above the introitus. The other was a case of vestibular anus. They were between 10 to 12 years of age, and presented with foecal incontinence. At first colostomy was done for diversion of faeces. The respective operations namely repair of fistula and transplantation of the anal canal to the perineal site were done at a subsequent stage.

Traumatic lesions

There were 3 cases of traumatic vulvovaginal injury who presented with active bleeding and required suturing under anaesthesia. The fourth was a case of vesicovaginal fistula following fall in a 9 year old girl who had been incontinent of urine for past 5 years. The operation

for repair of the fistula was successful at the first attempt.

Menorrhagia

Ten girls in this series presented with functional menorrhagia. They started menstruation at the age between 10 to 11 years. Menorrhagia improved with rest and haematinics, and in no case hormone therapy was required.

Lichen sclerosus et atrophicus

There was 1 case of white lesion of the vulva. The girl was 5 year old and presented with pruritus of the genitalia. The white lesion involved the skin over the right labium major and minor, and the affected skin was thin and smooth. Clinical features strongly suggested the diagnosis of lichen sclerosus et atrophicus. Pruritus was relieved by application of local cortisone. The colour and the thickness of the affected skin showed partial improvement.

Intersex

In this series there were 2 cases of intersex. They were 2 sisters, one was 7 year and another 9 year old. Both presented with swellings in the inguinal region. They had perfect feminine appearance. External sex organs were typically female and the length of vagina was normal for their age. But the chromosomal karyotype was XY. Biopsy of the groin swellings showed immature testicular tissue.

The assigned sex was female. So they were advised to be reared as female.

Discussion

Tanner (1960) found that socio-economic status was the most important factor that determined the age of adolescence and menarchae. Within the social classes there is perhaps further social distinc-

tion. Climate was once thought to exert a major influence. This is now known not to be so.

The present observations that adolescence and menarchae begin at a comparable age in our medical students, coming from upper socio-economic class, prove the above contention. Also menorrhagia in young girls is more frequently seen now than in the past. These girls in this series also had early menarche. Thus, like that in Western countries there is also a trend towards further lowering of the age of adolescence and menarche in this country.

Vaginitis was the commonest gynaecological problem amongst paediatric girls in the present series. Type of the vaginitis was determined by oestrogenic effect on the vagina. Thus pyogenic vaginitis was common in children without oestrogenic effect. This observation and the relative frequency of the organisms responsible for vaginitis resemble those reported by Gray and Kocher (1960).

In labial fusion, absence of any evidence of inflammation suggests that the infection, if any, was an old one and was likely to have been caused by organisms of low virulence.

Congenital agenesis of the vagina does not produce symptom in young girls, and does not require treatment. But a transverse septum obstructing the vaginal canal may produce symptoms in paediatric age. Two girls who had menarche between 10 to 11 had haematocolpos.

Surgical repair of congenital recto-vaginal fistula and vaginal anus is usually postponed upto the tenth year of life when sufficient space and tissue is available for successful repair.

Traumatic injury to the vulva and

vagina are not rare in young girls. But injury resulting in vesico-vaginal fistula is rare. Unlike recto-vaginal fistula the repair of urinary fistula cannot be long postponed. This operation in young girls is however technically difficult because in them the vagina is narrow, the sub-pubic angle is acute, tissue is inadequate and exposure is unsatisfactory.

Ovarian tumour is rare in paediatric age. Menorrhagia is not often met in paediatric practice. When present it usually responds to expectant treatment.

Lichen sclerosus et atrophicus was diagnosed clinically. Biopsy was thought unnecessary as white lesions of the vulva in children are invariably lichen sclerosion and not Leukoplakia (Hoffman 1960).

Intersex is a rare condition. Moreover with the exception of congenital adrenogenital syndrome, the intersexual states reveal themselves through amenorrhea and through anomaly in the growth of the secondary sex characters in adolescents of older age group. Thus the problem of intersex is more often encountered in older age group than in young adolescents and children.

Summary

In girls coming from upper socio-economic group the sexual changes of adolescence appear and the first menstruation occurs on average at 10 and at 12.5 years respectively. But both show wide variation. The genital organs of young girls may be the site of various pathological lesions. Of the 75 gynaecological problems in paediatric girls in this series, vulvo-vaginitis was the commonest lesion and was encountered in 47, 62.5 per cent. In 2 this was associated with foreign body in the vagina. Labial fusion was present in 10, 13.3 per cent.

Congenital genital anomalies formed an important group of lesion and was met in 9, 12 per cent.

Other lesions encountered in this series are accidental injury to the genitalia, benign ovarian tumours and testicular feminisation syndrome.

The Clinical features, pathology and

management of these lesions are discussed in this paper.

References

1. Hoffman, J. W.: Clinical Obst. & Gynec. 3: 158, 1960.
2. Tanner, J. M.: Clinical Obst. & Gynec. 3: 135, 1960.
3. Gray, L. A. and Kotcher, E.: Clinical Obst. & Gynec. 3: 167, 1960.

See Figs. on Art Paper XII