Environmental Health Hazards and Homoeopathy

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Introduction

Human knowledge has become unmanageably vast. Each science has begotten to a dozen or more each subtler, more complex than the rest. Entire corpus of medical knowledge has split into many isolated fragments. Environmental health is one among them. All branches of medical science are contributing through their therapeutic capabilities to rnitigate the health hazards, so also Homoeopathy.

In 1972, in the U.N.O conference at Stockholm on the world environment, the world leaders expressed their concern on the world environment; the world leaders expressed their concern in the following areas:

- Human settlement and health
- Natural disaster
- Environmental pollution
- Mushrooming industrialization and its effects on mankind.

In the same year W.H.O. Geneva alarmed the world population on the environmental hazards how it is going to pose serious threat on human health. Although the exact nature and extent of the association between environmental pollution and community health was not fully established as it is established today.

In June, 1992 a historic Earth Summit was held at Rio de Jenerio. The central message in the said meeting was held the socio-cultural roots of our present environment crisis lie in the paradigms of scientific materialism and economic determinism which fail to recognize the

physical limits. The economics must expand with in eco system which have limited regenerative capacities. Contrary to the neoclassical theory of continues material growth, economic activities directly undermine the potential for development through over exploitation of the resources and indirectly compromise future production through the discharge of residuals. The entrenchment with quantitative growth as a major instrument of social policy is thus quite paradoxical.

Over a course of ten thousand years human beings have successfully learned to exploit ecological system for sustenance, while ecological systems are supple / flexible / pliant / submissive, they can snap viciously when bent too far. The land ability to serve human ends can be markedly and sometime permanently snapped. Human being out of ignorance, shortsightedness greed or desperation have polluted air or water, undermined the productivity of the land through acceleration soil erosion, creeping deserts, increased flooding and declined soil fertility, thus destroying the basis of our livelihood and violated the limits of natural system.

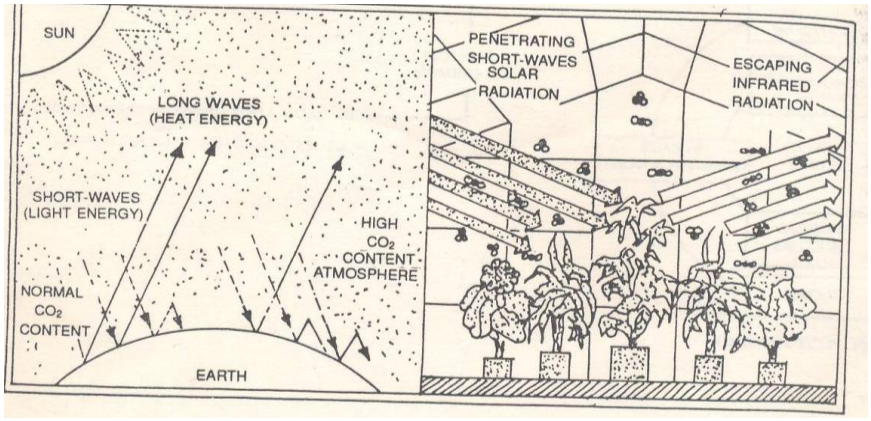
At this juncture it reminds us regarding our departed leader Mrs. Indira Gandhi which is quoted below:

"It is clear that environmental crisis which is confronting the world will profoundly affect the future destiny of the planet. No one among us, whatever our status, strength or circumstance can remain unaffected. The process of change challenges present international policies will the growing awareness of "one earth " and "one environment" guides us to the concept of "one humanity" will there be more equitable sharing of environmental costs and greater international interests in accelerated progress of less developed world? Or will it remain confined to narrow concern based on exclusive self-sufficiency?

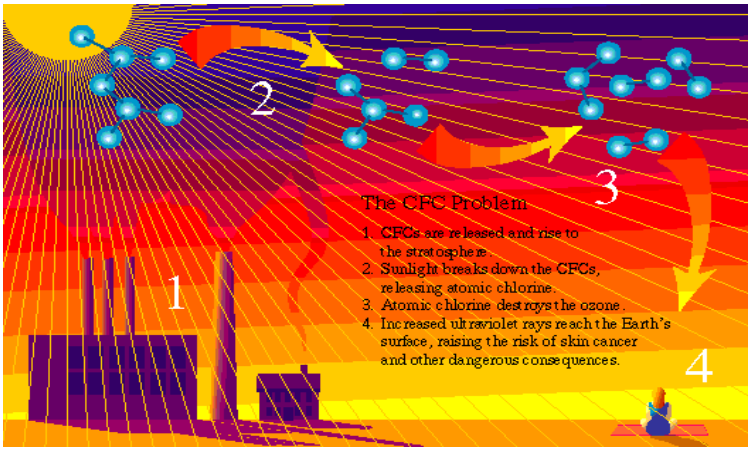
Let us look to the salient features of world environmental issues. They are as follows:

1. Climate change due to

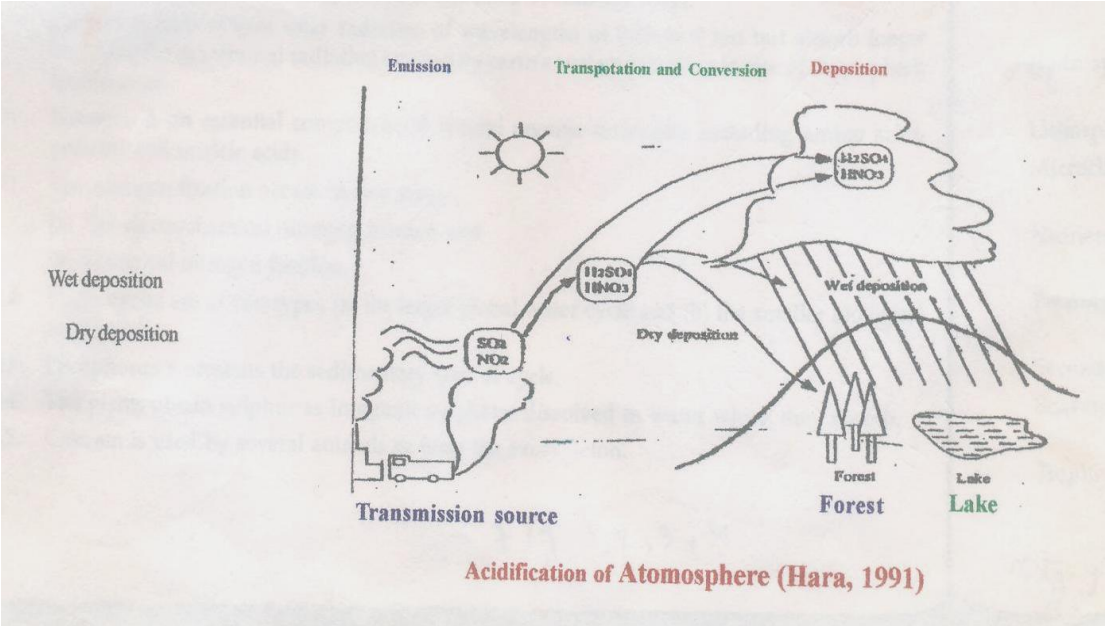
- Increase concentration of CO_2 in the atmosphere (Green house effects - global warming.
- Distribution and use of harmful / potentially harmful chemicals.
- There are 70,000 chemicals and each year 1000 new chemical entering into world market.



Green house effect – Global Warming

2. Risk of ozone layer 

3. Acid rain
4. Pollution of world's oceans
5. Eutrophication - Water pollution
6. Loss of tropical forest (deforestation)
7. Desertification
8. Decrease wildlife
9. Sewage and solid waste pollution
10. Hazardous Waste (Toxic chemicals) and medical waste pollution
11. Fly ash
12. Metallic Pollution
13. Noise pollution
14. Urban air pollution which disturb the ecosystem in large and putting serious threat 1 impact in food chain.



Acid Rain

Water pollution

Deforestation

Desertification

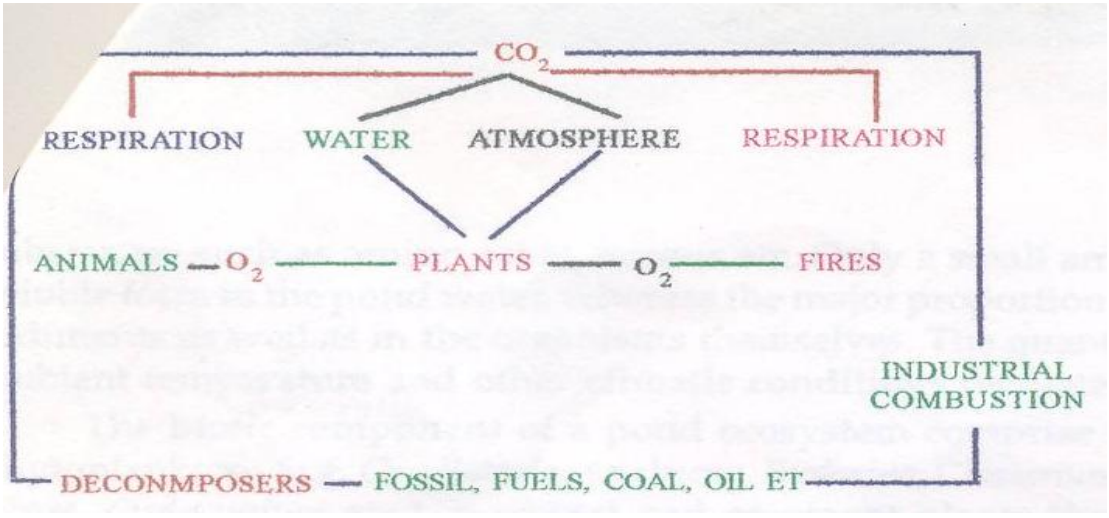
All living organism get matter from biosphere components i.e. lithosphere, hydrosphere and atmosphere. As the matter is neither created nor destroyed so the materials are used again and again in the formation of organism. Exchange of material from non-living to living and back to the non-living is called Bio-geochemical cycle. They are:

A. Gaseous Cycle

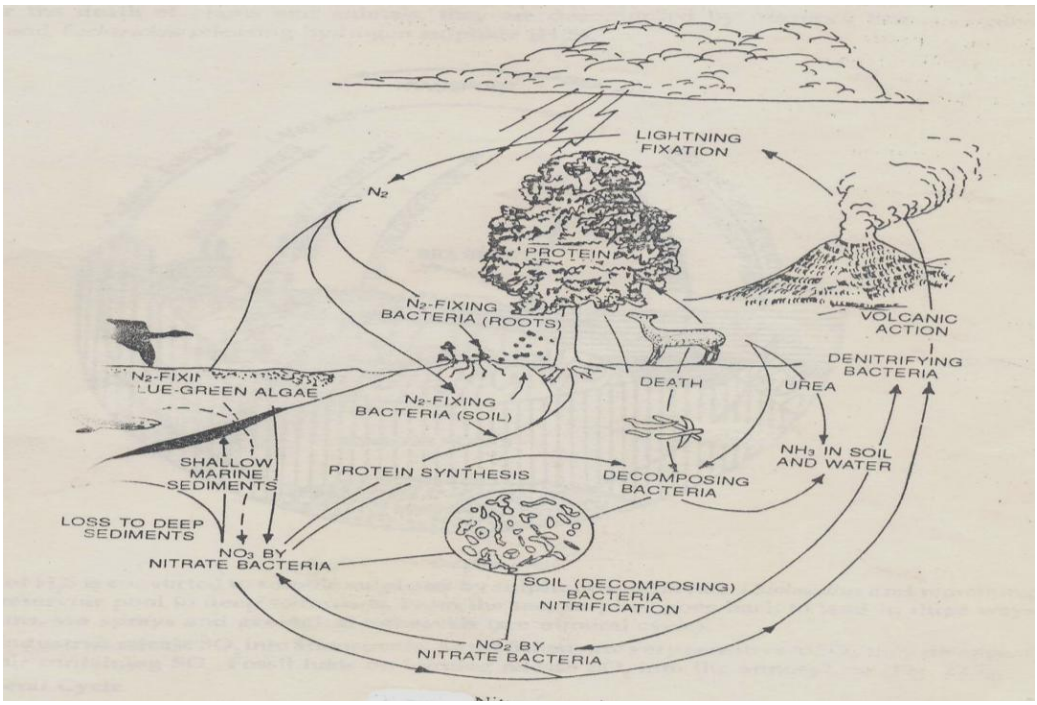
i) Carbon cycle.

ii) Nitrogen Cycle

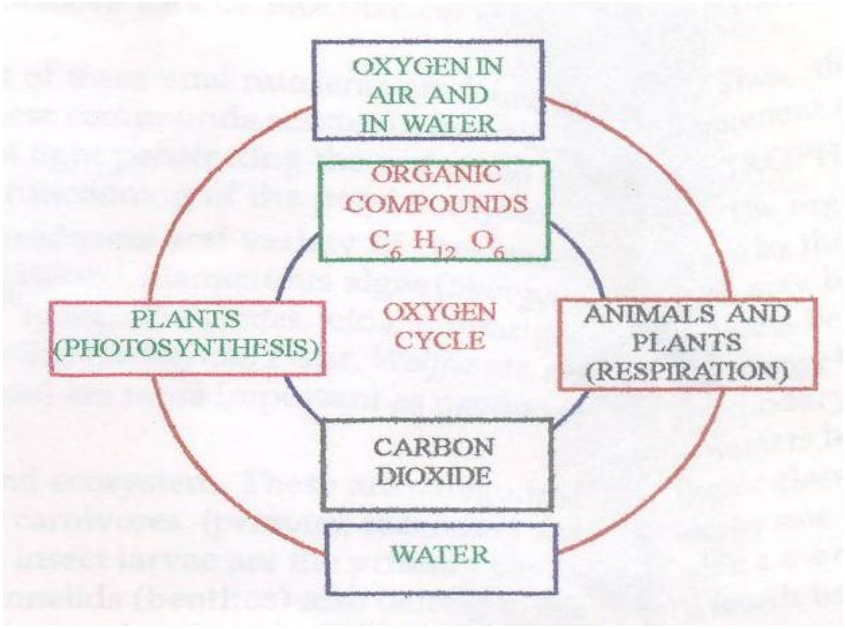
iii) Oxygen Cycle



Carbon cycle



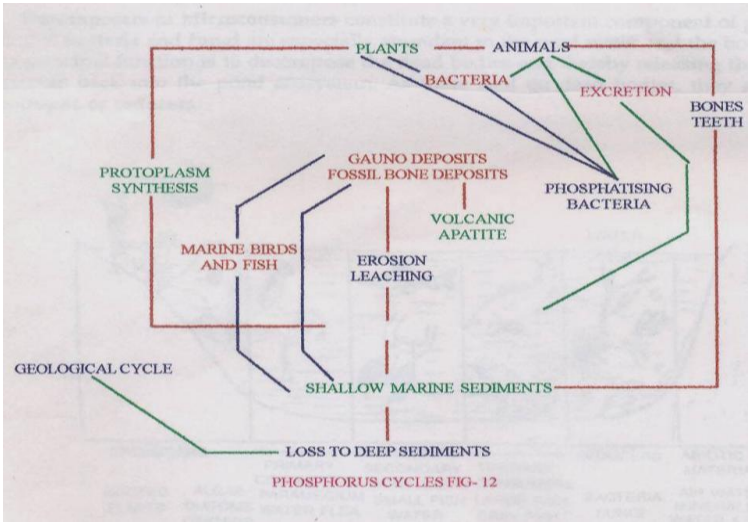
Nitrogen cycle



Oxygen cycle

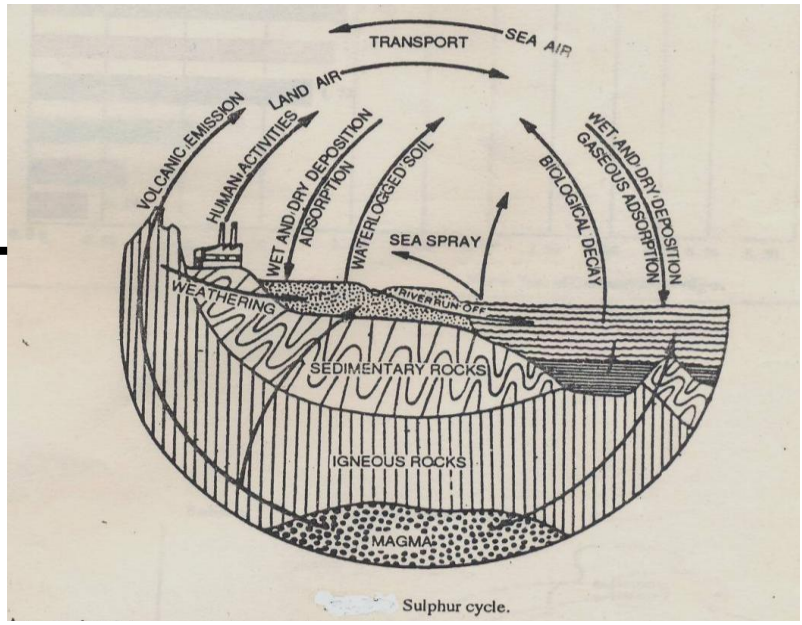
B. Sedimentary Cycle

i) Phosphorus Cycle ii) Sulphur Cycle



Phosphorous cycle

Sulphur cycle



Environmental health is affected mainly Water, Air, Ventilation and Noise.

A schematic presentation of various disorders belong to them are delineated below:

1. Water borne diseases:

I. From Infective agents

- Viral

  - Hepatitis

- Poliomyelitis
- Rota Virus diarrhoea in infants

- Bacterial
  - Cholera
  - Typhoid, Para-typhoid
  - Bacillary dysentery
  - Esch. Coli
  - Diarrhoea
  - Protozoal
    - Amoebiasis
    - Giardiasis
  - Helminthic –
    - Roundworm
    - Whipworm
    - Threadworm
    - Hydatid disease
    - Hookworm
  - Leptospiral
    - Weil's diseases

II. An aquatic host

- Cyclops
  - Guinea worm
  - Fish tape worm
- Snail
  - Schistosomiasis

2. Chemical hazards

Detergent, Cyanides, Heavy metals, Organic acids, Nitrogeneos substance, Bleaching agents, Dyes, Pigment, Sulphides, Ammonia, Toxic Biological organic compound, Toxic Chemicals, biologic organic compounds, etc.

Toxic chemicals	Upper limit of concentration mg /1 litre
Arsenic	0.005
Cadmium	0.005
Lead	0.005
Mercury	0.001
Selenium	0.001

Specific chemicals that may affect health:

a. Flouride - (Excess>0.5 mg/l) causes flourosis

b. Nitrates – (Excess >45mg /l) causes infant methaemoglobinaemia

c. Polynuclear aromatic hydrocarbon (PAH) - (excess 02 'ug /litre) - carcinogenic

3. Air borne diseases

I. Chronic Bronchitis

II. Radiological

a. Somatic

Immediate: Radiation sickness, Acute radiation syndrome

Delayed: Leukemia, Carcinogens, Foetal development abnormality, shortening of life

b. Genetic:

Chromosomal mutilation

Point mutation

III. Air Temperature

Effects of heat stress

Effects of cold stress

IV. Housing and health

a) Respiratory

Common cold

Tuberculosis

Influenza

Bronchitis

Measles

Whooping cough

b) Skin

Scabies

Ringworm

Impetigo

Leprosy

c) Rat infestation

Plague

d) Psychological

Neurosis and behavioural disorder

e) Noise

i) Auditory

Audition fatigue

Deafness

ii) Non -auditory

Infections

I.P.D. / O.P.D. of Dr. A .C. Homoeopathic Medical College and Hospital of 1997-98

Hepatitis -37

Poliomyelitis -- 5

Cholera - nil

Typhoid - 8

Paratyphoid - nil

Bacillary / Amoebic Dysentery- 1602

Giardiasis - 302

Diarrhoea E. Coli - nil

Roundworm Infestation - 109

Whip-worm - nil

Thread-worm - 107

Hydatid cyst - nil

Weil's disease - nil

Guinea worm - nil

Fish tape worm - nil

Schistosomiasis - nil

Bronchitis / Br. Asthma - 1924

Leukaemia - 6

Carcinoma - 19

Common Cold - 900

Tuberculosis - 10

Infuenza - 901

Diphtheria - 6

Measles - 408

Whooping Cough - 28

Scabies - 201

Impetigo - 19

Leprosy - 13

Plague - nil

Neurosis - 2

Auditory / deafness - 5

From above D.H.S. (Orissa) 1997-98 unpublished statistics it is clearly envisaged that:

a.) Respiratory diseases (Bronchitis/ Br. Asthma / Whooping cough / Common cold / influenza / TB) -3674028

b) Protozoal Infections - 1809836

c) Helminthiasis -- 1260110 head the list of diseases.

Dr. A.C. Homoeopathic Medical College and Hospital statistics (unpublished) have similar kind of trend except Helminthiasis and the reason is obvious.

a) Respiratory diseases - 2762

b) Protozoal infections (Amoebiasis / Giardiasis) - 1904

c) Helminthiasis - 208

Above two kinds of statistics are models for a macro and micro level information for us. However we are convinced that Respiratory diseases (air borne diseases) are posing problem in the community presently. It tops the list although in the said statistics; many other respiratory diseases of occupational nature (Pneumoconiosis) have not been incorporated such as anthrocosis, silicosis, asbestosis, siderosis, bagassosis, byssiniosis, tobacosis, farmer's lung etc. Therefore it was felt imperative to carry out a prospective study on it is to establish the efficacy of Homoeopathic medicines in it.

In these days of the fast growing civilization / industrialization, patients of bronchial asthma are increasing day by day. As per the statistics available this disorder is more prevalent in urban than rural area. Apart from the ecological factors, adulteration of food, persistent medications are also the contributing factors for the growth of this illness. The statistics of U.S.A. and other developed countries reveal / unfurl that 3% of their population are suffering from this diseases.

Bronchial asthma is a clinical syndrome characterized by reversible bronchial obstruction in patients with a clear cut h/o allergy in patients in whom broncho-spasm is precipitated by infection and in those whom no obvious cause is discoverable, the principal manifestation being paroxysmal wheezing, cough and dyspnoea.

Despite the technological advancement and many more discoveries the disease is posing problem to mankind. It is now accepted that the key to pathogenesis of bronchial asthma lies in the increase in the inherent hypersensitivity of bronchi to irritated and cholinergic stimuli determined by atopic status of the individual along either autonomic imbalance which usher in a series of immuno and chemical mediators. These mediators, in which prostaglandin has a role, quickly within the space of an hour bring about vascular permeability, oedema and constriction of the bronchi.

As the prognosis of the disease is concerned in the modern medicine as regard to the radical treatment it is still obscure inspite of advanced therapies - anti-allergic therapy, adenocortical hormone therapy, prescription of bronchodilators, disodium chromoglycate etc. As Homoeopathy is concerned and its rational philosophy advocates in favour of it and it corroborate in the practice too. The main theme of presenting this paper is unfurling it.

Author undertook a retrospective study to find out the effectiveness of Homoeopathic medicine in various conditions and result was encouraging, hence it was necessitated to carry out

a prospective study with control group to establish the scientificity of Homoeopathic medicaments.

AIMS / OBJECTIVE:

To study / evaluate the efficacy of Homeopathic drugs for the following objectives in open clinical trials using controlled trials:

a. To find out most effective drug / drugs with regard to their reliable guides for prescription.

b. Effects on type of bronchial asthma.

c. Most suitable potency / potencies.

d. Their repetition schedule.

e. Effects on various age group of patients.

f. Effects on sex.

g. Effects on recent and remote cases.

METHODOLOGY:

To consider above facts a study was undertaken. Patients included were chosen from those who attended O.P.D / I.P.D. of Dr. A. C. Homoeopathic Medical College and Hospital Bhubaneswar and author's clinic from 1990 to 1999. Medicines were prescribed on the basis of totality of symptoms after repertorisation.

Diagnostic features for bronchial asthma were as follows:

1. Paroxysmal dyspnoea.
2. Wheezing (loud whistling, squeaking and groaning sound called musical rales
3. Cough
4. Periodic appearance of symptoms

Classification were made on following basis:

I. Atopic Asthma (Extrinsic or allergic)

Features - Affect children and young adult

- Acute paroxysm of short duration with long interval
- Personal / Family history of allergy
- It may be complicated with infection!

II. Non-atopic (Intrinsic or Non-allergic)

Features - Sensitive to moulds, Organic suds (wood dust, inorganic metals)

- Their illness may begin as episodic asthma but it progress to a more severe and protracted form associated with high eosinophil level in both the sputum and peripheral blood.
- Chronic non-atopic asthma of age 40, history of contact dermatitis, history of urticaria, history of sinusitis, chronic bronchitis complicated with status asthmaticus
- Asthma with nasal polyps
- Asthma with pregnancy
- Chronic bronchitis and asthma (begin with productive cough which -goes on for many years and finally becomes associated with wheezing)

III. Status asthmaticus

Features - Dyspnoea becomes progressively severe.

- Cough becomes unproductive and mechanically inefficient.
- Progressive plugging of the bronchi by thick mucosa.
- Breath sound and ronchi become distinct.
- Absent of wheezing gives us false impression of patients improvement where patient is about to die.

For the collection of types of responses obtained by drugs the following parameters were fixed.

Positive Response

1. Cure - Disappearance of all symptoms for more than 3 years
2. Improvement -

Marked - Disappearance of symptoms for a period less than 3 years.

Moderate - Interval of paroxysm has become prolonged and there is less interval of paroxysms.

Mild - Disapperance of few symptoms with or without prolongation of paroxysm interval.

Negative Response

3. No improvement - There is no improvement even after sufficient period of treatment.

4. Dropped out - Did not stick to treatment for sufficient time

For collection of data from various ages following types were made:

Children - 2-12 years

Young age.- 13 -30 years

Middle age 31-50 years

Old age - 51 years and above

For recording repetition results following parameters were fixed:

Single dose - Presenting indicated drug in single dose and asked the patient to wait for sufficient period.

Daily Repetition- Indicated drug is administered daily.

For recent and remote cases the following criteria were fixed:

Recent case - It means suffering few months or within 1 year.

Remote case - It means the suffering more than 1 year.

For potencies at random patient s were prescribed with either to centesimal or to 50 millesimal potencies.

RESULTS

80 Patients were taken for study (40 in test group and 40 in control group).

TABLE - 1 (Results of drugs Response)

Drugs those cured cases with frequencies of appearances

Name of the drugs	Frequencies needed	Name of the drugs	Frequencies needed
Ars. alb.	6	Spong.	2
Ars. iod.	4	Kali bich.	2
Kali carb.	4	Calc. carb.	1
Nat. sulph.	4	Carbo veg.	1
Sulph.	4	Tuberculinum	1
Amm. carb.	2	Psorinum	1
Phos.	2	Nat. carb.	1
Hep. sulph.	2	Silicea	1
Sepia	2		

Drugs used frequently are:

Arsenicum album, Ars. iod, Kali carb., Natrum sulph., Sulphur.

Reliable Indications

Arsenicum album	**Arsenicum iod**
Generals	
Chilly Patient	Hot Patient
Easily catches cold	Easily catches cold
Desire warm food	Desire for cold food
Desire chilies	Dislike sweet
Dislike sweet	Thirst moderate
Thirst for small quantity of water	Irritability
Irritable	Restlessness
Restlessness	Fastidious
Fastidious	

TABLE - 2 (Effects of drugs Response)

	Test group		**Control group**	
Types of responses	**No. of cured cases**	**% of Cured cases**	**No. of cured cases**	**% of Cured cases**
Positive responses				
a) Cured cases	12	30	0	0
b) Marked imp.	14	35	0	0
c) Moderate imp.	4	10	0	0
d) Mild imp.	2	5	1	2.5
Total	**32 / 40**	**80 / 100**	**1 / 40**	**2.5 / 100**
Negative Responses				
a) No imp.	5	12.5	30	75
b) Dropped out	3	7.5	9	22.5
Total	**8 / 40**	**20 / 100**	**39 / 40**	**97.5 / 100**

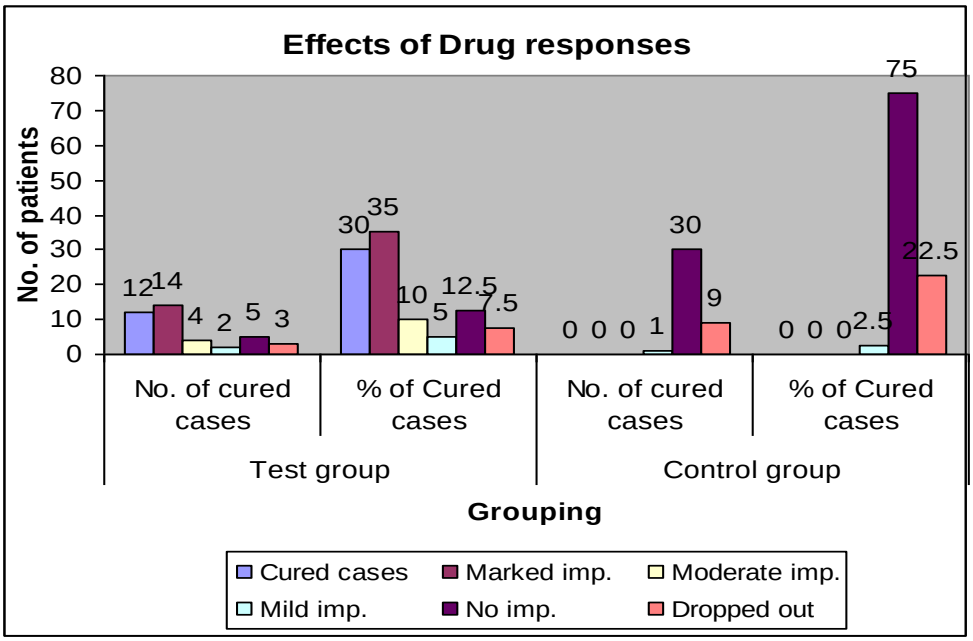


Table - 3 (Effects on different type of bronchial asthma of Test group)

Different types of Bronchial asthma	No. of cured cases	% of cured cases	No. of cases not cured	% of cases not cured
Atopic	**12**	**30**	**6**	**15**
Non-atopic	**20**	**50**	**2**	**5**

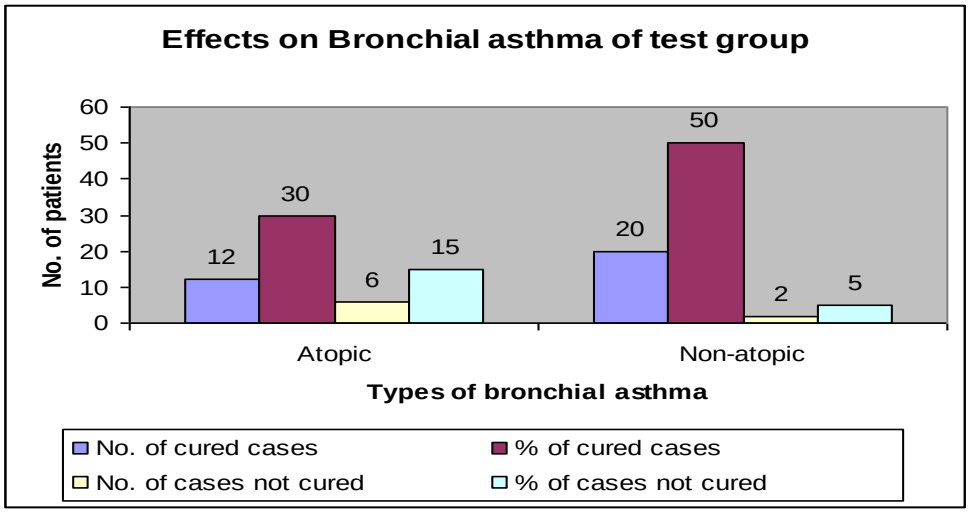


Table – 4 (Results of various scales)

Types of Scales	No. of cured cases	% of cured cases	No. of cases not cured	% of cases not cured
Fifty millesimal	**22**	**55**	**2**	**5**
Centesimal	**10**	**25**	**6**	**15**

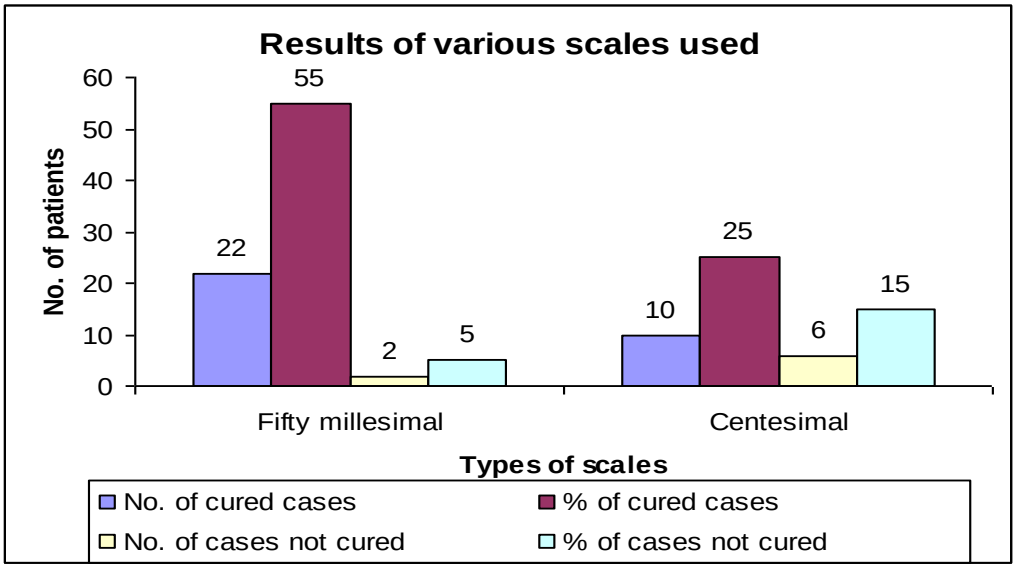
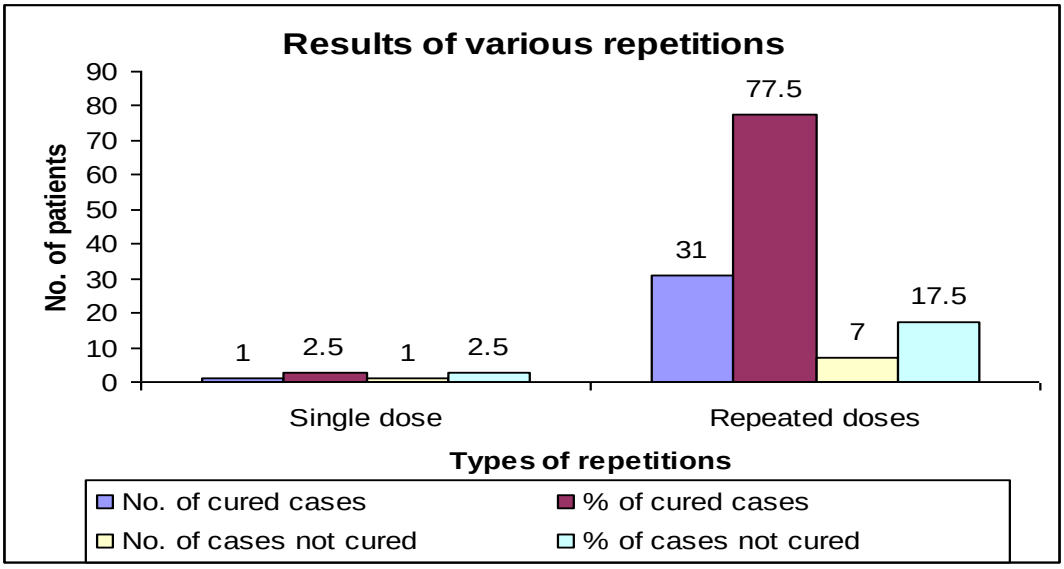


Table - 5 (Results of Various Repetition Schedules)

Types of Repetitions	No. of cured cases	% of cured cases	No. of cases not cured	% of cases not cured
Single dose	**1**	**2.5**	**1**	**2.5**
Repeated doses	**31**	**77.5**	**7**	**17.5**



DISCUSSION:

A study on bronchial asthma was undertaken from the cases who had attended the O.P.D. / I.P.D. of Dr. A. C. H. M. C. & H, BBSR and author's clinic from 1990 to 1999. the study was undertaken over 80 patients of bronchial asthma, from which 40 patients were taken as test group and 40 patients were taken as control group.

From the study effective drugs for bronchial asthma found frequently in cured cases were as follows:

- Ars. alb.
- Ars. iod.
- Kali iod.
- Natr. sulph.
- Sulph.

Results obtained from the drug responses for bronchial asthma were processed for reliability test through Chi-square ($\chi 2$) test for 1 degree of freedom with 5% probability. The calculated value was 50.89 and the tabulated value is 3.841 and as the calculated value is much above than the tabulated value so it is statistically established that homoeopathic medicines do act curatively when it is applied on the principle of homoeopathy in the treatment of bronchial asthma.

Similarly results obtained from the responses of different types of bronchial asthma of test group were processes statistically for its reliability and significant. Under $\chi 2$ test the observed value was 8.51 which is more than the tabulated value i.e. 3.841, so we conclude that non-atopic bronchial asthma gave a better response in the treatment than the atopic type.

Results obtained from various scales were processed for reliability test through $\chi 2$ test. The calculated value was 5.1 which is greater than the tabulated value (3.841) of $\chi 2$. So the result is significant and it is established that 50 millesimal potency was superior to centesimal potency while dealing with the disease bronchial asthma.

Results obtained from various repetition schedules were processed for reliability test through $\chi 2$ test and the calculated value was 11.8 which is greater than the tabulated value (3.841) of $\chi 2$. Hence the result is significant statistically that drug administered in repeated doses was superior to single dose.

CONCLUSION:

From the above study it is envisaged that:

- Homoeopathic medicines do act curatively for combating bronchial asthma.
- 50 millesimal scales are safer and superior to centesimal scales.
- Repeated doses are better than the single dose in the treatment of bronchial asthma.
- Non-atopic bronchial asthma is responding well to the treatment than the atopic type.

BIBLIOGRAPI-IY

1) Health Hazards of the Human Environment (World Health Organisation, Geneva 1972)
2) Kasliwal, N.M. Industrial Pollution and legal solution, study material, management of environmental and Ecology Feb 1999, Govt. of India Dept. of Personal and training (Training Division) New Delhi.
3) Mukhedee, Ananda Gopal, Environmental Pollution and Health hazards, causes and control, 1" edition 1986, Gaigotia Publication (P) Ltd. New-Delhi.
4) Report of Mrs. Indira Gandhi (Prime- Minister of India) UN conference on Environmental at Stochholra 1972.
5) Health Hazards of the human Environment W.H.O. Geneva 1972, W.H.O. Publications.
6) Dash, M. C. (Prof.) Chairman Orissa Pollution Control Board "Industrial development and Environmental" Pollution, study materials, Management of Environmental and Ecology, Feb 1999 Govt. of India Dept of Personal and training (Training division) New-Delhi.
7) Park, J.E. Park K. Text Book of Preventive and Social medicine- 11th edition.
8) Sastry K.G.K, Asthma an enigma, Quarterly bulletin C.C.R.H, vol 10 (1&2) 1998 ,New-Delhi.
9) Chiller, Y. S. et al "Bronchial Asthma" Quarterly Bulletin C.C.R.H. vol 10 (1 & 2 -1998, New Delhi).