

**Title:**        **ROLE OF PASTEUR INSTITUTE OF INDIA, COONOOR IN THE  
PROPHYLAXIS AGAINST RABIS: AN OVERVIEW**

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## **Keywords**

**Abstract**    Pasteur Institute of India, Coonoor (PIIC) was started in 1907 with the objective of Production and supply of Anti Rabies vaccine to the Nation. Concurrently, prophylaxis treatment for Rabies has been started on 7th April 1907 in this Institute, for animal bite victims from all over Tamil Nadu and also from neighbouring states.

## Special Article

## ROLE OF PASTEUR INSTITUTE OF INDIA, COONOOR IN THE PROPHYLAXIS AGAINST RABIES: AN OVERVIEW

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### Abstract

Pasteur Institute of India, Coonoor (PIIC) was started in 1907 with the objective of Production and Supply of Anti Rabies Vaccine to the Nation. Concurrently, prophylactic treatment for Rabies had been started on 7<sup>th</sup> April 1907 in this Institute, for Animal bite Victims from all over Tamilnadu (TN) and also from the neighboring States. This presentation is an analysis of the data available with the Anti Rabies clinic of PIIC over a period of 21 years (1994-2014). In PIIC from the year 1907 to 2004, Neural Tissue Anti rabies Vaccine was used. Since 2001 Tissue Culture Anti Rabies Vaccine is being used. We administer ERIG to the needy cases. During the last 21 years 71043 animal bite victims have taken prophylactic treatment at PIIC OPD. Over the years it is observed that there is drastic reduction in incidence of animal bites from 6678 cases in the year of 1993 to 1811 cases in the year 2014. Over the 21 years period cases of suspected rabies reported from Nilgiris districts were only 24 Nos. From other districts of TN 559 cases were reported. Since 1999-2012 no case was reported but in the year 2013, 1 case and in the year 2014, 2 cases were reported from Nilgiris district for which the source of animal bite is uncertain. In the year 2014, 5 cases were reported from other district of Tamil Nadu. Incidence of animal bite cases and suspected rabies cases reported at PIIC OPD have reduced in number. 67.3% of cases reported to our dispensary were Class-III category exposure out of that in 59% cases were given A.R.S. (ERIG). As PHCs and other hospitals in Tamil Nadu do not stock RIG so we have received more patients in need of RIG in our OPD. PIIC is offering 24 hours service for animal bite victims. Both NGO's and government agencies in Nilgiris are contributing to the control of animal rabies by ABC and mass immunization of stray dog. Prevention is better than cure, so IDRV and RIG should be available in all ARCs, of the Government and private organisations.

### Introduction

Rabies is caused by a RNA virus of the family Rhabdoviridae and Genus Lyssa virus, and its incubation period is 30-90days. Rabies is 100% fatal disease of antiquity but 100% preventable by first-aid, RIG and IDRV. In India 20,000 people die due to Rabies per Annum. Pasteur Institute OPD was started on 7<sup>th</sup> April 1907 for prophylactic treatment against Rabies. PIIC is a referral centre for diagnosis of Rabies and post-exposure prophylaxis of Animal bite victims.

Nearly 71,034 cases reported for PEP in the period 1994-2014. 6,678 cases in 1994 and 1,811 cases in the year 2014. In PIIC OPD 24 Rabies cases were reported from the Nilgiris and 559 cases of Rabies reported from other places of TN. Totally 583 Rabies cases referred to us during this study period.

There is a drastic reduction in incidence of reported cases of Animal bites and rabies cases. PIIC runs a 24 hrs clinic for prophylaxis against Rabies. In Nilgiris both Govt. and NGOs are regularly carrying out ABC & mass

Vaccination of Stray dogs in prevention and Control of Animal rabies.

### Objectives

To know the status of patient coming for PEP & incidence of bite victims and Rabies Cases in PIIC OPD.

### Methodology

This study is a Hospital based study at preventive clinic under PIIC over a period of 21 years. The data was maintained and analysed in the dispensary at PIIC.

### Results & Discussion

Out of the total of 71,034 cases reported during the period of last 21 years. 14931 cases were reported from Nilgiri district, and 56,103 cases reported from other districts of TN. It is observed that 91.2% of the cases were bitten by dogs, 3.59 % of the cases were bitten by cats and 5.14 % were by other animals. Class III categories are 67.3 % and ERIG given in 59% cases, 8.3% cases were late comers who did not require ERIG but received IDRV 4 doses.

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**Table: 1**  
**Total Number of Animal Bites Reported to**  
**PIIC Opd For The Past 21 Years**

Sl. No.	Year	No. of ARV Cases
1.	1994-95	6678
2.	1995-96	6396
3.	1996-97	3179
4.	1997-98	3778
5.	1998-99	3599
6.	1999-00	2320
7.	2000-01	5422
8.	2001-02	4705
9.	2002-03	5209
10.	2003-04	3799
11.	2004-05	4589
12.	2005-06	3116
13.	2006-07	2854
14.	2007-08	2718
15.	2008-09	2093
16.	2009-10	1695
17.	2010-11	1534
18.	2011-12	2028
19.	2012-13	2153
20.	2013-14	1811
	<b>Total</b>	<b>71034</b>

## REGARDING RABIES

From Nilgiri district a total of 24 rabies cases reported during the study period of 1994-2014 where as other districts of TN, 559 rabies cases reported to PIIC from OPD. There is no case from the Nilgiri district since 1999-2012 but in the year 2013, 1 case and in the year 2014, 2 cases are reported to PIIC from Nilgiris.

Most of the rabies cases were due to Dog bites. Adult-male patients were 60.83%, Females-15.13%, Child –M-18%, F-5.73%. Patients not taking complete treatment or nil treatment had succumbed to Rabies. Mostly Hydrophobia and Aerophobia with fever were the symptoms in most of the cases. In some patients vomiting and nasal regurgitation with palatal palsy were observed. In some cases pain in the area around the wound was there. This report shows the rabies incidences are less in Nilgiris than other district of TN. So Nilgiris is seems to be free of rabies.

This Table (5) shows District wise presentation of Rabies cases during the last 31 years of period from the neighbouring district of TN and Nilgiris, and other States .

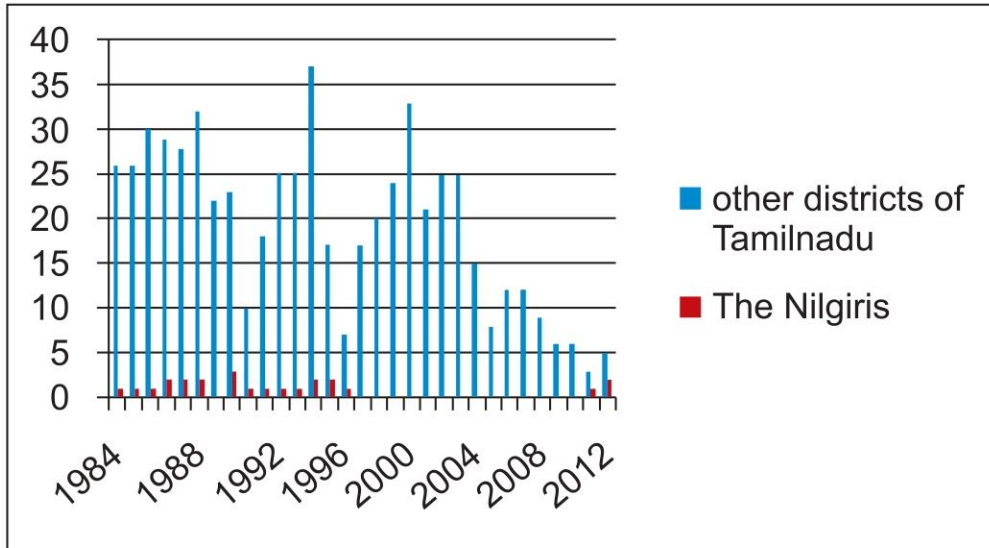
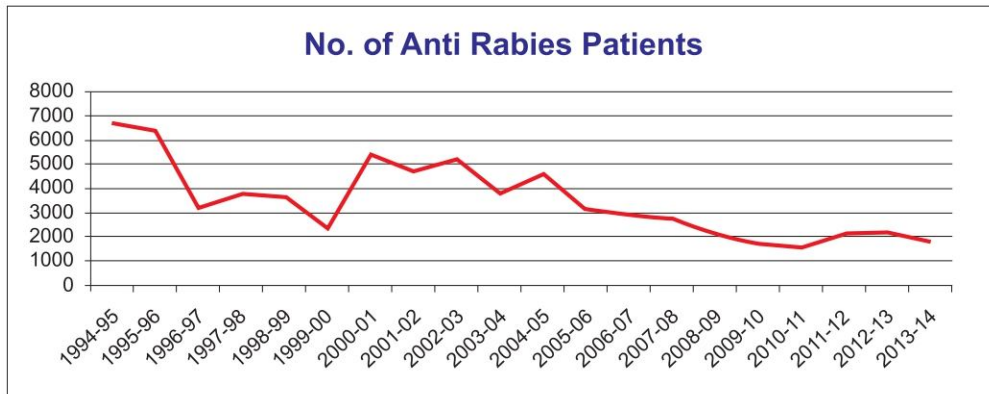
From this Table we find out that mostly in Salem, Erode, Coimbatore, Dharmapuri districts incidences of rabies cases are more.

**Table: 2**  
**Category of Exposure for The Animal Bite Patients Reported for Post Exposure Prophylaxis**

Year	I	II	III	ARS Given	Total
2000	60	632	1901	397	2593
2001	149+58(NTV)	451+(294NTV)	1137 + 780 (NTV)	246	4705
2002	205+47 (NTV)	821+200 (NTV)	2047 + 378 (NTV)	307	5181
2003	277	1483	2039	310	3799
2004	307	2215	2067	732	4589
2005	175	1381	1605	759	3161
2006	167	1201	1486	680	2854
2007	140	970	1608	768	2718
2008	107	560	1426	628	2093
2009	62	431	1202	632	1695
2010	48	353	1133	674	1534
2011	98	526	1404	998	2028
2012	101	266	1786	1309	2153
2013	70	111	1177	863	1358
2014	79	162	1570	1153	1811
15 Years	2150	12057	24746 (67.3%)	10456 (59%)	42272

**Table: 3**  
**Status of The Animal in Case of qfter Bite From 2008-2014**

Nilgiri						Other Districts of TN			Total		
Dog (2657)						Dog (8820)			10477 + 783 (other animals)		
Pet Dog (2092)			Stray Dogs (565)			Pet Dog (3144)			Stray Dogs (5676)		
Alive	Died	Vaccinated	Alive	Died	Missing	Alive	Died	Vaccinated	Alive	Died	Vaccinated
2048	44	1482	265	50	1482	2637	507	262	764	2607	1307



Rabies cases from the Nilgiris and other districts of Tamilnadu



**Table: 4**  
**Reported Rabies Case Details in PIIC Opd**  
**From 01.04.1984 To 31.03.2004**

Year	Nilgiris	Other Districts of TN	Total
1984	1	26	27
1985	1	20	21
1986	1	20	21
1987	2	29	31
1988	2	28	30
1989	2	32	34
1990	0	22	22
1991	3	23	26
1992	1	10	11
1993	1	18	19
1994	1	25	26
1995	1	25	26
1996	2	37	39
1997	2	17	19
1998	1	7	8
1999	0	17	17
2000	0	20	20
2001	0	31	31
2002	0	27	27
2003	0	18	18
2004	0	15	15
2005	0	15	15
2006	0	8	8
2007	0	12	12
2008	0	12	12
2009	0	9	9
2010	0	6	6
2011	0	6	6
2012	0	6	6
2013	1	3	4
2014	2	5	7
	24	559	583

**Table: 5**  
**District wise presentation of Rabies Cases**

Karur	11	Salem	143
Sangakiri	1	Erode	119
Krishnagiri	1	Palghat	14
Nammakkal	19	Palani	1
Avinashi	3	Villupuram	7
Dindigal	19	Tirupur	6
Vellakoil	2	Coimbatore	78
Madurai	18	Mettur	2
Gudalur	1	Bhavani	1
Dharmapuri	30	Madras	2
Kangeyam	2	Cuddalur	3
Aruvankadu	1	Trichur	3
Tirunelveli	1	Trichy	18
Nilgiris	17	Vedanpudur	3
Karnataka	10	Chengalpet	3
Andhrapradesh	1		

#### Observations

There is a drastic reduction in incidence of animal bite cases and Rabies cases from other districts of TN but incidences of Rabies in Nilgiris are less.

#### Conclusion

- ❑ Still rabies is an alarming threat over the country and Globally. In PHCS, and district hospitals in TN IDRv is given to the patient free of cost but RIG is still is economically a major burden to common masses from village area like low economic and middle class patients.
- ❑ So RIG should be made accessible, economic, and affordable to the patients or free supply of RIG to be given by initiative taken by Govt.
- ❑ WORLD RABIES DAY should be observed with more interest at national level throughout the Country and in all ARCs to make Public Awareness.
- ❑ MONOCLONAL ANTIBODY may be an alternative of ERIG/HRIG to enhance further safety.
- ❑ Prevention is better than cure. RIG should be available in all ARCs of the Govt. & NGOs.
- ❑ Our final goal is to Live in Rabies free World by 2020.