

A PRELIMINARY REPORT ON THE USE OF ELASE AND ELASE WITH CHLOROMYCETIN IN CASES OF LEUCORRHOEA ASSOCIATED WITH PREGNANCY

by

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Introduction

The ointment 'Elase' consists of an admixture of 30 units of fibrinolysin with 20,000 units of desoxyribonuclease in a 30 gm. ointment base. 'Elase with Chloromycetin' has a further addition of 1% chloromycetin for each 30 gm. of the ointment. Both these drugs in ointment form, with destructable cardboard applicators, were supplied to us through the kind courtesy of M/s. Parke Davis & Co.

Material and Methods

This report deals with initial experiences with Elase and Elase with Chloromycetin in cases of excessive vaginal discharge accompanying or following pregnancy. In all, a complete follow-up was possible in 50 cases, though many more patients were treated. The first application of intravaginal ointment was preceded in every case by a detailed history, pelvic examination, smear and culture of the vaginal discharge to study the vaginal flora. The vaginal dis-

charge was collected by means of a sterile pipette and transferred to test tubes containing normal saline, potassium hydroxide and nutrient broth. The latter was used as a primary medium of culture. A sterile swab stick was also introduced into the posterior vaginal fornix and the discharge collected on it was subsequently inoculated on different culture media. In every case the treatment was started with Elase alone; a course of six applications was given of which the first and the last were preceded by a bacteriological study of the vaginal discharge; use of Elase with Chloromycetin was resorted to in cases which showed no bacteriological improvement after the use of Elase.

Antenatal Series (25 Cases)

Analysis of Cases

Age. The ages of patients treated ranged from 18 years to 35 years; there were 5 cases below 20 years, 15 cases between 21 and 30 years, and the remaining 5 cases, between 31 and 36 years of age.

Parity. Parity ranged from 2nd to the 6th. In 18 cases, parity was less than three; in 7 cases, the patients were between 4th and 6th parity groups. There was no relation bet-

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ween age, parity and degree of leucorrhoea.

Period of Gestation. There was only one case in which the period of gestation was less than 3 months; 11 cases were between 2 and 6 months pregnant; while the remaining 13 cases ranged from 7 months to full term.

Duration of Leucorrhoea before Institution of Treatment. The minimum duration was 10 days and the maximum period was 2 years; there were 3 cases of less than one month's duration, 14 cases of duration 1-3 months, 7 cases of duration 4-7 months, while only one case gave a history of 2 years' duration.

Degree of Vaginal Discharge. The cases were grouped into three grades: (1) severe degree of discharge, (2) moderate degree and (3) mild degree of vaginal discharge.

There were 7 cases who complained of severe degrees of vaginal discharge, 16 cases had moderate degrees and only 2 patients had mild degrees of discharge to complain about. There was no relation between severity of leucorrhoea and the duration of leucorrhoea.

Nature of Vaginal Discharge: Each specimen of vaginal discharge was studied in detail as regards colour, odour and consistency and charted as follows:

Associated Symptoms. Inquiry regarding pruritus, dysuria, insomnia etc. was made in every case under study. The following is a tabular representation of the associated symptomatology.

There was no relation between the degree of pruritus and the type of organisms subsequently detected by smear or by culture; similarly there was no relation between urinary symptoms and the type of organisms cultured. In every case of dysuria, the patient's urine was examined to exclude possible renal or bladder conditions and in each case the urine report was normal.

Treatment Received before Elase Therapy. Only 2 cases gave a history of having been treated outside for the same complaint. Of these 2, one had been treated with dettol douches and the other with pentavalent arsenical compounds without any relief.

Pelvic Examination. This includ-

TABLE I

	Colour			Odour		Consistency		
	White	Yellowish	Blood stained	Non-foul smelling	Foul smelling	Watery	Viscous	Thick
No. of cases	20	5	Nil	20	5	3	4	18

TABLE II

	Pruritus (16)			Dysuria (12)	Insomnia (2)
	Slight	Moderate	Severe		
No. of cases	4	10	2	12	2

ed examination of the external genitalia with special reference to erythema or ulceration of the vulval skin and a speculum examination in every case to detect any abnormalities associated with the vagina or the cervix. The following table represents the abnormalities detected:

Lactobacilli + Candida
albicans .. 8 cases

Grade III

There were 5 cases in this group and are tabled as follows:—

Coagulase — ve staphylococci .. 3 cases

TABLE III

External genitalia		Internal genitalia		Erosion	Erosion endocervicitis
Erythema	Ulceration	Vaginitis	Endocervicitis		
3	Nil	9	10	8	3

Bacteriological Study of Vaginal Discharge. The vaginal flora was graded as recommended by Schroder into three grades:—

- Grade I: Vaginal flora consisting solely of Lacto bacilli.
- Grade II: Vaginal flora consisting of Lacto bacilli and other bacteria.
- Grade III: Vaginal flora consisting of bacteria other than Lacto bacilli.

Grade I

There were no cases in this group.

Grade II

There were 20 cases in which the Lacto bacilli were accompanied by other varieties of bacteria. The following is a tabular representation of this group:—

Lactobacilli + Pseudomonas aeruginosa .. 3 cases

Lactobacilli + B. coli .. 3 cases

Lactobacilli + Kl pneumoniae .. 1 case

Lactobacilli + Trichomonas .. 5 cases

Coagulase + ve staphylococci .. 1 case

Aerobacter cloacae .. 1 case

Treatment

As stated before, prior to institution of therapy, a detailed study was made of the vaginal flora by smear and culture methods. Each patient was initially given a course of six applications of Elase spread over a period of six days. Following the last application of intravaginal ointment, a specimen of the vaginal discharge was collected to note any change in the vaginal flora; at the same time a speculum examination was made to note the effect of treatment on cervical erosion, cervicitis, etc. if these existed before the start of the treatment.

Each application of the ointment consisted in the instillation of about 5 c.c. of the ointment into the posterior fornix of the vagina. If after a course of Elase, the vaginal flora showed no change, a course of six applications of Elase with Chloromycein was given.

Results

(1) Clinical improvement in the symptoms of leucorrhoea and pruritus was obtained in 100 per cent of cases.

(2) *Candida albicans* was completely eradicated by a course of Elase alone.

(3) *Trichomonas vaginalis* resisted Elase therapy but disappeared when Elase with Chloromycetin was used.

(4) Coagulase positive staphylococci and *B. coli* were resistant to both Elase and Elase with Chloromycetin.

(5) As far as other organisms (e.g. coagulase negative staph. *Ki. pneumoniae*, *Aerobacter cloacae*) no definite conclusions could be drawn, as in some cases they seemed to appear susceptible to therapy, whereas in others, they showed resistance.

(6) The endocervicitis, and cervicitis which had been present prior to treatment, disappeared totally after treatment; erosion of cervix was never totally cured, though it showed slight improvement.

Postnatal Series (25 cases)

There were 25 patients in this series who complained of excessive vaginal discharge within two months

of their last confinement. These patients had come with this complaint during their postnatal visits commencing 15 days after delivery. All these patients had delivered in the hospital.

Age. Seventeen out of the total 25 patients were between 21 and 30 years, 5 below 20 years and only 3 above 30 years of age.

Parity. There were 12 primiparae in this series, the remaining parity groups were as follows:—

Two patients	..	2nd para
Four patients	..	3rd para
Three patients	..	4th para
Four patients	..	6th para

Of the parity group, 8 patients gave a history of some obstetric interference during the last delivery.

Nature of Last Delivery. In only 10 cases out of the total 25, the last confinement had been spontaneous vaginal delivery. In only one case the patient had been delivered by caesarean section.

Incidentally, of the 15 aided deliveries, nearly 10 (i.e. 66.6%) had foul lochia in the immediate puerperium. Of the five forceps cases, 4 had cervical tear which had been sutured immediately following expulsion of placenta.

TABLE IV

Nature of last delivery	No. of cases
1. Spontaneous, unaided delivery	10
2. Reposition of prolapsed hand	1
3. Pulling down of a leg of foetus	1
4. Accidental haemorrhage + artificial rupture of membranes	3
5. Manual removal of placenta for retained placenta	4
6. Forceps rotation and extraction	3
7. Forceps + manual removal of placenta	1
8. Failed forceps + craniotomy	1
9. Lower segment caesarean section for placenta praevia	1

Onset of Leucorrhoea. Effort was made to find out when the patient first noticed excessive vaginal discharge following delivery. Many patients could not give the exact day of onset but a rough estimate is as follows:—

TABLE V

No. of days after delivery	No. of cases
Less than 15 days	7
15-30	15
31-45	3
Total	25

Duration of Leucorrhoea. This ranged from 3 days to 30 days after the patient felt the need to consult the doctor regarding her vaginal discharge. There were 15 cases of less than 15 days' duration while the remaining 10 cases had a duration of leucorrhoea between 15 and 30 days.

Characteristics of Vaginal Discharge. Nearly 50% of patients complained of foul-smelling blood-stained discharge.

Degree of Vaginal Discharge. Six patients complained of severe degree (+++) of vaginal discharge, 11 patients had moderate degree (++)

of discharge while 8 complained of a mild degree (+) of vaginal discharge.

Associated Symptoms. The following table indicates the associated symptomatology the patients came with:—

Pelvic Examination

(a) *External Genitalia.* Two had gaping episiotomy wounds which were infected, 8 had a well healed episiotomy scar; no erythema nor ulceration of the external genitalia was found.

(b) *Internal Genitalia.* Seven patients had endocervicitis, 3 had an associated cervical erosion with endocervicitis while 3 patients had cervical erosion alone. There was no case of vaginitis.

Bacteriological Study of Vaginal Discharge. As with antenatal cases, therapy in each case was preceded by a detailed bacteriological study of the vaginal flora. In each case both smears and cultures were done and the results were as follows:—

Grade I: No case.

Grade II: There were 21 cases of which,

TABLE VI

Blood stained	Colour		Odour		Consistency	
	Yellowish white	Watery white	Foul smelling	Non-foul smelling	Thick	Thin
12	11	2	16	9	15	10

TABLE VII

Slight	Pruritus		Foul smell	Urinary symptoms (dysuria)	Insomnia due to excessive pruritus
	Moderate	Severe			
5	5	2	16	10	4

2 cases showed Lacto bacilli +	P. aeruginosa
4 cases showed Lacto bacilli +	B. coli
7 cases showed Lacto bacilli +	Trichomona
8 cases showed Lacto bacilli +	Candida albicans

Grade III: There were 4 cases in this group.

Gram negative bacilli	..	2 cases
Trichomonas	..	2 cases

Treatment

In each case, treatment was first started with Elase; a course of 6 applications was followed by a repeat bacteriological study of the vaginal flora and a detailed clinical evaluation of the symptomatology. A second course with chloromycetin-elase was then given in resistant cases to note any change in the vaginal bacteriology.

Conclusion

(1) Clinical improvement was observed in almost all cases.

(2) In those cases where the discharge was thick and foul smelling, a course of six applications with Elase was enough to dispel the foul odour; consistency of the discharge became watery and less in amount than that

observed by the patient before therapy.

(3) As with antenatal cases, those patients who harboured trichomonas in their vaginal discharge were cured of the same only after a second course of treatment using Elase with chloromycetin.

(4) The striking feature observed in these postnatal cases was the resistance shown by almost all organisms other than trichomonas to therapy with both the drugs.

(5) The remarkable speed with which a foul discharge was cured, tempted us to try these drugs on cases with foul lochia in the immediate puerperium with astonishingly good results. Preliminary study has been made in such cases and in almost all cases so far treated, foul lochia have been completely cured with only 3 applications of Elase alone.

The entire research was carried out at the Nowrosjee Wadia Maternity Hospital, Parel, Bombay 12.

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