

Clinical Research

Iron Deficiency Anaemia

(study conducted by CCRH)

Abstract

Iron deficiency is by far the commonest cause of anaemia specially in areas where hookworm infestation is endemic. About 20% of women, 50% of pregnant women, and 3% of men are iron deficient. Inadequate diet is also the main cause of this disease. It is due to mal-absorption of Iron from intestinal mucosa. Homoeopathic medicines like **Calc. carb.**, **Ferr. phos.**, **Gelsimium**, **Kali carb.**, **Natrum mur.**, **Pulsatilla** and **Phosphorus** have improved absorption of iron taken as supplement or from the food rich in iron. The study was conducted at Regional Research Institute for Homoeopathy, New Delhi for five years, in which 223 cases were studied.

Introduction

Iron Deficiency Anaemia (also called IDA) is a form of hypochromic microcytic anaemia due to dietary lack of iron or iron loss as a result of chronic bleeding.

Causes

• Low intake:

Iron is obtained from foods in our diet, however; only 1 mg of iron is absorbed for every 10 to 20 mg of iron ingested. A person unable to have a balanced iron-rich diet may suffer from some degree of iron-deficiency anemia.

• Increased demand:

An increased iron red blood cell production is required when the body is going through changes such as growth spurts in children and adolescents, or during pregnancy and lactation.

* Mal-absorption:

Malabsorption of iron is common after some forms of gastrointestinal surgeries. Most of the iron taken in by foods is absorbed in the upper small intestine. Any abnormalities in the gastrointestinal (GI) tract could alter iron absorption and result in iron-deficiency anemia.

* Blood loss:

Loss of blood can cause a decrease of iron and result in iron-deficiency anemia. Sources of blood loss may include GI bleeding, menstrual bleeding, or injury.

Symptoms

- ◆ Abnormal paleness or lack of color of the skin
- ◆ Irritability
- ◆ Lack of energy or tiring easily (fatigue)
- ◆ Increased heart rate (tachycardia)
- ◆ Sore or swollen tongue
- ◆ Enlarged spleen
- ◆ Desire to eat peculiar substances such as dirt or ice (a condition called pica)
- ◆ Dizziness, weakness,
- ◆ Shortness of breath,
- ◆ Brittle nails,
- ◆ Decreased appetite (especially in children),
- ◆ Headache - frontal.

Diagnostic procedures

1. Red blood cell measures of hemocrit and hemoglobin;
2. size of red blood cells,
3. serum iron level, and
4. Iron binding capacity in the blood.

Treatment

◆ Iron-rich diet

Eating a diet with iron-rich foods can help treat iron-deficiency anemia. Good sources of iron include the following:

- * Meats - beef, pork, lamb, liver, and other organ meats
- * Poultry - chicken, duck, turkey, liver (especially dark meat)
- * Fish - shellfish, including clams, mussels, and oysters, sardines, anchovies
- * Leafy greens of the cabbage family, such as broccoli, kale, turnip greens, and collards
- * Legumes, such as lima beans and green peas; dry beans and peas, such as pinto beans, black-eyed peas, and canned baked beans
- * Yeast-leavened whole-wheat bread and rolls
- * Iron-enriched white bread, pasta, rice, and cereals

◆ Iron supplements

Iron supplements can be taken over several months to increase iron levels in the blood. Iron supplements can cause irritation of the stomach and discoloration of bowel movements. They should be taken on an empty stomach, or with orange juice, to increase absorption.

◆ Homoeopathic medicines

These are prescribed according to symptomatic indications of each case based upon subjective and objective parameters.

Objective of study

To clinically evaluate the efficacy of Homoeopathic medicines in order to

- ◆ Identify their reliable indication
- ◆ Identify their most useful potencies
- ◆ Determine their repetition schedule.
- ◆ Deduce their reportorial indices
- ◆ Set-out their relationship with Other drugs as:

- * Follow well
- * Complementary
- * Cognates
- * Intercurrent
- * Antidote
- * Incompatible

Materials and Methods

Cases were selected from O.P.D. , from all age groups and both sexes. During history taking, cases were identified as per diagnostic criteria of Iron deficiency Anaemia from among the general out door patients and then subjected to Laboratory investigations essentially required to establish the diagnosis.

Inclusion criteria

Cases with complete symptoms and signs in order to fulfil the Diagnostic criteria e.g. Haemoglobin below 10 gm %, microcytosis, hypochromia and elongated hypochromic red cells etc. were included for study.

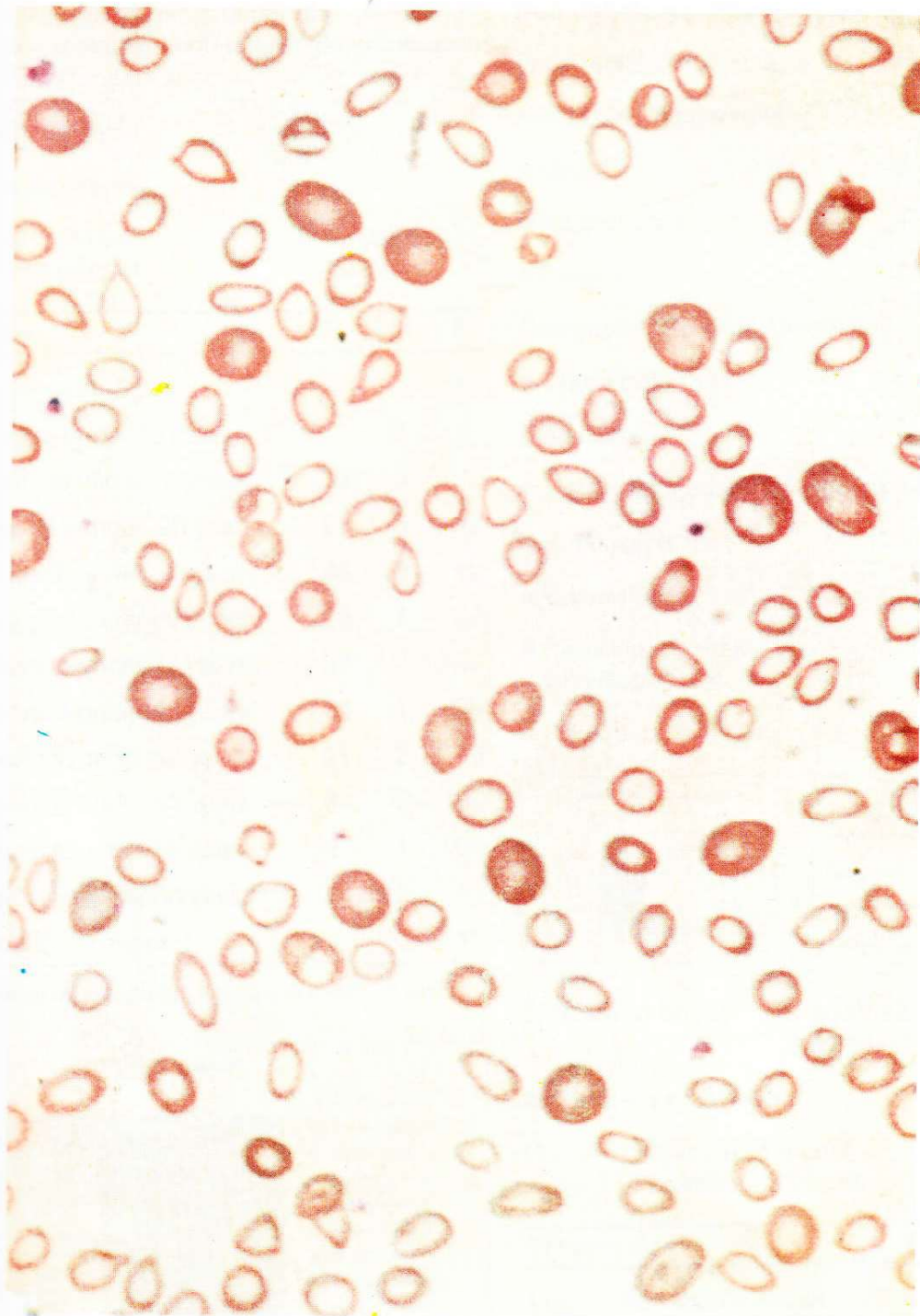
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Iron deficiency Anaemia-Slide showing hypochromic microcytic RBC's

Exclusion criteria

Cases not coming under the purview of Homoeopathic treatment/ requiring hospitalization / surgical intervention.

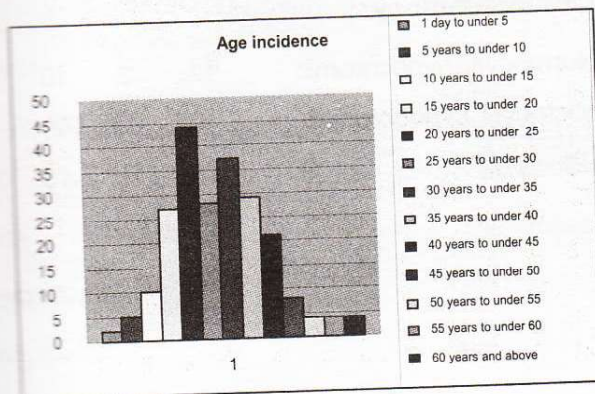
Observations

1. Age incidence

Range: Minimum 2 1/2 years
Maximum 80 years

Groups	T	M	F
1 day to under 5 years	2	1	1
5 years to under 10 years	5	2	3
10 years to under 15 years	10	3	7
15 years to under 20 years	27	5	22
20 years to under 25 years	44	2	42
25 years to under 30 years	28	1	27
30 years to under 35 years	37	2	35
35 years to under 40 years	29	4	25
40 years to under 45 years	21	2	19
45 years to under 50 years	8	0	8
50 years to under 55 years	4	1	3
55 years to under 60 years	4	2	2
60 years and above	4	3	1

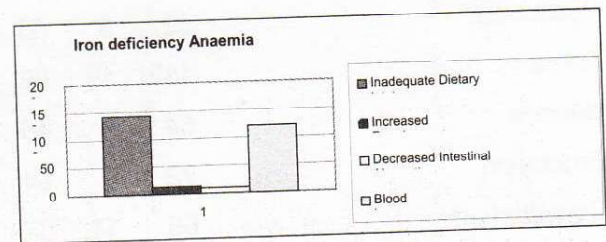
Predominant age group: 20 years to under 25 years



2. Clinical types

Iron deficiency Anemia due to

Inadequate Dietary Intake	143	22	121
Increased Requirement:	T	M	F
* Growth	6	1	5
* Adolescence	4	1	3
* Pregnancy	4	0	4
Decreased Intestinal Absorption:			
* Chronic diarrhea	9	2	7
Blood loss:			
* Excessive Menstrual Bleeding	82	0	82
* Peptic ulcer	3	2	1
* Hemorrhoids	13	3	10
* Parasitic infestation with Hookworm	20	1	19
* Regular blood loss	3	0	3



3. Mode of onset
Gradual - 222 cases
Sudden - 1 case

4. Duration of Disease

Range: Minimum - 1 month
Maximum - 31 years

Groups	T	M	F
1 day to less than 1 month	0	0	0
1 month to less than 3 months	3	1	2

Groups	T	M	F	6 Laboratory findings (Blood)		
3 months to less than 2 years	85	8	77	Hb %		
2 years to under 5 years	82	11	71	-less than 6 gm %9	4	5
5 years to under 10 years	39	4	35	-6 gm % to 9 gm %	125	14 111
10 years to less than 20 years	11	1	10	-9 gm % to 11 gm %	89	10 79
20 years to under 30 years	2	2	0	Decreased R.B.C Count (less than 3.8./cmm)	127	12 115
30 years and above	1	1	0	Increased Leucocyte count (more than 10,000/cum)	26	4 22
5. Clinico-pathological findings				Increases neutrophils (more than 70%)	35	9 26
Symptoms				Increased Eosinophils (more than 4%)	48	8 32
Headache	11	9	102	Increased lymphocyte (more than 40%)	20	4 16
Weakness	211	26	185	Increased ESR (more than 20 mm/hour)	147	18 129
Fatigue	204	26	178	Serum Iron decreased	17	1 16
Lassitude	170	22	148	Total iron binding capacity decreased	17	1 16
Palpitation	135	11	124	MCV decreased	95	8 87
Subtle behavioral changes	6	0	6	MCH decreased	95	8 87
Pica:- Geophagia	15	0	15	MCHC decreased	95	8 87
Dysphagia	30	5	25	PCV decreased	95	8 97
Dyspnoea	62	9	53	Cell Morphology:		
Anorexia	113	15	98	Normocytic hypochromic	12	2 10
Nausea	54	8	46	Microcytic hypochromic	195	26 169
Eructation	72	8	64	Dimorphic	16	1 15
Constipation	68	11	57			
Menorrhagia	66	0	66			
Signs						
Pallor	223	28	195			
Tachycardia	57	6	51			
Haemic flow murmur	1	0	1			
Dry brittle and ridged Nails	34	2	32			
Kolinochia	0	0	0			
Angular stomatitis	35	3	32			
Glossitis	12	2	10			

7. Drug Therapy

<i>Name of drug</i>	<i>Potency</i>	<i>Doses</i>	<i>No. of cases Prescribed</i>	<i>No. of cases found effective</i>
Abroma augsta	30	TDS, QID	2	1
Acid benzoic	30	QID	1	1
	IM	Two doses	1	1
Acid nitric	6	QID	1	1
	30	QID	1	1
Aegle marr.	Q	tds	1	1
Alumina	30	tds	2	1
	200, IM	Two doses	1	1
Arsenic alb.	6	qid	1	1
	30	qid	8	4
	200	tds, 2 doses	3	2
	0/3	bds	1	1
Atista indica	30	qid	1	1
Bryonia alb.	200	tds	1	1
	IM	Two doses	1	1
Ceanothus	6	tds	1	1
Calc carb	30	qid	13	6
	200	Two doses	4	4
	IM	Two doses	2	2
Calc. fluor.	30	tds	1	1
Calc. phos.	30	qid	1	1
	200	bds	1	1
China	6	qid	3	2
	30	qid	22	13
	200	Two doses	5	4
	IM	Two doses	3	2
Cina	IM	Two doses	1	1
Embelia ribes	30	qid	3	3
Ferr. met.	30	qid	13	6

<i>Name of drug</i>	<i>Potency</i>	<i>Doses</i>	<i>No. of cases Prescribed</i>	<i>No. of cases found effective</i>
Ferr. phos	3X	qid	23	12
Gelsemium	30	qid	1	1
	200	Two doses	1	1
	IM	Two doses	1	1
Iodium	30	tds	1	1
	200	Two doses	1	1
	IM	Two doses	1	1
Kali carb.	30	qid	5	3
	200	Two doses	2	2
	IM	Two doses	2	2
Kali bich.	30	qid	1	1
	200	Two doses	1	1
Lachesis	30	qid	1	1
	IM	Two doses	1	1
Lycopodium	30	qid	3	2
	IM	Two doses	1	1
Merc sol	30	tds	2	1
	IM	Two doses	3	3
Natrum mur.	30	qid	41	27
	200	tds	10	7
	IM	Two doses	12	10
Nux vomica	30	qid	3	2
	200	Two doses	1	1
	0/1	bds	2	2
Nyctanthes	6	qid	1	1
Pulsatilla	30	qid	21	10
	200	tds, 2 doses	3	3
	IM	Two doses	3	3
Phosphorus	30	qid	46	29
	200	tds, 2 doses	13	11
	IM	Two doses	15	14
Saraca indica	30	qid	2	1

Name of drug	Potency	Doses	No. of cases Prescribed	No. of cases found effective
Sepia	30	qd	4	2
	200	bds	2	1
Sulphur	30	tbs	11	9
	200	Two doses	5	5
	0/1	bds	8	8
	0/2	bds	5	5
	0/3	bds	5	5
	IM	Two doses	4	3

8. Basis of Prescription

	T	M	F
Causation	4	-	4
Presenting Complaint	115	13	102
Repertorial analysis	76	12	64
Specific drugs	28	3	25

Observations (Made from follow up cases only):

III. Response to drug therapy

a) Symptoms

	No. of cases Before treatment	No. of cases improved
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9. Duration of treatment:

Range:- Minimum - 7 days
Maximum - 1 1/2 year

Groups

1 day to 1 month	69	14	88
1 month to 3 months	69	8	61
3 month to 6 months	60	3	57
6 month to 9 months	18	3	15
9 months to 1 year	2	-	2
1 year to 1 1/2 year	3	-	3

Weakness 172 98

Fatigue 151 94

Lassitude 115 72

Palpitation 103 69

Subtle behavioral change 2 2

Pica 13 7

Dysphagia 16 9

Anorexia 80 41

10. Improvement indices:

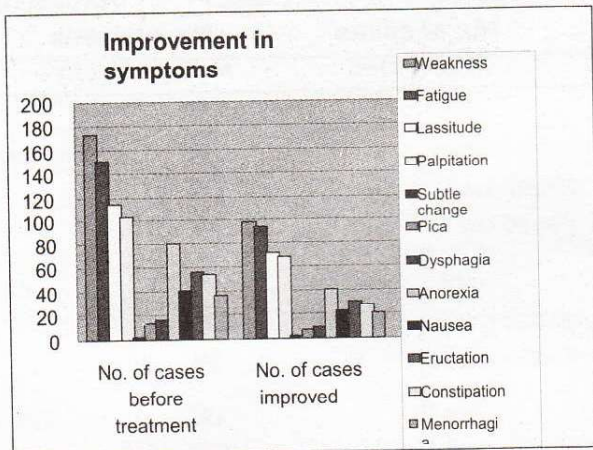
+ Improved	133	16	117
* Marked	31	1	30
* Moderate	60	8	52
* Mild	42	7	35
+ Not improved	39	6	33
+ Not reported	51	6	45

Nausea 41 23

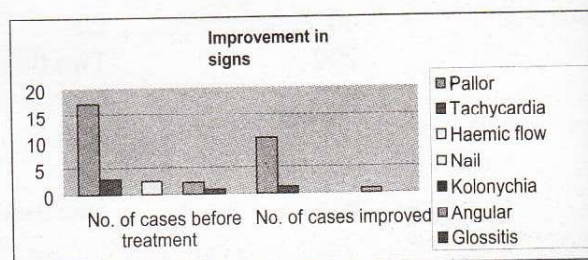
Eructation 56 30

Constipation 54 28

Menorrhagia 37 20



Nail dry/brittle/ridged	23	3
Kolonychia	2	0
Angular stomatitis	22	8
Glossitis	7	3



b) Signs

Menorrhagia	37	20
Pallor	172	104
Tachycardia	27	12
Haemic flow murmur	1	1

C) Hb %

Hb % less than 6 gm %	9	7
6 gm % to 9 gm %	116	78
9 gm % to 11 gm %	75	98

d) Medicines causing Increase in Hb%

Name of Medicine	No. of cases with			Duration of application of Medicine in months
	Increase upto 1 gm	Increase upto 2 gms	Increase upto 3 gms.	
Abroma augusta	One			2
<i>Acid benzoic</i>		One		2 ½
Aegle marr.		One		2 ½
<i>Arsenic alb.</i>	One	One		1 ½ to 2
<i>Bryonia</i>		One		2
<i>Ceanothus</i>			One	2 ½
<i>Calc. carb.</i>		One		Two
Calc. fluor.	One			2
Calc. phos.			One	1 ½
China	Three	Two	One	1 ½ to 3
Embelia ribes.	Two	One		1 ½ to 3
Ferr. met.		One		1 ½ to 2

Name of Medicine	No. of cases with			Duration of application of Medicine in months
	Increase upto 1 gm	Increase upto 2 gms	Increase upto 3 gms.	
Ferr. phos.	Two	Five		Two
Gelsimium				One
Iodium	One			
Kali carb.		Two		One
Kali bich.		One		
Lachesis	One			
Lycopodium		One	One	
Merc. sol.		Two		
Natrum mur.	Eight	Six		Three
Nux vomica		Two		
Pulsatilla		Five	One	One
Phosphorus	Five	Eight	One	Eight
Saraca indica		One		
Sepia	One	Two		
Sulphur	One	Four		

Above table shows that:-

- There was increase of Hb % upto 1 gm % by Abroma augsta, Arsenic alb., Calc. fluor., China, Embelia ribes., Ferr. phos., Iodium, Lachesis, Natrum mur., Phosphorus, Sepia and Sulphur
- There was increase of Hb % upto 2 gm % by Acid benzoic, Aegle marr., Arsenic Alb., Bryonia, Calc. carb., China, Embelia ribes., Ferr. met., Ferr. phos., Kali carb., Kali bich., Lycopodium, Merc. sol., Natrum mur., Nux vomica, Pulsatilla, Phosphorus, Saraca indica, Sepia and Sulphur.
- There was increase of Hb % upto 3 Gm % by Ceanothus, Calc. phos., China, Lycopodium, Pulsatilla and Phosphorus

- There was increase of Hb % upto/ More than 4 gm % by Calc. carb., Ferr. phos., Gelsimium, Kali carb., Natrum mur., Pulsatilla and Phosphorus.

Discussion

- Out of 223 cases registered for study, 172 cases reported regularly.
- Most of the cases were between the age group of 15 years to 40 years.
- Females were found to be suffering more from Iron deficiency Anemia.
- Lab. Investigations of blood (Hb%, TLC, DLC, ESR, RBC, Peripheral smear, MCV, MCH, MCHC, PCV), Stool and urine examination were done in all cases.

- * Out of 223 cases, 143 cases reported inadequate dietary intake, 82 cases reported excessive menstrual blood loss.
- * 195 cases were of Microcytic hypochromic, 12 cases normocytic hypochromic, and 16 cases Diamorphic Anaemia.
- * Intensity of Iron deficiency was as under:-
 - o mild (Hb between 9 gm % to 11 gm %) in 89 cases,
 - o moderate (Hb % between 6 gm % to 9 gm %) in 125 cases and

o marked i.e. (Hb % less than 6 gm %) in 09 cases

- * Remedy selection: on the basis of presenting complaints (115 cases), causation (4 cases), Reportorial totality (76 cases). Specific medicines in 28 cases.
- * Improvement indices:- Out of 172 cases 60 have shown marked improvement, 42 moderate improvement & 31 mild improvement; 39 cases are not improved.
- * Efficacious medicines & potencies:- The medicines found more efficacious in relieving signs and symptoms of Iron deficiency Anaemia and also increasing the HB % are as follows:-

Name of medicine	Potency used	Frequency	No. of cases prescribed	No. of cases relieved	Increase of Hb% observed
Calc carb	30	qid	13	6	Three cases (2-4 gm%)
		200 IM	Two doses Two doses	4 2	4 2
China	6	qid	3	2	Six cases (1-3 gm%)
		qid	22	13	
		200 IM	Two doses Two doses	5 3	4 2
Ferr. phos.	3X	qid	23	12	Nine cases (1-4 gm%)
Kali carb.	30	qid	5	3	Three cases (2-4 gm%)
Natrum mur.	30	qid	41	27	Seventeen cases (1-4 gm%)
Pulsatilla	200 IM	tds	10	7	
		Two doses	12	10	
		qid	21	10	Seven cases (2-4 gm%)
	200	tds, 2 doses	3	3	

Name of medicine	Potency used	Frequency	No. of cases prescribed	No. of cases relieved	Increase of Hb% observed
Phosphorus	IM	Two doses	3	3	Twenty two cases (1-4 gm%)
	30	qid	46	29	
	200	tds, 2 doses	13	11	
	IM	Two doses	15	14	

Conclusion

Homoeopathic medicines like **Calc. carb., Ferr. phos, Gelsimium, Kali carb., Natrum mur., Pulsatilla and Phosphorus** have improved such absorption and thereby helped in absorption of iron taken as supplement or from the food rich in iron.

Bibliography

1. Harrison's *Principles of Internal Medicine*, eighth edition; 1652-1656
2. Davidson's *Principles and Practice of Medicine*, 14th edition; 495-499
3. Case records, OPD, Regional Research Institute (H), New Delhi