NON-HAEMORRHAGIC VAGINAL DISCHARGE IN INFANTS AND CHILDREN

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Vaginal discharge during infancy and childhood is a matter of great concern to the mother and also to the young patient for which a gynaecologist is often consulted. The cause of such a discharge varies from simple physiological leucorrhoea to serious inflammatory diseases or even malignant conditions. For this reason no case of vaginal discharge should summarily be disposed off as normal discharge without doing thorough investigations and excluding the presence of any serious pathology.

Fifty-four cases of neonates and children have been studied during the lasi 3 years' time from 1970 to 1973. These cases were all seen at the Out-Patient Department.

The age group in these 54 cases varied from newborn to girls upto 10 years of age only (Table I).

TABLE I

Shows the Distribution of Age

Age groups	Age in years	No. of cases
Group A	Below 1 year	3
Group B	Between 1 to 3 years	6
Group C	Between 4 to 6 years	18
Group D	Between 7 to 10 years	27

It has been observed that the problem of vaginal discharge is maximum in the premenarchal age group and the age of menarche in this series is mostly around 11 years.

The type of discharge and etiological factors varied in different age groups. Since the anatomic development and actual physiology of the vagina change with varying concentrations of estrogenic hormones, such an observation is not at all surprising. The discharge was seen to be more mucoid in young infants

TABLE II

Type of Discharge Seen in Various Age Groups

Type of vaginal discharge	No. of cases	Age groups			
		A	B	C	D
Mucoid	19	2	—	6	11
Muco-purulent	10	—	3	4	3
Thin watery (sometimes blood stained)	3	—	—	2	1
Purulent	17	1	2	5	9
Thick—curd like	6	—	1	2	3

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and tended to be purulent in older age group. The incidence of physiological leucorrhoea i.e. normal mucoid discharge so excessive in amount as to make her wet all the time again increased in the premenarchal group.

Etiological factors responsible for vaginal discharge were analysed. As shown in Table III it was observed that vulvo-vaginitis of childhood of non-specific origin is the commonest cause of discharge.

TABLE III
Etiological Factors

	No. of cases
1. Vulvo-vaginitis—Specific	1
—Non-specific	30
2. Physiological leucorrhoea	11
3. Foreign bodies	5
4. Trauma	3
5. Tumours	3
6 Urinary fistulae	1
Total	54

Non-specific vulvo-vaginitis

The diagnosis of non-specific vulvo-vaginitis can only be made after smear examination and culture have excluded gonococcal infection. Clinically the differentiation is difficult and severity of symptoms depends on the virulence of the infecting organisms.

Out of 30 cases of non-specific vulvo-vaginitis seen in neonates and children in majority poor personal hygiene and nutritional deficiency was found to be the main responsible factor.

Although poor hygiene and nutritional deficiency was the only factor present in 18 cases, it was often found to be a predisposing or associated factor in other cases as well. Besides the vagina of a child has thinner mucus membrane due to low estrogenic influence, and hence neutral pH which becomes ideal bacterial culture medium. A child's genital area is prone to be contaminated by faeces and urine and less likely to be cleaned properly. Consequently the main source of infection in young children is the bacteria commonly found in gastrointestinal tract, since the vagina in young females contains very few bacteria. The faecal contamination of vagina takes place because of the unclean habits and improper cleaning after toilet. Huffman (1968) found that nearly 80 per cent of the bacteria recovered in the young girls with specific vaginitis grew out as E. coli on culture. In 6 out of 10 cases of vulvo-vaginitis where the culture was made, E. coli was isolated from the vaginal discharge. Other organisms isolated from the discharge were streptococcus viridans and anaerobic streptococci.

TABLE IV
Various Non-specific Causes of Vulvo-vaginitis of Childhood

Causes	No. of cases
Poor hygiene and nutritional deficiency	18
Intestinal parasites	7
Mycotic infection	2
Other allergic manifestations	3

Nutritional deficiency seemed to play a very important role in the predisposition to the infection and also in its control. Response to therapy, local and general and healing of denuded epithelium is very slow. A girl 4 years old died due to tetanus occurring after severe sloughing type of vulvo-vaginitis. In a healthy but otherwise unclean child the response to treatment is quicker than in a rickety or marasmic child where vulvo-vaginitis is one of the many stigmas of nutritional deficiency.

The clinical picture of non-specific vulvo-vaginitis varied from simple redness to sloughing ulceration. Treatment is never started without smear or culture examination.

Intestinal parasites

Enterobius vermicularis is the parasitic infection that most commonly produces chronic recurrent vulvo-vaginitis. On two occasions the whole perineum as well as vulval area was swarming with live tiny worms. Twice the characteristic ova were isolated from vaginal discharge. In 3 cases the stool specimens showed presence of this parasitic infection. Incidence of pinworm infection in this part of the country is very high. However, their presence in stool does not always produce vulvo-vaginitis.

Gray and Kotcher (1961) isolated pin worms in 10 per cent of the girls of premenarchal age but found the incidence as 25 per cent when cases of vulvo-vaginitis of that age period were taken.

Although the type of treatment in all these cases of vulvo-vaginitis depends on the cause and severity of infection, importance of keeping perineal area clean can never be overemphasized. The mother and child both should be given instructions about hygiene of that area.

Other treatment includes local application of creams that contain cortisone, antihistamine and antibiotic. This controls infection, aids healing and is antipruritic. An immediate relief is obtained. Parental or oral antibiotics were used which control the local infection and also prevent spread to urethra and bladder. Needless to emphasize the role of vitamin and tonics to improve general health. Worm infestations should be treated by oral treatment.

Vaginal irrigations were never required nor were suppositories ever used since vagina and cervix are not usually involved in infection in younger age group. In severe infections, however, ointment or cream can be applied intravaginally by just pressing the tube at the introital opening.

Incomplete treatment is the cause of recurrence and should be guarded against.

Mycotic infection

Moniliasis is uncommon in childhood; of the two cases that were seen one was following use of antibiotics for quite sometime for febrile condition. Juvenile diabetes was detected in another girl of 9 years because of recurrent attack of vulvo-vaginitis, where fresh smear showed monilial infection. The clinical picture does not differ from any other type of intense vulvo-vaginitis, thick cheesy white discharge covers the red inflammed and tender vulva. Thrush like patches are difficult to see. Gentian violet 1% aqueous solution is the most effective treatmnet but vaginal application in children is not always possible. Nystatin given orally and vaginally either as instillation or in ointment form gives good result. Needless to emphasize that control of diabetes and addition of vitamins are essential part of the management.

Allergic manifestation and other skin infection

Vulvo-vaginal allergic reaction was seen in one case as a generalised reaction. Red inflammed vulva with thin watery discharge was the complaint. In two cases severe degree of vulvitis with ulceration and purulent discharge had occurred due to scabies. Which unfortunately is again quite common in this part of the State. The treatment with Asca-

biol or Eurex and proper hygiene gives quick relief.

Foreign bodies

This is well known cause of paediatric vaginitis and as a rule in all cases of vaginitis or vaginal discharge not responding to conventional treatment, foreign body should be looked for. Vaginal discharge varies from clear watery discharge to foul smelling and purulent. Sometimes it may get bloodstained as well. The diagnosis is only made by speculum examination which may not be possible even with the smallest peadiatric speculum. For removal and proper examination anaesthesia has to be administered. Girls from countryside often playing in the field sometimes have paddy grains in the vagina. Leech was removed twice from the vagina of 4 to 6 years old. Objects removed from the vagina include hairpins, beads, marbles, nuts, corks etc. as reported by Schneider and Geary (1971). Although predominant symptom is discharge reddening of the vulva and vaginal mucus membrane are usually present and E. coli and other organisms are often isolated.

Fistulae

A young girl of 8 years was brought with complaints of continuous watery discharge. She was examined under anaesthesia and was diagnosed as a case of ureteric fistula. Intravenous pyelogram showed ectopic ureter on right side which was opening into the vagina. The ureter was transplanted into the bladder and her dribbling was cured.

Tumour

A case of sarcoma botryoides first came to us as a case of thin watery discharge which gradually became blood stained. In another case the watery discharge was due to polyp in the cervix which turned out to be benign. Both the cases were examined under general anaesthesia and were treated surgically.

Specific infection

In the present case only one case of gonococcal vulvo-vaginitis was seen. Since adults receive early and adequate treatment, there is less chance of newborn or the children getting infected. However, it is quite possible for the child to get infected from fresh discharge in clothings or other articles. This young girl of 3 years came with inflammed vulva covered with thick purulent discharge. Smear examination from vaginal and vulval discharge showed gram negative diplococci. Examination of cervix and collection of cervical smear is not possible in such young girls. The discharge was collected from the vagina with thin pipette. The mother gave history of receiving treatment for infection a month earlier. Father could not be contacted, but on indirect interrogation appeared to be the source of infection.

Physiological leucorrhoea

The girls of premenarchal age (8-10 years) complained of leucorrhoea which was found to be clear, nonirritating vaginal secretion. This discharge becomes excessive in the presence of chronic constipation or any other type of gastrointestinal disorder. Estrogenic stimulation of cervical glands without cyclical progesterone result in the copious mucoid material.

Comments

Although Carrington (1971) has reported the incidence of paediatric patients in gynaecological practice to be about 18 per cent, the number of such patients coming to our gynaecological practice is

still very low. His series, however, includes girls upto the age of 18 years.

Paediatric gynaecology has not been given due attention till recent years and the children are often treated by general practitioners alone.

Incidence of vulvo-vaginitis in children, specially of gonococcal origin is on the increase in western countries after a few years of decline, as reported by Parson and Sommers (1961). Valdes-Depena (1966) reported that 9.3 per cent of cases of vaginitis in girls are due to N. gonorrhoea because according to him 35 per cent of the girls between the age 6 years and puberty in New York schools had sexual contacts. In our practice incidence of gonococcal vaginitis has certainly decreased (only 1 case in 54 cases of vaginitis), but vulvo-vaginitis due to other causes occur quite frequently. More than 50% of the cases of vulvo-vaginitis are due to poor hygiene coupled in some cases with worm infestations.

Gynaecological examination of the child-patient is the crux of the whole problem. According to Carrington (1971) symptoms sufficient to bring a young girl and her mother to the gynaecologist are quite sufficient to warrant pelvic examination and the consequent psychic implication she feels, are overemphasized. Young premenarchal girl complaining of excessive vaginal discharge needs no detailed gynaecological examination. Simple reassurance, exclusion and treatment of any worm infestation, besides stress on perineal hygiene, will be sufficient to tackle this problem.

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