

Research Study Of Homoeopathic Drugs in Conjunctivitis Epidemic (1981)

(A report based on study conducted by Central Council for Research in Homoeopathy, New Delhi)

DE, T.K.,* PRAMANIK, M.S.**

Preamble

The membrane which covers the sclera (bulbar part of the eye) and also the inner surfaces of both upper and lower eyelids (palpebral parts) is termed as conjunctiva. Its main function is to protect the cornea and repair it in the event of any injury or bacterial or viral infections.

Conjunctival tissue is exposed to all types of exogenous irritants, i.e. vegetable, chemical, bacterial, viral etc. It is also affected in certain endogenous diseases and metabolic disorders. The inflammation of the conjunctiva is termed as conjunctivitis. Infective conjunctivitis is either Bacteriological (commonly staphylococcal, pneumococcal and *H. aegypticus*) or viral (herpes and adenoviruses). It may be mild or severe and may be serous type with minimal congestion (adenovirus group) or acute catarrhal or mucopurulent with varying degrees of hyperaemia, mucus discharge, matting of eye lids, stitching pain in the eyes and other constitutional complaints etc.

Conjunctivitis due to staphylococcal infection is frequently associated with multiple corneal erosions and other forms of superficial punctate keratitis and may lead to blepharitis and eczema; the pneumococcal variety is characterised by more of oedema and less ecchymosis, often results in pneumonia. However, the conjunctivitis epidemics are usually caused by *H. aegypticus* which may be severe, occasionally leading to corneal involvement, particularly in sandy and

subtropical countries or may be mild which is most often the case. The latter is usually sporadic in temperate countries. An attack of such conjunctivitis often confers immunity for sometime.

The conjunctivitis which occurs in epidemics is contagious, being transmitted directly by the discharge and reaches peak in 3 to 4 days time and subsides usually within a week or two. In absence of effective treatment, the condition may become chronic.

Although the complications are rare but sometimes secondary infections and ulcerations of the cornea may occur.

The study of "Conjunctivitis Epidemic" was undertaken in order to observe the efficacy of homoeopathic drugs in lessening the usual time period of recovery, in avoiding the complications if any, and also to evaluate other factors such as environmental, sanitary condition etc. which might act as predisposing factors.

Introduction

Conjunctivitis often occurs in epidemic form in various parts of our country, affecting a large percentage of the population. During the year 1981 there was a rapid outbreak of the disease occurring in most of the parts of the country. The CCRH undertook a short project on "The study of Homoeopathic drugs in Conjunctivitis Epidemic" during the period, July to December, 1981. It organised special research study

* Statistical Assistant, ** Assistant Director Central Council for Research in Homoeopathy, New Delhi.

cum treatment camps in different parts of Delhi and also in affected areas in other states where Institutes and Units of the Council are located.

The present study was aimed at understanding the occurrence of conjunctivitis (epidemic) with regard to severity, incidence, the involved age-group, the sex—group, the period of sufferings etc. and also at finding out homoeopathic drugs which could be effective in acute stage and also in complications of conjunctivitis.

Materials and Methods

A total number of 3376 cases of Acute Conjunc-

tivitis were attended to, at Institutes/Units located in Delhi and other parts of the Country. However, only 469 cases were selected through simple random sampling method, for evaluation.

Method of Sampling

A two-stage simple random sampling without replacement procedure was adopted in selecting the cases from original records. In the first stage of sampling, 25% cases of the various units and institutes were selected. The second stage comprised a total of 469 cases from those selected in the first stage.

Observation and Discussion Age and Sex distribution

Table—1

Age Group (Year)	Male			Female			Both Sexes		
	Cont'd.	Dis-cont'd.	Total	Cont'd.	Dis-cont'd	Total	Cont'd	Dis-cont'd	Total
0—4	7 (1.49)	5 (1.07)	12 (2.56)	9 (1.92)	9 (1.92)	18 (3.84)	16 (3.41)	14 (2.99)	30 (6.40)
5—14	37 (7.89)	27 (5.76)	64 (13.65)	32 (6.82)	18 (3.84)	50 (10.66)	69 (14.71)	45 (9.60)	114 (24.31)
15-44	99 (21.11)	105 (22.39)	204 (43.50)	48 (10.23)	29 (6.18)	77 (16.42)	147 (31.34)	134 (28.57)	281 (59.91)
45—59	6 (1.28)	12 (2.56)	18 (3.84)	9 (1.92)	4 (0.85)	13 (2.77)	15 (3.20)	16 (3.41)	31 (6.61)
60+	4 (0.85)	5 (1.07)	9 (1.92)	4 (0.85)	—	4 (0.85)	8 (1.71)	5 (1.07)	13 (2.77)
All age groups	153 (32.62)	154 (32.84)	307 (65.46)	102 (21.75)	60 (12.79)	162 (34.54)	255 (54.37)	214 (45.63)	469 (100.00)

(Percentage in parenthesis)

The age and sex distribution of the patients, as shown in Table—1, indicated that out of 469 cases included in the sample, 307 (65.46%) were male and 162 (34.54%) female. Further break-up showed that out of 307 males, 153 (32.62%) were followed up regularly and 154 (32.84%) were dropped from the study whereas in case of females 102 (21.75%) and 60 (12.97%) respectively.

The disease is reported to be of a short-duration and most of the cases are usually relieved within a

shorter period and, therefore, a large number of patients might not have reported for treatment after the first visit. Another reason for a large number of male patients not reporting for follow-up may be their outdoor occupation and other engagements.

A general upward trend of attendance of the patients from both sexes was observed in the age—group of 15—44 years (281 cases 59.91%) followed by the age—group 45—59 (31 cases 6.61%) and (13 cases 2.77%) in the age—group of 60 and above respectively.

Incidence of the onset

Table—2

	Sudden	Gradual	Total
Onset	386 (82.30)	83 (17.70)	469 (100.00)

(Percentage in parenthesis)

The above table indicates that the epidemic had sudden onset in most of the cases i.e. 386 (82.30%) followed by 83 (17.70%) cases of gradual onset.

Sources of Infection

Table—3

Home	Neighbourhood	School/College	Others
288 (61.41)	147 (24.99)	13 (2.77)	51 (19.87)

(Percentage in parenthesis)

Table—3 depicts that 288 (61.41%) out of 469 cases had the history of source of infection at home followed by 147 (24.99%) at neighbourhood, 13 (2.77%) at schools and colleges and 51 (19.87%) at other known places like office, factory etc.

Presenting Symptoms

Table—4

Symptom under study	Number	Percentage
Pain (various types)	231	49.25
Sandy Sensation	197	42.00
Burning	131	27.93
Foreign body Sensation	64	13.65
Itching	58	12.37
Aching	53	11.30
Smarting	35	7.46
Pricking	16	3.41
Stinging	16	3.41
Soreness	3	0.64
Cutting	3	0.64
Electric Current like sensation	2	0.43
Bursting	1	0.21

Symptom-wise break up (Table-4) showed that 231 (49.25%) out of 469 cases had pain, 197 (42.00%) cases had sandy sensation, 58 (12.37%) cases had itching, 53 (11.30%) cases had aching and 35 (7.46%) had smarting, respectively. Amongst the other symptoms-pricking, stinging, soreness, cutting, electric current like sensation and bursting were observed in 3.41, 3.41, 0.64, 0.64, 0.43 and 0.21 percentages of cases respectively and are seen to be low; however, the disparity in the occurrence of symptoms in individual patients with probably the same type of infection in the epidemic, reasonably justify the Homoeopathic principle "Individualisation" and which only call for different drugs for different patients of similar disease entity unlike the other systems of medicines.

Number and percentage of conjunctivitis cases with Eye involvements

Table—5

	Left	Right	Both	Total
Eye	39 (8.32)	48 (10.23)	382 (81.45)	469 (100.00)

(Percentage in parenthesis)

The physical examination of the eyes revealed that only the left eye was affected in 39 (8.32%) out of the 469 cases, right eye in 48 (10.23%) cases and both eyes were involved i.e. in 382 (81.45%) cases (Table-5).

Presenting Signs

Table-6

Signs under study	Number	Percentage
Lachrymation	291	62.05
Photophobia	353	75.27
Redness of conjunctiva	416	88.70
Swelling of eye lids (upper or lower or both)	367	78.25
Ulceration	199	42.43
Matting of eye-lashes	209	44.56

It was observed from presenting signs (Table-6) that lachrymation occurred in 291 (62.05%), photophobia in 353 (75.27%), redness of conjunctiva in 416 (88.70%) swelling of eyelids in 367 (78.25%), ulceration in 199 (42.43%) and matting of eyelashes in 209 (44.56%).

Types of Discharge

Table—7

Symptoms	Number	Percentage
Watery	246	52.45%
Acrid	31	6.61%
Bland	22	4.69%
Purulent (alone or along with mucopurulent and mucous)	199	42.43%
Serous	3	0.64%

Watery discharge was found in 246 (52.45%) cases, acrid in 31 (6.61%), bland in 22 (4.69%), purulent (alone or along with mucopurulent and mucous) in 199 (42.43%) and serous in 3 (0.64%) cases respectively (Table-7).

Response to the Drugs

Table—8

	Response to the treatment				No response	All groups
	Recovery	Marked	Moderate	Mild		
Number	97	79	47	21	11	255
Percentage	(38.04)	(30.98)	(18.43)	(8.24)	(4.31)	(100.00)

About 96 percent cases of acute conjunctivitis showed improvement in various degrees, under the study. Amongst them, the recovery (response) was experienced to be maximum i.e. (38.04%) followed by marked (30.98%), moderate (18.43%) and mild (8.24%) responses respectively. Only 4.31% indicated 'no drug response' as observed in this study (Table-8).

Drug Response and Sex

Table—9

Sex	Response to the treatment				No response	All groups
	Recovery	Marked	Moderate	Mild		
Male	55 (35.95)	50 (32.68)	28 (18.30)	15 (9.80)	5 (3.27)	153 (100.00)
Female	42 (41.18)	29 (28.43)	19 (19.63)	6 (5.88)	6 (5.88)	102 (100.00)

(Percentage in parenthesis)

It is observed from the table-9 that about 97% of male and 94% of female experienced improvement in varying degrees under this study. However, female showed higher rate of recovery than male but opposite finding was experienced when mild responses were observed.

Drug Response and Age-Groups

Table—10

Age-groups	Response to the treatment				No response	All groups
	Recovery	Marked	Moderate	Mild		
0—4	7 (43.75)	4 (25.00)	2 (12.50)	—	3 (18.75)	16 (100.00)
5—14	30 (43.48)	18 (26.09)	15 (21.74)	4 (5.80)	2 (2.90)	69 (100.00)
15—44	52 (34.90)	45 (30.20)	29 (19.46)	16 (10.74)	5 (3.36)	147 (100.00)
45—59	4 (26.67)	8 (53.33)	1 (6.67)	1 (6.67)	1 (6.67)	15 (100.00)
60+	4 (50.00)	4 (50.00)	—	—	—	8 (100.00)

(Percentage in parenthesis)

It was observed that there was 100% positive response in 60 and above age group, followed by 97.10% in 5-14, 96.64% in 15-44, 93.33% in 45-59 and 81.25% in 0-4 year respectively (Table—10).

The total response rate had shown a steady decline from 43.75% in 0-4 years to 26.67% in 45-59 years

age-group and again increased to 50% in 60 years and over, while marked response rate had shown a sharp rise from 25.00% in 0-4 years to 53.33% in 45-59 years age-group respectively and then decreased to 50% on the same of 60 year and above. The moderate response was typical in nature and attained its maximum value of 21.74% in 5-14 years age-group as observed in this study.

Drug Response and Duration of the Ailment

Table—11

Disease-duration (day)	Response to the treatment				No response	All groups	Proportion distribution
	Recovery	Marked	Moderate	Mild			
0—1	42 (37.84)	38 (34.23)	17 (15.32)	10 (9.01)	4 (3.60)	111 (100.00)	45.68
2—3	34 (40.48)	22 (26.19)	16 (19.05)	7 (8.33)	5 (5.95)	84 (100.00)	34.57
4—5	8 (28.57)	13 (46.43)	4 (14.29)	3 (10.71)	—	28 (100.00)	11.52
6—7	5 (45.45)	4 (36.60)	1 (9.09)	—	1 (9.09)	11 (100.00)	4.53
8+	5 (55.56)	2 (22.22)	2 (22.22)	—	—	9 (100.00)	3.70

(Percentage in parenthesis)

The distribution of duration of the disease and response to the drug as seen in table—11, had shown a steady decline 45.68% in 0-1 days duration to 3.70% in 8 days and over duration.

Amongst the patients with the disease-duration at 4-5 days and that at 8 days and over, showed highest

drug response followed by 96.40% of cases at 0-1 days and 90.91% of cases at 6-7 days respectively.

The peaks of recovery, marked and moderate responses were not experienced among the patients suffering for the same period of time, but of different ones.

Drug Response and Response Time

Table—12

Response time (day)	Response to the treatment				No response	Total
	Recovery	Marked	Moderate	Mild		
0—1	3 (1.18)	15 (5.88)	18 (7.06)	11 (4.31)	3 (1.18)	50 (19.61)
2—3	63 (24.70)	51 (20.00)	24 (9.41)	6 (2.35)	7 (2.74)	151 (59.20)
4—5	16 (6.28)	8 (3.14)	4 (1.57)	2 (0.78)	1 (0.39)	31 (12.16)
6+	15 (5.88)	5 (1.96)	1 (0.39)	2 (0.78)	—	23 (9.01)

(Percentage in parenthesis)

The response rate with relation to time is shown in table-12 above. It is evident that the response rate increased from its lower value (18.43%) in 1 day, to its maximum value (56.46%) in 2-3 days and then decreased to (11.77%) in 4-5 days and showed mini-

imum response-rate (9.01%) after 5 days and over. The recovery, marked and moderate responses 24.70%, 20.00% and 9.41% were maximum in 2-3 days, while mild response had maximum value (4.31%) within the period of one day.

Drugs and Their Response

Table—13

Drug	Drug response of the followed up cases					Total	Not followed up cases	All Groups	Percentage
	Recovery	Marked	Moderate	Mild	No relief				
Belladonna	39 (30.95)	47 (37.30)	26 (20.63)	9 (7.14)	5 (3.97)	126 (100.00)	94	220	46.91
Euphrasia	18 (47.37)	11 (28.95)	5 (13.16)	2 (5.26)	2 (5.26)	38 (100.00)	25	63	13.43
Argentum nitricum	5 (21.74)	10 (43.48)	5 (21.74)	3 (13.04)	—	23 (100.00)	33	56	11.94
Apis mellifica	17 (62.96)	6 (22.22)	3 (11.11)	—	1 (3.70)	27 (100.00)	23	50	10.66
Calcareo carbonicum	4 (33.33)	2 (16.67)	2 (16.67)	2 (16.67)	2 (16.67)	12 (100.00)	8	20	4.26
Sulphur	—	3 (50.00)	1 (16.67)	2 (33.33)	—	6 (100.00)	10	16	3.41
Natrum muriaticum	4 (80.00)	—	1 (20.00)	—	—	5 (100.00)	4	9	1.92

Mercurius solubilis	1 (33.33)	1 (33.33)	1 (33.33)	3 (100.00)	4	7	1.49
Pulsatilla	3 (100.00)			3 (100.00)	3	6	1.28
Arnica montana		2 (100.00)		2 (100.00)	3	5	1.07
Rhus toxicodendron	1 (100.00)			1 (100.00)	4	5	1.07
Arsenicum album	4 (100.00)			4 (100.00)		4	0.85
Aconitum napellus		2 (66.67)	1 (33.33)	3 (100.00)	1	4	0.85
Ferrum phosphoricum			1 (100.00)	1 (100.00)	1	2	0.43
Kali iodatum					1	1	0.21
Podophyllum	1 (100.00)			1 (100.00)		1	0.21

(Percentage in parenthesis)

*Drugs were used in 30 and/or 200 and/or 1000 potencies and were administered orally and for local application-Mother Tincture of Euphrasia (2%) or Argentum nitricum (1%) were administered.

As it appears from above table No. 13 the drugs used were Belladonna (46.91%), Euphrasia (13.43%), Argentum nitricum (11.94%), Apis mellifica (10.66%), Calcarea Carbonicum (4.26%), Sulphur (3.41%), Natrum muriaticum (1.92%), Mercurius solubilis (1.47%), Pulsatilla (1.28%), Arnica montana (1.07%), Rhus toxicodendron (1.07%), Arsenicum album (0.85%), Aconitum napellus (0.85%), Ferrum Phosphoricum (0.43%), Kali iodatum (0.21%), and Podophyllum (0.21%) respectively. Amongst the mostly used drugs the response rate (recovery, marked and moderate responses) was maximum with Apis mellifica (96.29%) followed by Euphrasia (89.48%), Belladonna (88.88%), and Argentum nitricum (86.96%) respectively. Further, that although the drugs like Arsenicum album, Pulsatilla, Natrum muriaticum could be selected only for a small number of cases but their efficacies upon such limited number are observed to be highly satisfactory.

Summary

- 469 cases of epidemic conjunctivitis were treated with homoeopathic drugs, 54.37% of these were followed-up and 45.63% dropped out after their first visit.
- 82.30% of the cases had sudden onset, with involvement of both the eyes (81.85%) and their source of infection was mainly at home (61.41%).
- The following signs symptoms were observed: Lachrymation (62.05%), Photophobia (75.27%) redness of conjunctiva (88.70%), swelling of eyelids (78.25%), ulceration (42.43%) and matting of eye-lashes (44.56%) respectively.

Pain (various types of) (49.25%), i.e. sandy sensation (42%), burning (27.93%), foreign body sensation (13.65%), itching (12.37%), aching (11.30%) were present in higher percentages followed by others i.e. smarting, pricking, stinging, soreness, cutting, electric current like sensation, bursting etc. which were present in a lower percentage.

The discharges observed were mainly watery (52.45%) and purulent (42.43%) followed by acrid and bland types in lower percentages).

4. The improvement was observed in about 96% of cases which included total recovery, and marked, moderate and mild responses.
- 5a. About 80% of the cases received the treatment within three days of the onset of their complaints.
- b. 74.89% of the cases who attended the clinics were observed to be improved within a period of 1 to 3 days.
6. The drug *Belladonna* topped the list of homoeopathic medicines. It was followed by *Euphrasia*, *Argentum nitricum* and *Apis mellifica*.

The drugs *Arsenicum album*, *Pulsatilla* and *Natrum muriaticum* although used in a smaller number of cases, were observed to be highly effective wherever they were indicated.

References

1. Miller, S.J.H. : *Parson's Diseases of the Eye*. 16 ed. Gr Britain, ELBS and Churchill Livingstone, 1978.
2. Allen, H.C. ; : *Key Notes and Characteristics of the Materia Medica with Nosodes*. 7 ed. New Delhi, Jain Publishing Co, 1979.
3. Boericke, W. : *Materia Medica with Repertory*. 9 ed. New Delhi, B. Jain Publishers, 1982.
4. Dewey, W. A. : *Practical Homoeopathic Therapeutics*. 3 ed. New Delhi, Jain Publishing Co., (n.d.).

Conclusion

1. The high rate of improvement, although in varying degrees substantiate the fact that the homoeopathic drugs are effective in conjunctivitis epidemic.
2. The variations in the occurrence of symptoms and signs with almost same type of infection as happens in one epidemic, justifies the principles of Homoeopathy. "INDIVIDUALISATION" and "DYNAMISATION" which only are responsible for indicating different set of drugs and their potencies for different individual patients affected with similar disease.

Acknowledgement

The keen interest and laborious attempts made by research workers at different Institutes and Units in collecting data are highly acknowledged. Thanks are also due to the staff of Central Council for Research in Homoeopathy Head Quarters office and with particular reference to Mrs. K. Banerjee who demonstrated her painstaking interest in typing the material. Lastly the authors are indebted to the Director of the Council without whose encouragement this study would not have been possible.