

Original Research Article:-An observational of prospective study of the evaluation of efficacy of 0.3% Hyaluronic acid, electrolytes and cyanocobalamin in post menopausal women in a second tire Government Hospital in West Bengal, India.

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ABSTRACT

Background: Menopause cause physiological disruption of hormonal secretion of ovary. There occur changes in level of major hormone – oestrogen progesterone. One such syndrome which is mainly found is “dry eye” syndrome. In the treatment of “Dry Eye” disease maintaining stability of tear film by hyaluronic acid and cyanocobalamin tear drops have proved to be reliable, efficacious and easily acceptable procedure.

Objective: Hence our aim of the study is to identify 0.3% hyaluronic acid, electrolytes & cyanocobalamin formulation as a reliever of this uncomfortable “Dry Eye Disease”.

Methodology: It is a prospective longitudinal study where 50 female patients were included. Neibomian gland loss evaluation was identified with a scale of 4 levels.

Phenol Red Test (PRT) was done.

A questionnaire with ocular surface disease index was made.

Tear film break up time noted.

Results: A visual analogue scale (VAS) was performed on day 0 and on day 84 to detect changes in dry eye symptoms. Dry eye assessment was done by TBUT on 0, 35, 84 days to measure the tear fluroscein break up time.

Qualitative analysis was done before treatment, PRT was 9.32 ± 5.52 mm. After treatment PRT was elevated to 16.32 ± 2.21 mm.

Before study & treatment, OSDI was 24.53 ± 13.03 score points. After treatment it lowered to 14.20 ± 11.69 score points.

And TBUT was 6.20 ± 1.65 S. After installation of drop, it was 8.00 ± 1.06 S.

[Only 4 eyes did not show any difference]

Regarding meibomian gland loss Grade Frequency 11.7% was Grade-3, 46.7% attend Grade-1 and 41.7% attend Grade-2.

Conclusion: This treatment has been considered efficacious in treatment of “Dry Eye Disease”. At

the same times VIT + B12 has enhanced the effect of hyaluronic acid.

Keywords:- PRT; TBUT; VAS;

I. INTRODUCTION :

Menopause cause physiological disruption of hormonal secretion of ovary. There occur changes in level of major hormone – oestrogen progesterone¹. Among this oestrogen level is mainly causative factor. As a result of which the different system of body like bones⁴, cardiovascular system³, urogenital system² get affected. None the less ocular structures & function also get affected causing a damage of quality of life in post⁵ menopausal women⁶.

One such syndrome which is mainly found is “dry eye” syndrome, causing burning, itching, redness⁷ and other ocular discomfort.

Though there are many approaches like auto logous serum⁸ anti inflammatory agents⁹, surgery¹⁰ for the treatment of this disease however maintaining stability of tear film by hyaluronic acid and cyanocobalamin¹¹ tear drops have proved to be reliable, efficacious and easily acceptable procedure.

II. AIMS OBJECTIVE :

Hence our aim of the study is to identify 0.3% hyaluronic acid, electrolytes & cyanocobalamin formulation as a reliever of this uncomfortable “Dry Eye Disease”.

III. METHODS :

Study Design:

It is a prospective longitudinal study.

Study Place:

It was conducted in outpatient department of Obstetrics and Gynaecology and outpatient department of ophthalmology in T.L.J.S.G Hospital, Howrah, West Bengal, India

Period of Study:

December, 2021 to November, 2022.

Tests Done:

1) Neibomian gland loss evaluation was identified with a scale of 4 levels.

- 2) Phenol Red Test (PRT) was done.
- 3) A questionnaire with ocular surface disease index was made.
- 4) Tear film break up time noted.

Inclusion Criteria	Exclusion Criteria
1) Sea – Female	1) Patient below 45 yrs.
2) Age – 45 – 70 yrs	2) Previous history of corneal disease like injury, burn.
3) Patient attend Gynae OPD of TL Jaiswal Hospital.	3) History of eye trauma
4) Patient with dry eye symptoms	4) History of eye surgery

Every patient were identified with the symptoms and asked to follow up in three visits for a period of 84 days.

First visit was on day (0), Second on day (35) and Third on day (84).

Each patient's symptoms were identified, was put under following treatment and thorough check up was done.

IV. RESULTS

A visual analogue scale (VAS) was performed on day 0 and on day 84 to detect changes in dry eye symptoms. Dry eye assessment was done by TBUT on 0, 35, 84 days to measure the tear fluroscein break up time.

VSA score at baseline & 84 days of treatment.

VSA (0-100)	Base line	Day 84	Pre-value
a) Pain	35.22 ± 28.09	19.84 ± 18.03	<0.0001
b) Foreign Body sensation	35.22 ± 28.09	25.30 ± 29.68	<0.005
c) Dry eye sensation	64.62 ± 21.38	36.21 ± 25.17	<0.0001
d) Burning	20.75 ± 24.15	17.80 ± 26.34	0.24

Qualitative analysis was done before treatment, PRT was 9.32 ± 5.52 mm. After treatment PRT was elevated to 16.32 ± 2.21 mm.

Before study & treatment, OSDI was 24.53 ± 13.03 score points. After treatment it lowered to 14.20 ± 11.69 score points.

And TBUT was 6.20 ± 1.65 S. After installation of drop, it was 8.00 ± 1.06 S.

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Regarding mebomian gland loss Grade Frequency 11.7% was Grade-3, 46.7% attend Grade-1 and 41.7% attend Grade-2.

V. CONCLUSION :

This study was aimed to note the efficacy of 3% hyaluronic acid drops on post menopausal women about 3 months of use. This treatment has been considered efficacious in treatment of "Dry Eye Disease". At the same times VIT + B12 has enhanced the effect of hyaluronic acid.

[Note – No adverse effect noted due to instillation of drops]

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