STUDY OF HOMOEOPATHIC DRUGS IN ENCEPHALITIS EPIDEMIC (1991) IN UTTAR PRADESH (INDIA)

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

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SUMMARY

Epidemiological investigation of Japanese encephalitis epidemic conducted during the period 29th Oct.1991 to 16th Nov.1991 in the wake of reoccurrence of this epidemic in the four districts of Uttar Pradesh (India) viz.- Gorakhpur, Deoria, Maharajganj and Basti by a team of research workers of Central Council for Research in Homoeopathy (CCRH). A total of 237 patients (223 camp patients + 14 cases of the sequelae of Japanese Encephalitis (JE) discharged from various Hospitals/Primary Health Centres were studied. A Genus Epidemicus "Belladonna" was worked out on the basis of totality of symptoms observed in the patients of JE. Single dose of Belladonna 200 was distributed as a preventive in 96 villages covering 3,22,812 persons. Follow up of 39,250 persons was done revealing no untoward development of any signs or symptoms of encephalitis. Besides this, the symptoms of patients discharged with sequelae were relieved to a great extent in comparison to the symptoms prior to their treatment. Credibility of "Belladonna" has thus been proved in both preventive and treatment aspect in the present investigation for treatment of Japanese Encephalitis.

Introduction

Viral Encephalitis has been known to arrive from JAPAN. This dreadful disease is caused by a virus and spread by the bite of Culex Vishnui mosquito, Medical authorities believe that this particular mosquito carries the infection through the birds and animals especially pigs, keeping these as reservoirs, but there is no man to man infection. It is presumed that the species of the birds involved in the cycle are not found in our country. Therefore, the health authorities stress on the need for isolation of such pigs etc. to remote areas as far as possible away from the human inhabitation. It is a sporadic disease and manifests as high fever, headache, convulsions, confusion, stiffness of the neck and coma etc. The death rate due to this disease is very high and those who survive, suffer with various degree of neurological complications. This disease chiefly affects children under 12 years of age, due to low immunity status.

Encephalitis Situation (Epidemiology)

Encephalitis due to flaviviruses occurs in most countries of East and South East Asia. In the world situation, the ratio of clinically apparent disease (Japanese encephalitis) to subclinical human infection is believed to be in range between 1:300 to 1:1000 (country wise variation). But in India, this ratio has not

been estimated, where the disease mainly affects the people of the lower socio-economic group residing in rural areas. On an average 1 -1.5 cases have occurred per village.

It emerged as a major public health problem in our country only since 1970 after a series of epidemics which occurred in various parts of the country. The earliest evidence of Japanese Encephalitis virus activity was obtained through serological surveys in 1952 and the disease was first recognised in 1955, when cases of Encephalitis were reported from North Arcot district and neighbouring districts of Tamil Nadu and Andhra Pradesh. According to institutional report of Central Health Education Bureau (C.H.E.B.), case fatality rates (%) were 6.2% in 1973, 12.6% in 1974, 60.2% in 1975, 16.6% in 1976, 16.6% in 1977, 8% in 1978,11.2% in 1979,7% in 1980, 9.8% in 1981, 10.8% in 1982 (limitation is that generally all the hospitals do not report to C.H.E.B.).

Prior to 1970, disease was recorded only from South India

TABLE 1 - Outbreaks Of Encephalitis In India

Year	Districts/State
1973	Burdwan, Bankura (West Bengal)
1976	Burdwan (West Bengal)
1977	Arunachal Pradesh, Assam
1978	Siong (Arunachal Pradesh), Tirumelve (Tamil Nadu) Kolar (Karnataka), U.P.
1979	Kolar (Karnataka), Andhra Pradesh.
1980	East west Champaran (Bihar) Gorakhpur, Deoria U.P. Dibrugarh (Assam) Balighat, Bhilai, Raipur (M.P.)
1981	Tamil Nadu, Pondicherry, Andhra Pradesh, Karnataka.
1982	Union Territory of Goa
1986	Nine districts (Assam), U.P.
1990	Haryana.

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The disease in South India has mainly affected children below 15 years, whereas in West Bengal, Bihar, Assam, U.P. & Goa all age groups were infected. The incidence was higher in males than females in most of the epidemics. Fatality rate ranged between 21 to 44 percent.

Among reported cases of encephalitis in States/ Union Territories in India during 1987-1990, there were 3515 cases & 346 deaths in 1987 (Case fatality rate -38.29%), 6867 cases & 2404 deaths in 1988 (Case fatality rate - 35.01%) and 6489 cases & 2422 deaths in 1989 (case fatality rate - 39.32%).

Such alarming situations were also found in the U.P. State where incidence of encephalitis cases and deaths resulted. Case fatality rates - 44.19% in 1987 (ie. cases - 172, deaths - 76), 31.5% in 1988 (ie. cases - 4485, deaths - 1413) and 34.81% in 1989 (ie. cases - 1574, deaths - 548).

The case fatality rate in various districts of UP in 1988— Gorakhpur 31.4%, Basti 21.8%, Azamgarh 17.7% & Deoria 36.99%

Epidemiological survey in U.P. has confirmed that suspected cases of encephalitis report throughout the year and out of the suspected cases 86% show evidence of J.E. virus infection.

Seasonal Pattern

The most vulnerable period observed to be is May to October in Eastern India and October to December in South Indian States. The disease prevalence coincides with rainy season and period of high mosquito prevalence. Hence the disease mainly occurs during the latter half of the year. In West Bengal the disease has occurred between May and October, while in Bihar, U.P. and Assam the outbreaks have occurred between September and December.

Signs and Symptoms

The incubation period of the disease varies between 5-15 days. Prodromal stage which lasts for 1-6 days is characterised by fever, headache, nausea and vomiting. In the encephalitic stage, high fever often accompanied by rigor and chills, neck rigidity, altered sensorium, focal or generalized convulsions, coarse tremors, confusion, delirium, coma and paralysis are commonly seen. The common sequelae left in those who recover from the acute phase are mental impairment, severe emotional instability, paralysis of lower or upper motor neuron type and less commonly aphasia and organic psychosis. Fever is in almost 90 percent cases. Deterioration of mental status occurs in about 3/4 th of the patients within 3-4 days. Localized paralysis occurs among 1/3rd of the cases.

Flow Diagram - Guideline Forming a Clinical Diagnosis of Encephalitic Cases

High Fever

Recovery with Antimalarial - Yes - malaria

ONLY CONVULSIONS - Yes -any case leading for high fever

No

convulsions and/or confusion/Delirium and/or stiffness in neck and/or coma + paralysis

Yes

watch for Japanese Encephalitis.

Management, Prevention And Control

Management of encephalitic patient:

Since no specific treatment is available, the management consists of maintaining fluid and electrolyte balance, maintenance of airways, nutritional supplement, lowering of body temperature, reducing cerebral and pulmonary oedema, controlling seizures, chorea, athetosis, distonia and preventing secondary infections.

Possible ways to control the disease are

- (a) Control of insect vector
- (b) Prevention of mosquito bites
- (c) Administration of Genus Epidemicus

During an epidemic situation, to break the transmission cycle it is necessary to bring down the adult mosquito population by peridomestic fogging (in Indian condition), malathion has been found to be effective.

Management Through Homoeopathy

Preventive/Prophylactic Aspect

Preventive medicine is a positive aspect; an improvement in the quality of living as well as longivity; building up physical, mental and emotional health. Dr. Hahnemann made some rules about preventive medicines which were available in 1810 in Aphorism 73, foot notes to Aphorism 53 and 73, appendix to Aphorism 72, Aphorism 101 and 102 of the Organon of Medicine. Dr. Hahnemann too noted that Homoeopathic remedies can act as prophylactic medicine when the homoeopathic remedy in its proving brings out symptoms similar to a particular disease. It was experienced that the Genus Epidemicus when given to the members of a family who were not suffering from the Epidemic disease were protected from developing the disease.

Genus Epidemicus

It is a medicine which is indicated for large number of patients suffering from an epidemic. In epidemic and sporadic disease which attack it. ge number of persons at one time, all patients show similar set of symptoms as the causative factor in all of them is same (probably an acute miasm). The entire picture (symptomatology)can be ascertained by observing a large number of patients suffering from it. The total symptoms so obtained from all the patients constitute the real picture of the Epidemic or sporadic disease. The medicine selected on the basis of this symptomatology is known as Genus Epidemicus. This medicine gives relief to large number of patients. Moreover, this medicine acts as prophylactic/preventive when given to healthy persons of the area where the disease is prevailing.

Material And Methods

A total number of 237 cases of Japanese Encephalitis were studied from 29th Oct.,1991 to 16th Nov.,1991 in the districts of Gorakhpur, Maharajganj, Deoria and Basti of U.P.

In order to perform effectively and efficiently, a systematic approach was adopted which is as follows.

Signs and symptoms of 32 patients admitted in indoor wards of the Civil Hospital and B.H.D. Medical College, Gorakhpur were recorded on a semi-structured proforma prepared by the team. After observing the totality of symptoms of Encephalitis patients, both symptoms which were common symptoms of the disease as well as uncommon or peculiar symptoms found in the majority of patients suffering from Encephalitis, a remedy was selected after repertorisation by Kent's Method (Annexure I). This remedy was selected as Genus Epidemicus on the basis of the highest total marks and the maximum number of the rubrics covered and the remedy (Similimum) was Belladonna The signs and symptoms of the Similimum were verified from various authoritative books (Annexure 2)

It was observed that 19 symptoms out of the 20 symptoms were covered by Belladonna. It was a medicine which was also indicated for large number of patients suffering from Encephalitis as was observed during the study.

The single dose of Belladonna 200 was distributed as preventive to 3,22,812 (three lakhs twenty two thousand eight hundred and twelve) persons irrespective of their age (As recommended by Hahnemann in his Organon in Aph. No.238) in about 96 villages. In this work all the Gram Pradhans, School Teachers, Lekhpals apart from P.H.Cs. co-operated.

Homoeopathic treatment was given to 223 patients in remote areas, whom the research team contacted during this period, and such patients had not taken any other treatment at all. These suffered from acute febrile affections, the first paroxysm of the disease i.e. headache, fever, vomiting, cough, backache, bodyache,

pain in extremities, neck, eyes and joints etc. Each individual was provided symptomatic treatment.,

Fourteen (14) prolonged cases of the sequelae of Encephalitis having various degrees of neurological complication discharged from different Hospitals and P.H.Cs. were suffering from aphasia, paralysis, muscle weakness, convulsions, trembling of tongue, stiffness. They were also provided symptomatic treatment.

Observations

The thirty two (32) hospitalised encephalitis cases were studied to find out the common symptoms of the epidemic in order to find out the Genus Epidemicus. It was found that most of the patients belonged to the age group 0-15 yrs. and sex ratio of male to female was 2:1. About 20 symptoms were noticed in these cases. (Table 2)

TABLE 2- Symptoms Found In The Hospitalised Encephalitis Cases

SL. NO.	SYMPTOMS	INTENSITY OF SYMPTOMS (IN %)
1. DE	ELIRIUM-frightful	14%
	CAPE-attempt to	16.3%
	DANING	16.3%
U.S. C.	STLESSNESS, nervousness	14%
	NCONSCIOUSNESS	81.2%
	EAD-DRAWN, BACKWARD (see	e Falling) 47.2%
	EADACHE-HEAD PAIN	90.6%
	EADACHE-HEAD PAIN-violent	90.6%
9. PL	JPILS-dilated	29.7%
	JPILS-sluggish	40.6%
	PEECH difficult	53.1%
12. TE	ETH-GRINDING	21.8%
13. IN	VOUNTARY-stool	62.5%
	ACK-PAIN-CERVICAL region	92.8%
15. B	ACK-STIFFNESS-CERVICAL re	egion 47.2%
	KTREMITIES-PARALYSIS-UPP	
Se	ensation of	56.2%
17. E	KTREMITIES-STIFFNESS	56.2%
	ENERALITIES-CONVULSION	90.6%
	VER-CHILL, with	100%
	EAD-INFLAMMATION, brain o	f 100%

Among fourteen (14) cases of the sequelae of encephalitis it was found that male to female ratio was 2.5:1 (Male 71.43% and Female 28.57%) and most of the patients belonged to the age group 0-15 yrs. These cases were discharged with various neurological complications. (Table 3)

TABLE 3 - Symptom-wise Break Up of Encephalitis Cases (14 Cases) Before Treatment

SI.	No. Sign/Symptoms	Male	Female	Total	%age
1.	Headache	7	3	10	71.47%
200	Speech difficult	6	2	8	57.1%
	Convulsions	- 5	2	7	5 0.0%

4.	Convulsions-children	5		2	-7	200
5.	Unconsciousness	3		3	7	50%
6.	Swelling of inguinal gland	5		3	6	42.8%
7.	Back-pain			1	6	42.8%
8.	Fever with chill	3		2	5	35.7%
1000		3		2	5	35.7%
	Thirst	3		2	5	35.7%
	Extremities, Coldness upper arm	4		7 2 //	4	28.6%
11. 12.	Coldness lower arm Coldness, head hot	4	٠		4	28.6%
	with	4			4	28.6%
	Extremities, stiffness	4		-	4	28.6%
14.	Sleepiness	4			4	28.6%
	Head-Drawn-backward Back-Stiffness	3			3	21.4%
	cervical region	2		-	2	14.3%
17.	Back pain cervical region	1		-	1	7.1%
18.	Eye-pupils-Dilated	2			2	14.3%
19.	Stool Involuntary			2	2	
20.		1		~	2	14.3%
21.	Escape, attempt to	1		-	1	7.1%
	Pupils sluggish				1	7.1%
	Tongue trembling			1	1	7.1%
20.	rongue trembling	1			1	7.1%

Two hundred twenty three (223) cases found with various symptoms of encephalitis were given symptomatic treatment.

In these cases it was observed that male to female ratio was 1:1 and the most of the patients belonged to the age group 0-15 yrs. (27%). Various symptoms found in these patients are listed. (Table 4).

TABLE -4 Symptoms Found in the 223 patients in the Remote Areas

S.	No. Symts.	Male	Female	Total No. of patients with their %
1.	Headache	84	90	174 (78.26%)
2.	Fever	59	51	110 (49%)
3.	Cough	54	45	99 (41%)
4.	Backache	43	46	89 (35.9%)
5.	Thirst	35	40	75 (33.68%)
6.	Anorexia	37	35	72 (32.28%)
7.	Eye pain	27	26	54 (26.2%)
8	Constipation	26	21	47 (21.2%)
9.	Pain in nape of neck	13	12	25 (11.2%)
10.	Dysentery	7	8	15 (6.72%)
11.	Vomiting	5	1	6 (2.69%)
12.	Convulsion with fever	3	2	5 (2.2%)

Result

Fourteen (14) cases of the sequelae of Japanese encephalitis were treated with indicated homoeopathic medicines and improvement was seen in varying

degrees in almost all the symptoms (Table 5). Out of these, there was total recovery in four(4) cases.

TABLE 5 - Response in Symptoms of Encephalitis Cases Before And After Treatment

Table 3)
90%
86%
86%
75%
100%
100%
83%
100%
66%
100%
100%
1000/
100%
100%
75%
13/6
100%
10076
66%
0070
100%
100%
100%
100%
100%
50%
100%

The patients (223) found in the remote areas were provided treatment on the basis of totality of symptoms. The drugs found effective are given in Table 6

TABLE 6 - Drugs Found Effective

SI. No.	Name o with po	f the Drug otency	No. of patient relieved (%)
1.	Belladonna	200	149 (68.6%)
2.	Rhus tox	200	35 (15.7%)
3.	Bryonia	200 .	27 (11.6%)
4.	Pulsatilla	200	9 (4%)
5.	Gelsemium	200	3 (3.6%)
	TOTAL		 223

From the table it can be seen that the signs/symptoms of majority of the patients were very much similar to the first paroxysms of the disease and also similar to the symptoms of the medicine "Belladonna" which was the Genus Epidemicus and also relieved 149 patients.

Belladonna 200, single dose was distributed as preventive to 3,22,812 (12%) persons in 96 villages in three districts. Follow up of 39,250 persons was done and it was found that none of them reported any signs and symptoms of Japanese Encephalitis. Mild symptoms viz. fever, cough, headache, convulsions appeared in 14 persons in the age group of 15-20 years, which subsided automatically within 3 to 4 days.

Discussion And Conclusion

From the above observations and results, it is concluded that the medicine "Belladonna" was found the most specific remedy (exact similimum) for this particular epidemic.

The drug (sign/symptoms) Belladonna covered the uncommon, singular and characteristic disease symptoms i.e. totality of symptoms of the disease in different constitutions.

The totality of symptoms of disease were found similar to the sign and symptoms of Belladonna. The medicine was selected after repertorisation and signs/symptoms of the medicine were verified from various Homoeopathic Materia Medica. (Annexure 2)

It also covered the symptoms before the actual onset of the disease by proving as an effective preventive.

It also covered the acute phase of the disease and the signs/symptoms in sequelae of Japanese encephalitis. Thus, it can be concluded that the administration of this medicine covers the prophylaxis as well as systematic treatment of this epidemic.

In some healthy persons after administration of Belladonna as a preventive in minute dose, alteration in the sensation and function of the body was observed thus

confirming that "The medicines that covers the disease must have the power of creating the same alteration in the sensation and function of the healthy individual if given in minute dose." The curative power of this medicine is supported by aphorism no. 19 as mentioned in the Organon of Medicine by Dr.Samuel Hahnemann.

Other medicines were also given for proper treatment only when some definite indications for the same were observed.

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"Observation more than books, experience rather than persons are the prime educators."

A. Benson Alcott

ANNEXURE - 1

SYMPTOMS OF ENCEPHALITIS CASES WORKED OUT IN KUNZLI REPERTORY

S.No.	Symptom	Page no. in Kunzli's Repertory	
1.	MIND-DELIRIUM-FRIGHTFUL	16	
2.	MIND-ESCAPE-ATTEMPTS TO	31	
3.	MIND-MOANING	53	
4.	MIND-RESTLESSNESS-		
	NERVOUSNESS	57	
5.	MIND-UNCONSCIOUSNESS	71	
6.	HEAD-DRAWN-BACKWARD-SEE (FALLING)	95	
7.	HEAD-INFLAMMATION-OF BRAIN	106	
8.	HEAD-PAIN-HEADACHE-IN-GENERAL	110	
9.	HEAD-PAIN-HEADACHE-IN-GENERAL VIOLENT	125	
10.	EYE-PUPILS-DILATED	221	
11.	EYE-PUPILS-SLUGGISH	230	
12.	MOUTH-SPEECH-WANTING	350	
13.	MOUTH-TEETH-GRINDING	368	
14.	RECTUM-INVOLUNTARY-STOOL	531	
15.	BACK-PAIN-CERVICAL-REGION	782	
16.	BACK-STIFFNESS-CERVICAL REGION	793	
17.	EXTREMITIES-PARALYSIS-UPPER ARM SENSATION	975	
18.	EXTREMITIES STIFFNESS	985	
19.	GENERALITIES-CONVULSION	1115	
20.	FEVER-CHILL WITH	1050	

ANNEXURE - II

SYMPTOMS OF BELLADONNA CONFIRMED FROM VARIOUS MATERIA MEDICA'S

SI. No.	Symptoms found in the majority of Encephalitis patients		from various authoritative dica's Vol./ page No.
1	2		3
1.	MIND-DELIRIUM	H.C.Allen p.71	Delirium; the boy jumped out of bed talked a great deal, was lively, and ofter laughed; consciousness was entirely gone; he did not recognize his patients, Delirium the child is very restless, talks confusedly, runs jumps, laughs convulsively;
		Quick Bed-Side Prescriber by J.N. Shinghal p.111	DeliriumDuring fever, with spasms and jerks and twitching and starting from sleep. Laughs of screams. Gnashes teeth and becomes violent Tries to bite or strike. Face is particularly red and eyes are red. The congestion of face and eyes is the main distinguishing feature from Stramonium (Bell.). Trio of delirium medicines: (1) Bell., (2) Hyos., and Stram.
		H.G.S. Vol.II p.367	MINDDelirium. Delirium and heat. Delirious moaning, flushed face, hot head.
		p.368	In evening he was seized with such violent delirium that it required three men to confine him; his face was livid; his eyes injected and protruding, pupils strongly dilated; carotic arteries pulsating most violently; a full, hard pulse, with loss of power to swallow.
2.	MIND-ESCAPE-attempt to	T.F.Allen p.170	GENERALITIES-Every movement he wished to get out of bed (Hyos) the boy wished to escape
		Materia Medica by N.M. Choudhuri p.110	Another characteristic of Belladonna that should be remembered is a desire to escape and hide either in his insanity or in his delirium. He shows a great anxiety to escape.
		H.G.S. Vol.II p.368	MIND-Desire to escape or hide herself

Vol. 14 (3&4) 1992		
3.	MIND-MOANING	M.M. by N.M Choudhuri p.109	MOANING is a great characteristic of our remedy, well or ill we find him constantly indulging in this. Garrulity is also present. His speech and actions are rapid and hasty.
		H.G.S. Vol.II p.367 p.369	Delirious moaning, flushed face,hot head. MIND-Moaning. Much moaning, distress, a sudden crying out. Q Retention of urine.
4.	RESTLESSNESS- Nervousness	H.G.S. Vol.II p.368 p.371	Complete restlessness; Anxiety, restlessness, nausea & pain in back, with wind, colic. Anxiety, anguish, trembling, constant restlessness.
		Boe.p.110	Restless sleep.
5.	UNCONSCIOUSNESS	A.E. Vol.II p.75	Insensibility, loss of consciousness, rattling breathing and convulsive movement in the face & hands, stiffness of lower limbs. Complete loss of consciousness, consciousness disappears, he no longer recognised, his surroundings, loss of senseness, with convulsions of limbs.
		H.G.S. Vol.II, p.366	Loss of consciousness
		Boe.p.111	MIND-Loss of consciousness.
6.	HEAD-DRAWN-	A.E. Vol.II p.77	HEAD-Her head is drawn backward
	BACKWARD (see falling)	H.G.S. Vol.II p.372	Inner Head-Sensation as if brain was pressed to forehead, which disappeared directly on bending head backward.
		T.F. Allen, p. 171	HEAD-Clinical-Terrific headaches, the head feels full of blood, violent at base of brain, head drawn backward, violent throbbing carotids, with red face.
		Boe. p. 111	HEAD-vertigo, with falling to left side or backwards.
7.	HEAD-INFLAMMATION OF BRAIN	A.E. Vol.II p.77	Swelling of head, great swelling of the head and redness over the whole body, trembling of the head, and limbs, her head is drawn backwards, Rush of blood to the head, pulsation of the cerebral arteries & a throbbing in the internal of the head.
		Quick Bed-Side Prescriber J.N. Shinghal p.262	Inflammation of brain. Congestion and cerebral irritation with head hot; throbbing carotid and headache. Vertigo with falling to left side or backward; Headache from suppressed catarrhal flow; pain: fullness specially in forehead. (Belladonna).

			VOI. 14 (OCH) 1332
8.	HEAD-PAIN -HEADACHE	M.M. by N.M. Choudhuri p. 109	Due to congestion of brain our patient is a victim to constant headache. The pain is throbbing in nature; is associated with intolerance of light and noise.
		Boe. p. 111	HEAD-Painfulness, especially in forehead, also occiput, and temples, pain worse, light, noise, jar, lying down and afternoon, better by pressure and semi-erect posture.
9.	HEADACHE-HEAD- PAIN VIOLENT	A.E. Vol. II, p. 77	HEAD-Violent headache chiefly in orbital region with redness of the eyes and face. Pains in head are aggravated by noise, motion, when moving eyes, contact, least exertion and in open air.
		T. F. Allen p. 171	HEAD-Clinical: Terrific headaches; the head feels full of blood; violent with red face. The headaches are almost universally aggravated by the slight noise and light. Headache violent that he seems to get blind and then becomes unconsciousness.
		H. C. Allen, p. 53	Head hot, and painful, flushes of heat to face, eyes, wild, staring, pupils dilated.
		F.M.M. p. 408	Intense throbbing headache; from noise, light or jarring, better when bending backward.
10.	PUPILS-dilated	M.M. by N.M. Choudhuri p. 116	We have yet to deal with fever of Belladonna, it begins with a chill of congestive nature, violent, bursting frontal headache, dilated pupils, dread of light and noise, accompany the chill.
		T.F. Allen p. 172	EYES-Pupils dilated and immovable.
		F.M.M. p. 408	Pupils dilated.
		H.G.S. Vol. II p. 368	Laughing and grinding of teeth head was hot, face red, look wild and staring; pulse small and very frequent; pupils dilated, arteries of head and neck visibly palpitating, pulse hard and frequent.
		H.G.S. Vol. II p. 379	Pupils dilated.
		H.C. Allen, p.53	EYES-Wild, staring, pupils dilated.
11.	PUPILS-sluggish	T.F. Allen, p. 172	EYES-Pupils-Insensible to light.
12.	MOUTH-SPEECH- difficult	H.G.S. Vol. II p. 386	Loss of speech. Paralytic weakness of organs of speech.
	dinicult	H. G.S. Vol. II p. 386	Inarticulate speech from hindered mobility of tongue.
		C.M.M. Vol. I p. 263	Heaviness trembling, and paralytic weakness of the tongue with difficult and stuttering speech.

p. 385	VOI. 14 (3&4) 1992		
H.G.S. Vol. II p. 385 F.M.M. p. 408 H.C. Allen, p. 52 14. RECTUM-INVOLUNTARY -Stool 15. BACK-PAIN-Cervical region 16. BACK-Stiffness-Cervical region 17. Extremities-Paralysis 18. EXTREMITIES- T.F. Allen, p. 177 H.G.S. Vol. II p. 405 T.F. Allen, p. 177 H.G.S. Vol. II p. 406 F.M.M. Vol. II p. 407 F.M.M. Vol. II p. 408 H.G.S. Vol. II p. 408 H.G.S. Vol. II p. 409 F.M.M. p. 407 F.M.M. p. 408 F.M.M. p. 408 F.M.M. p. 407 F.M.M. p. 408 F.M.M. p. 407 F.M.M. p. 408 F.M.M	13.		Boe. p. 112	MOUTH-Grinding of teeth.
H.C. Allen, p. 52 Gnashes the teeth. H.G.S. Vol. II p. 394 H.G.S. Vol. II p. 394 Involuntary evacuations; temporary paralys of sphincter. M.M. by N.M.Choudhuri Involuntary discharge of faeces and urin violent flushed face. T.F. Allen, p. 117 The stool are thin greenish, bloody or pale cent white, they are small in quantity, frequer and involuntary. 15. BACK-PAIN-Cervical region H.G.S. Vol. II p. 403 Boe. p. 113 Fainful swelling and stiffness of neck and nay of neck. H.G.S. Vol. II p. 407 Fain in nape as it would be burst. NECK AND BACK-Painful swelling and st ness of neck and nape of neck. Boe. p. 113 It is one of the best remedies in rheumatic at stiff neck. T.F. Allen, p. 177 H.G.S. Vol. II p. 406 C.M.M. Vol. I p. 406 C.M.M. Vol. I p. 267 T.F. Allen, p. 177 BACK-Stiffness-Swelling of glands of neck. NECK-Clinical-stiff neck from taking cold. T.F. Allen, p. 177 Loss of co-ordination of muscles of both upg and lower limbs, very like heaviness and he lessness of movement observed in first sta of progressive paralysis of the imsane. Stiffness Stiffness EXTREMITIES— Stiffness H.G.S. Vol. II p. 405 EXTREMITIES-heaviness of hands and first states of progressive paralysis of the limst paralysis and insensibility of one side of both pa		Grinding		TEETH AND GUMGrinding of teeth with, moaning; great dryness of mouth.Grinding of teeth with foam at mouth.
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	18.			GENERALITIES – Feeling of strength, paralytic weakness, and paralysis of the limbs, paralysis and insensibility of one side of body.
				EXTREMITIES-heaviness of hands and felt stiffness, immobility.
LOWER LIMBS-Stiffness of hip joints.				LOWER LIMBS-Stiffness of hip joints.

19.	GENERALITIES Convulsions	M.M. by N.M. Choudhuri p. 111	Belladonna is no doubt our main remedy in convulsions; it is, particularly indicated in robust, corpulent children with unmistakable symptoms of cerebral congestion. The convulsions commence in upper extremities and extend to the mouth.
		C.M.M. Vol. I p. 267	GENERALITIES – Cramps, spasms and convulsive movements, with violent contraction of the limbs.
		H.G.S. Vol. II p. 406	Convulsive movements of limbs, convulsive twitching, twisting and turning of extremities.
		H. C. Allen, p. 52	Convulsions, during teething with fever, comes on suddenly, head hot face cold.
		F.M.M. p. 408	Convulsions often ensure, particularly in children and these convulsions are very violent, distorting,
		p. 201	Belladonna is probably more frequently indi- cated than other remedy for convulsions fol- lowing violent emotion, anger etc. with bright red face, wild staring eyes, hot
20.	FEVER WITH CHILL	M. M. by N.M. Choudhuri p. 116	We have yet to deal with the fever of Belladon- na, it begins with a chill of a congestive nature, violent, bursting frontal headache. dilated pupils, dread of light and noise accompany the chill.
		H.G.S. Vol. II p. 411	FEVER - Feels very chilly, wants warmth of a stove.
		C.M.M. Vol. I p. 268	Coldness of the entire body, with paleness of face, or coldness of the extremities.
	OTHER CVARPTOMS		
21.	OTHER SYMPTOMS 1. Generalities— Inflammation of glands	C.M.M. Vol. II p. 267	Inflammation of the glands; induration of the glands; glands painful, pricking swelling of the glands.
	Extremities-Cold- ness lower arm	H.G.S. Vol. II p. 406	LIMBS In General Hands and feet become very cold.
	Extremities-Cold- ness lower arm	H.G.S. Vol. II p. 406	-do-
	Extremities-Coldness heat hot	H.G.S. Vol. II p. 376	OUTER HEAD-Head, hot; feet cold, rolls hand
		H.C. Allen p. 52	Convulsions during teething with fever; come on suddenly head hot, feet cold.
		Boe. p. 113	Cold extremities.