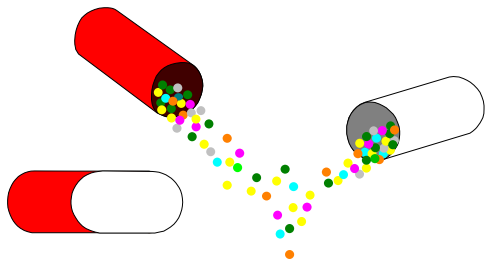


Evaluation of the impact of single dose DEC, Ivermectin and DEC+ Ivermectin on transmission of bancroftian filariasis



(WHO/TDR/Id No.920702)



Principal Investigator: **Dr.P.K. Das**

Co-investigators: **Dr.S.P.Pani** **Dr.K.D. Ramaiah**
Mr.P.Vanamail **Dr. J.Yuvaraj**



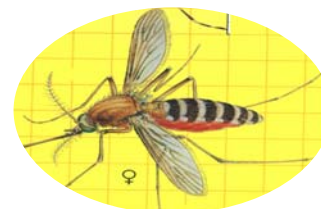
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Objectives

To evaluate the impact of mass chemotherapy
(Ivermectin or DEC or both) on

- ➔ *transmission*
- ➔ *microfilaraemia*
- ➔ *Incidence of ADL*
- ➔ *prevalence of chronic disease*



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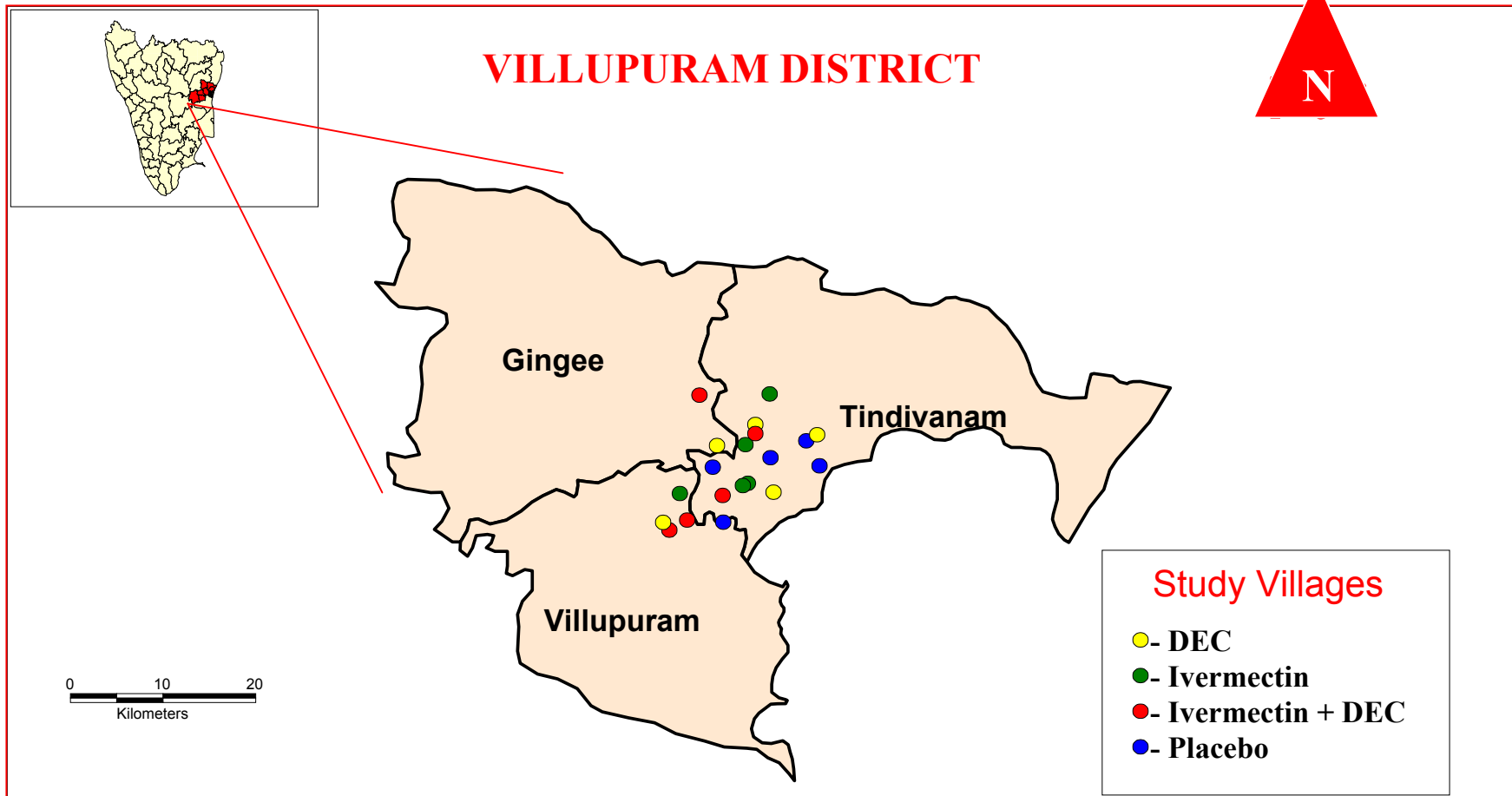
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Study Area



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Study Design

Four arms of the study

1. Ivermectin (400 mcg*)
2. DEC (6mg*)
3. Ivermectin (200 mcg *) + DEC (6mg*)
4. Placebo

* kg / bodyweight



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Population Covered

Arms	Population	Males	Females	Household size
Iver	8526	4307	4219	4.7
DEC	9889	5025	4824	4.8
Iver+DEC	7467	3729	3738	4.5
Placebo	8405	4186	4219	4.8

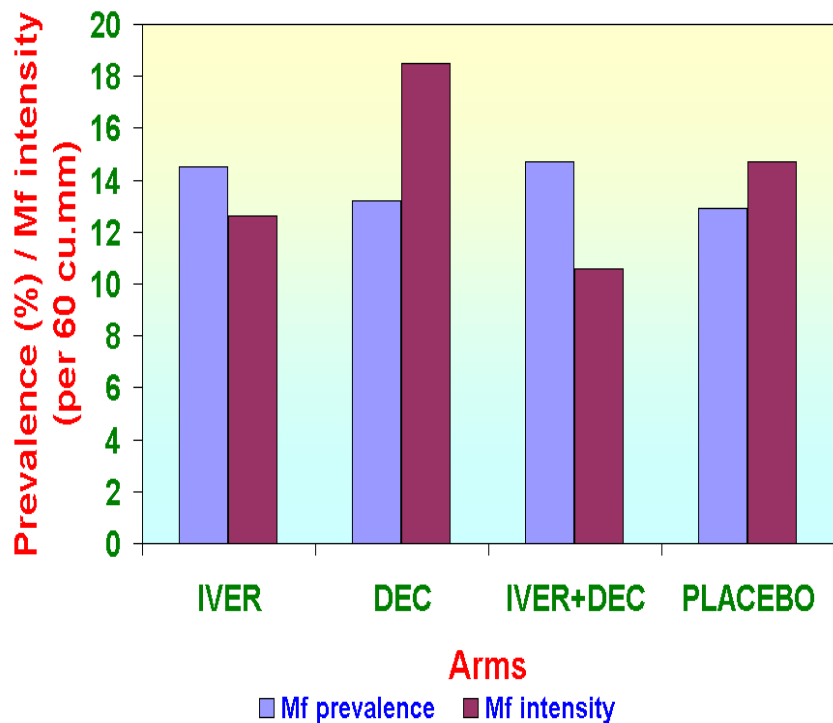


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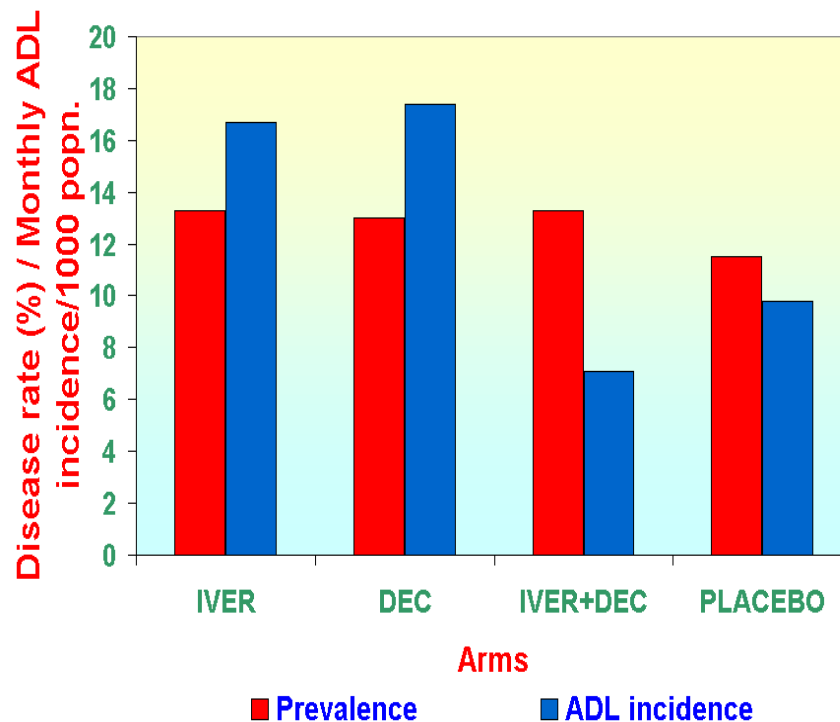


Base-line filarial infection & disease status in the host

Mf prevalence & mf intensity



Filarial disease prevalence & ADL incidence



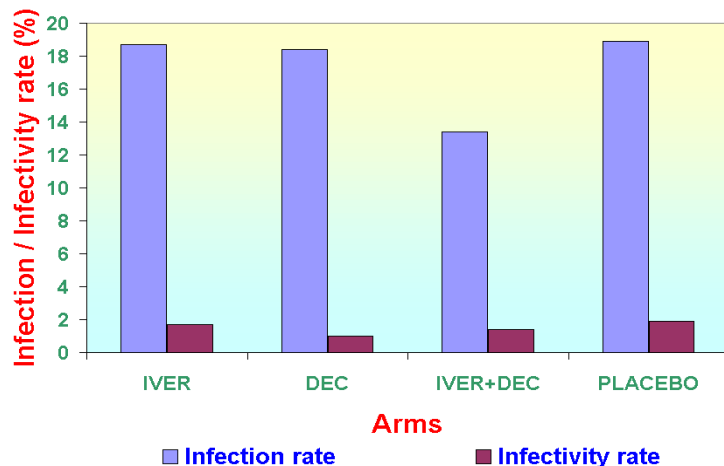
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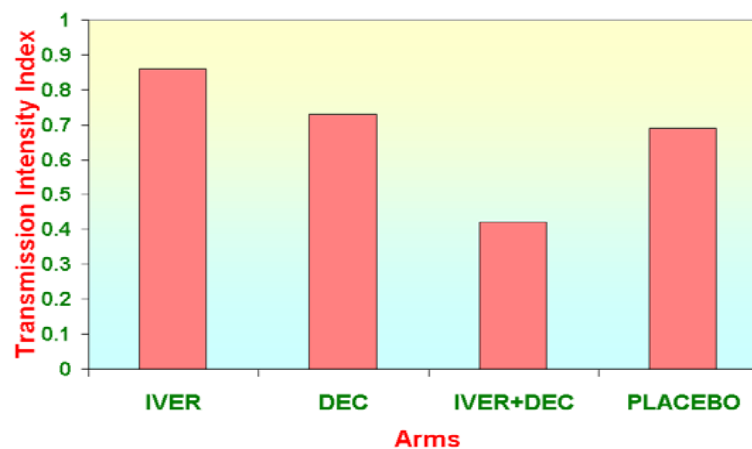


Base-line transmission parameters in the vector

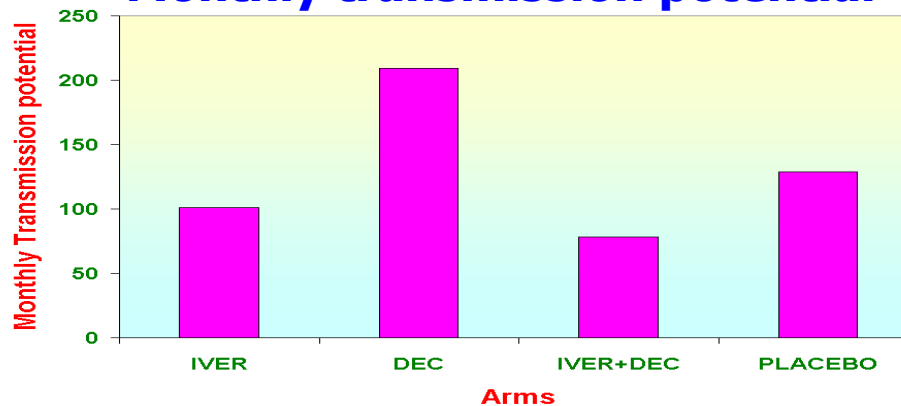
Vector infection & infectivity rate



Transmission intensity index



Monthly transmission potential



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Coverage (%) in different rounds

Arms	Pop	Rounds						
		I	II	III	IV	V	VI	Average
		11/94	5/95	9/96	12/97	1/99	2/00	
Iver	8526	75	71	57	69	68	64	68
DEC	9889	73	71	54	68	67	61	66
Iver+DEC	7467	54	65	68	60	ND	ND	62
Placebo	8405	75	73	ND	ND	ND	ND	74



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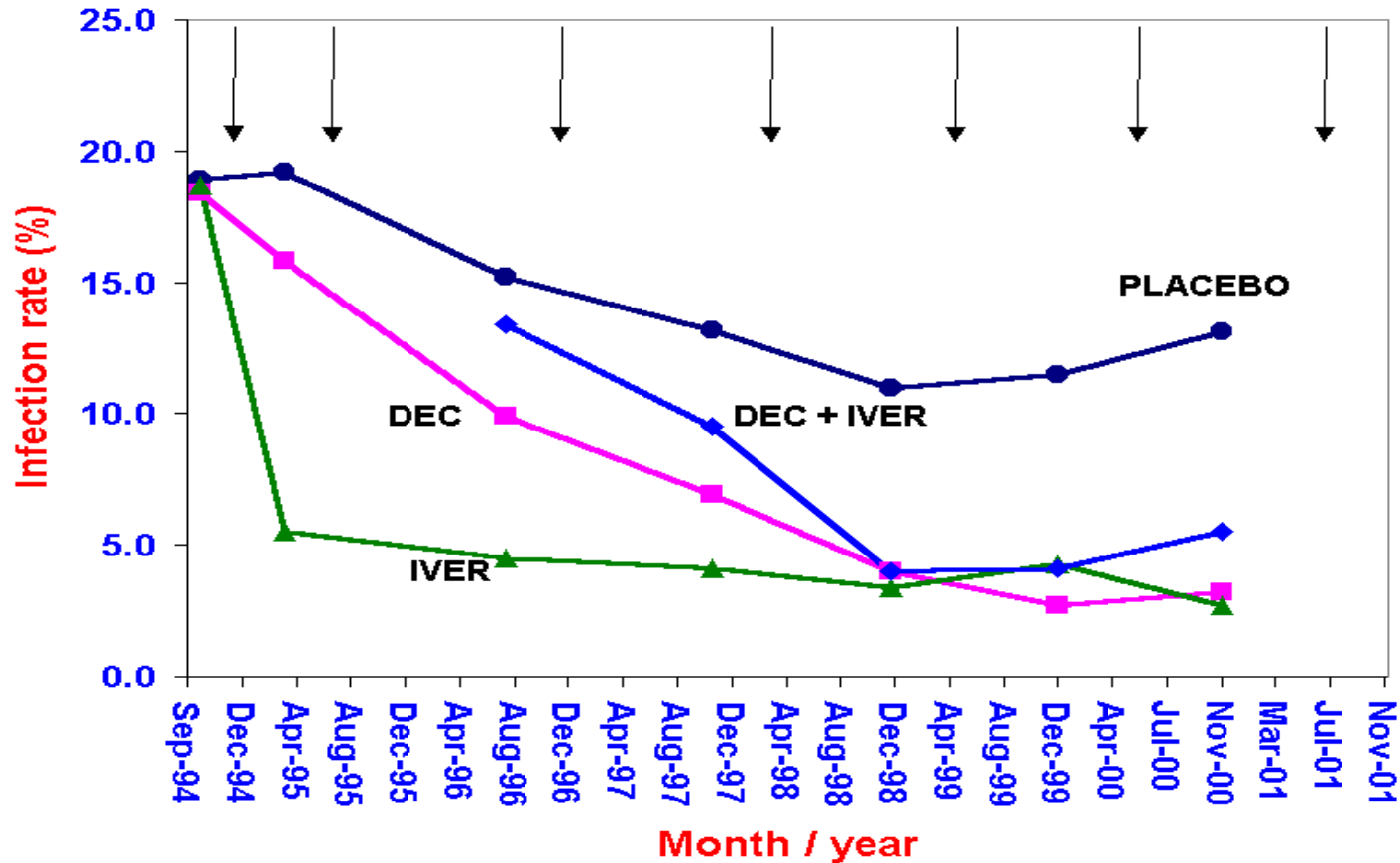
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Impact of six rounds of chemotherapy on vector infection rate



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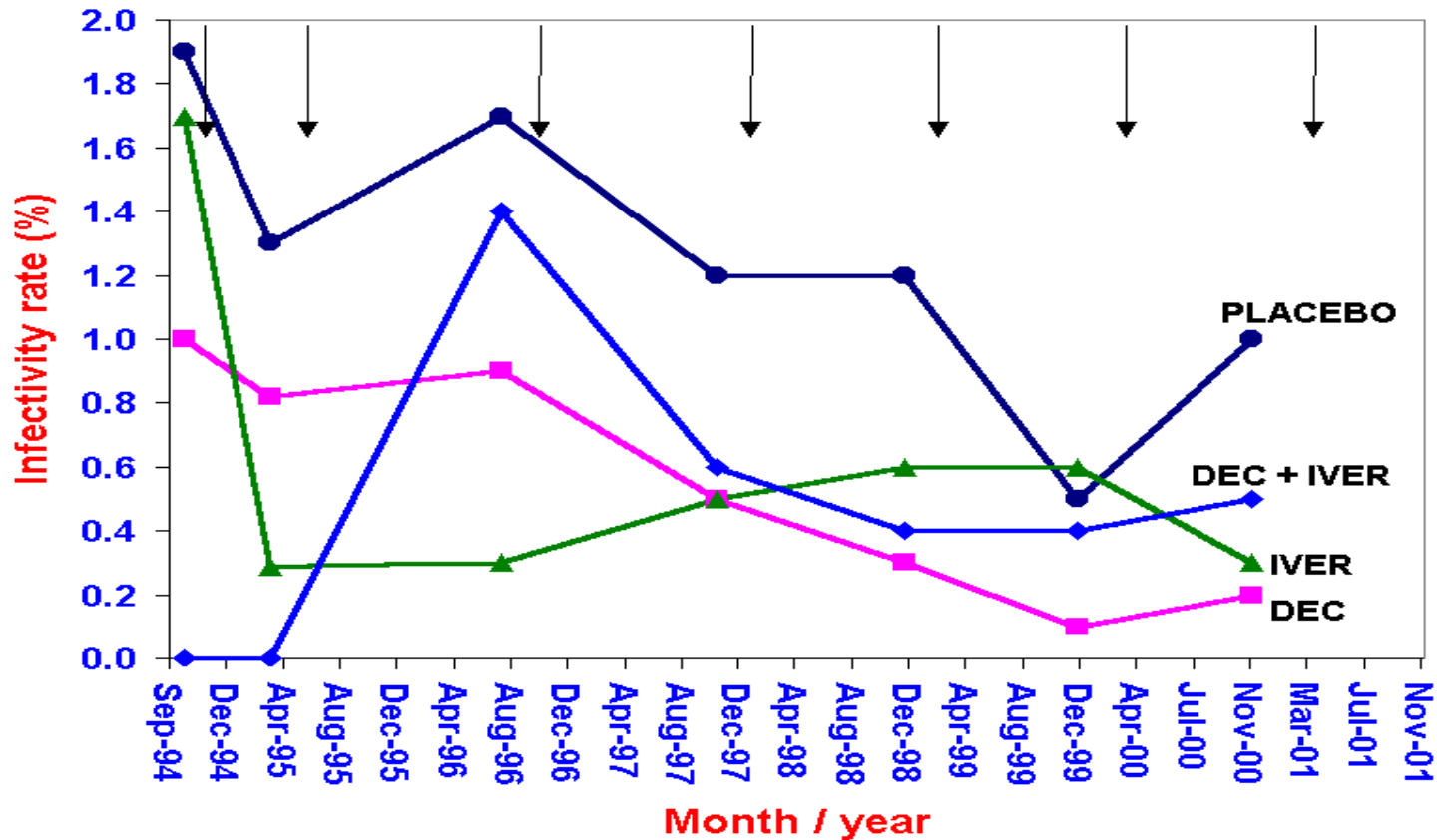
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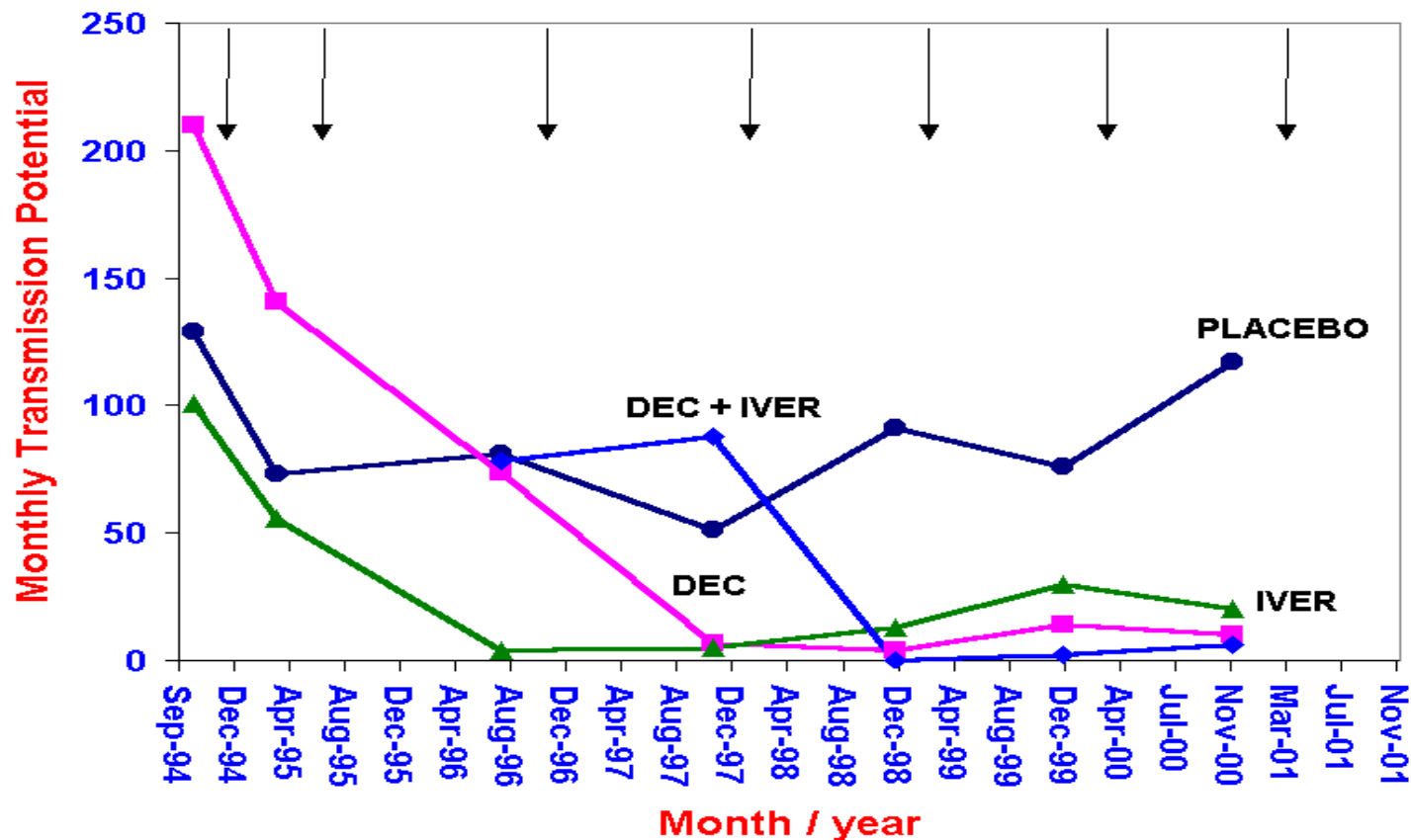


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Impact of six rounds of chemotherapy on Monthly Transmission Potential

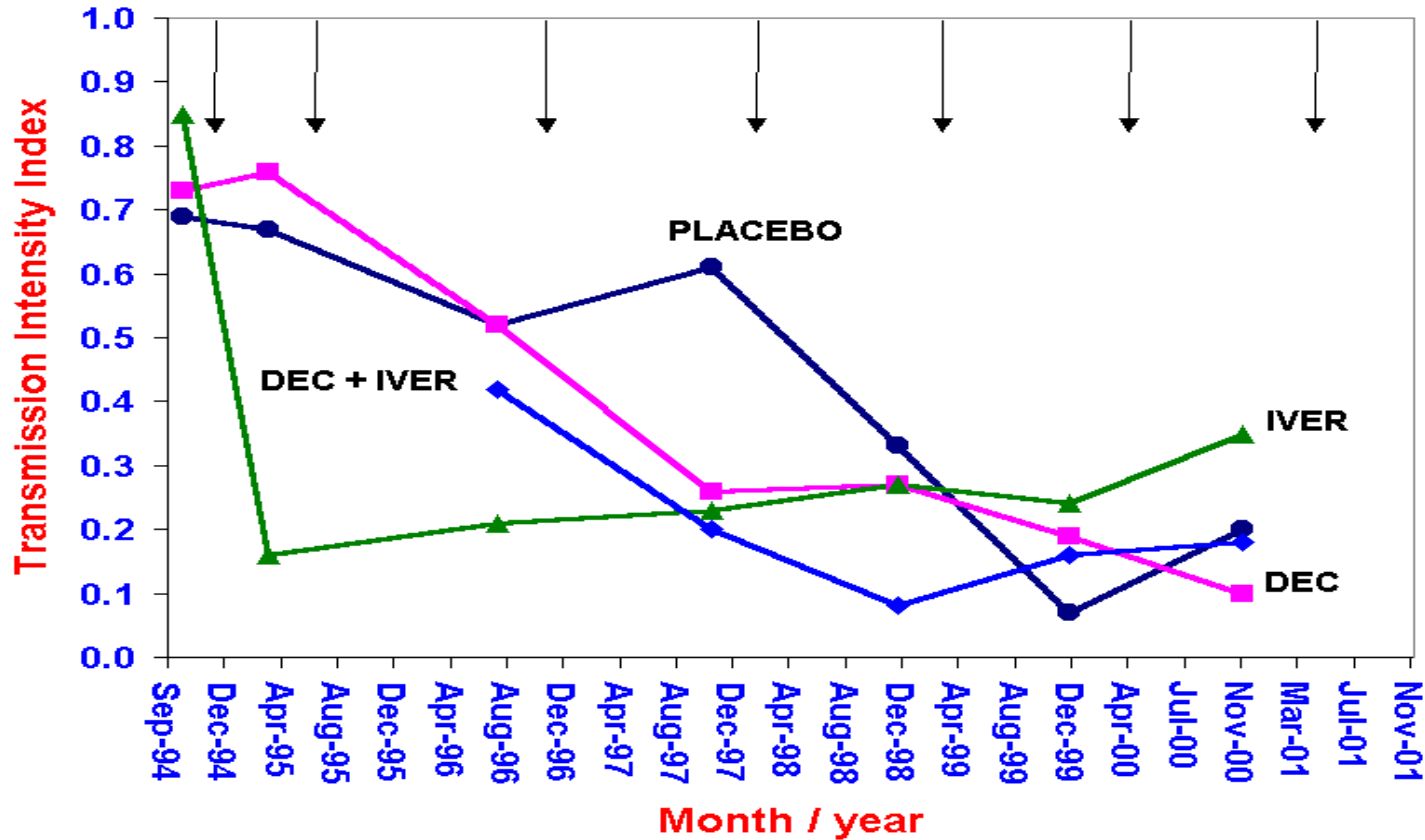


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Impact of six rounds of chemotherapy on Transmission Intensity Index

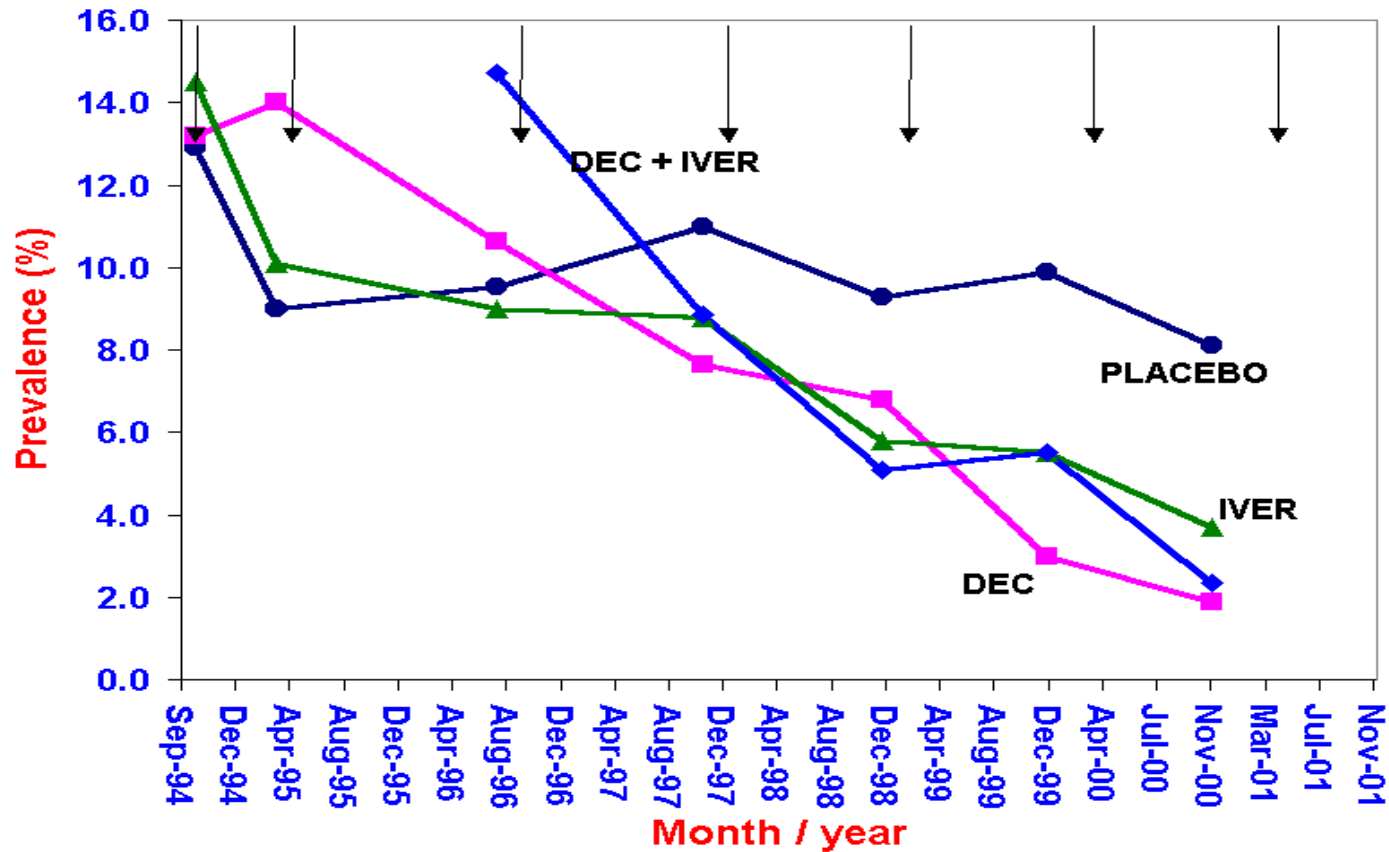


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Impact of six rounds of chemotherapy on mf prevalence



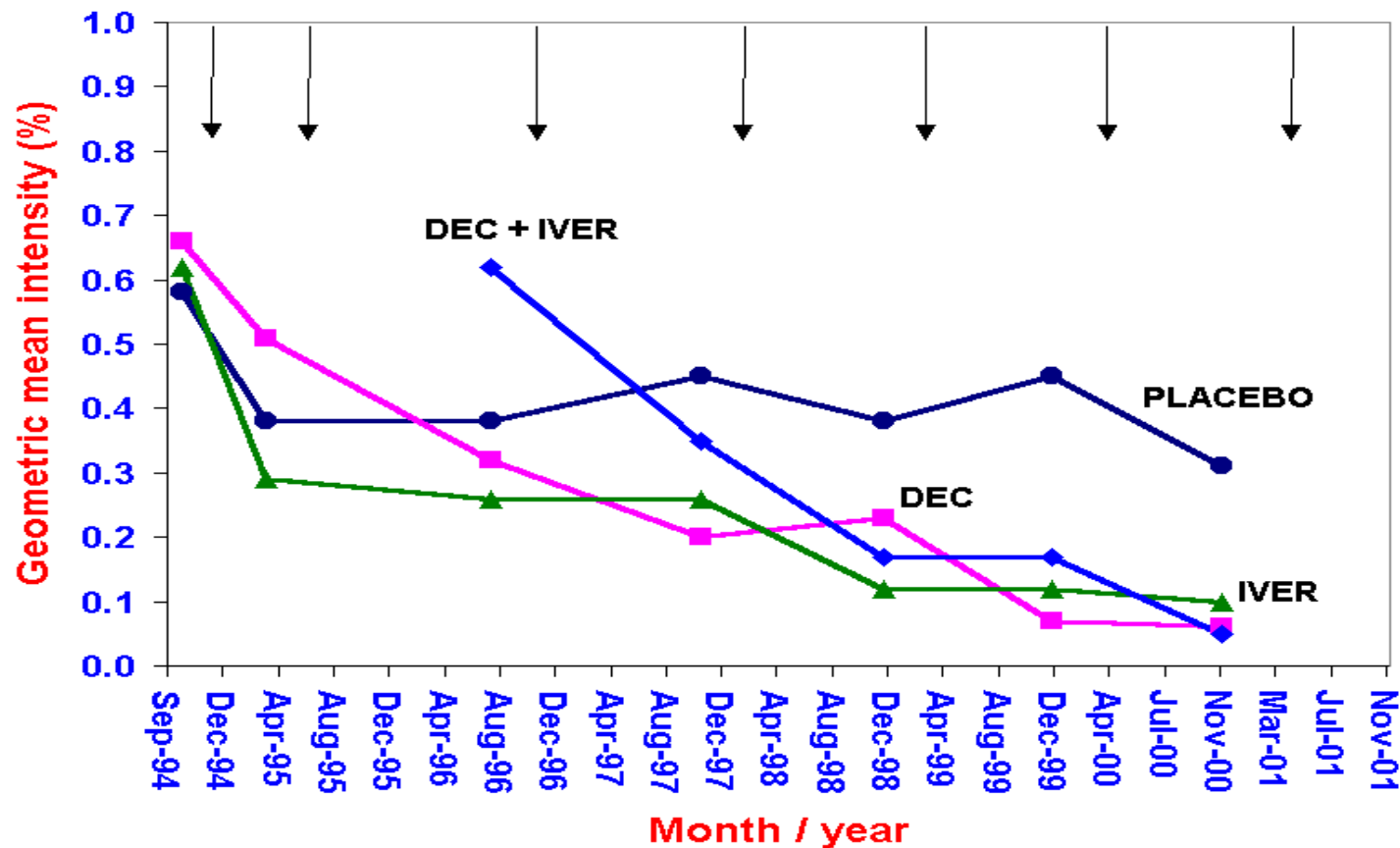
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Impact of six rounds of chemotherapy on mf intensity

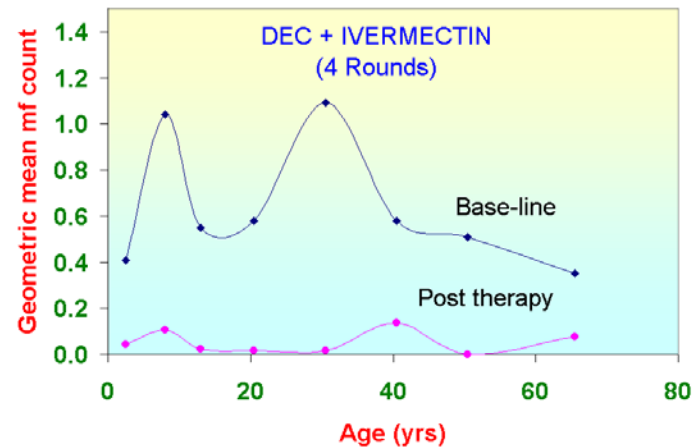
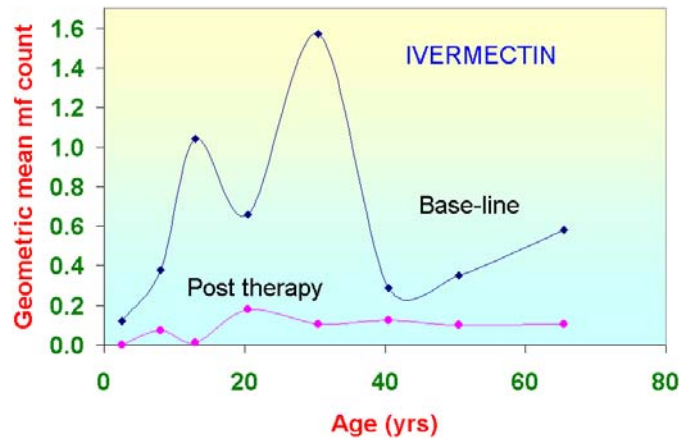
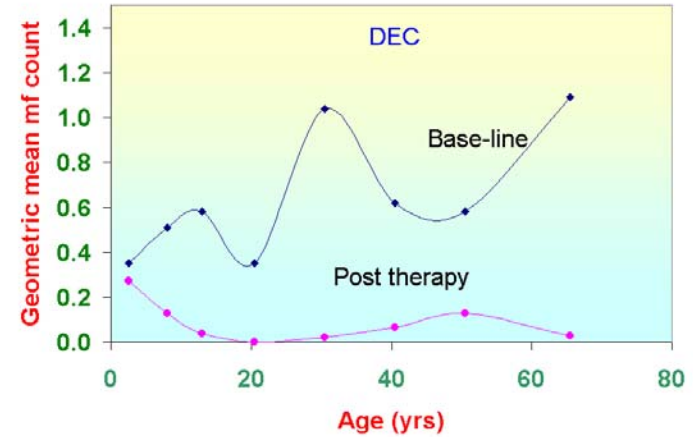
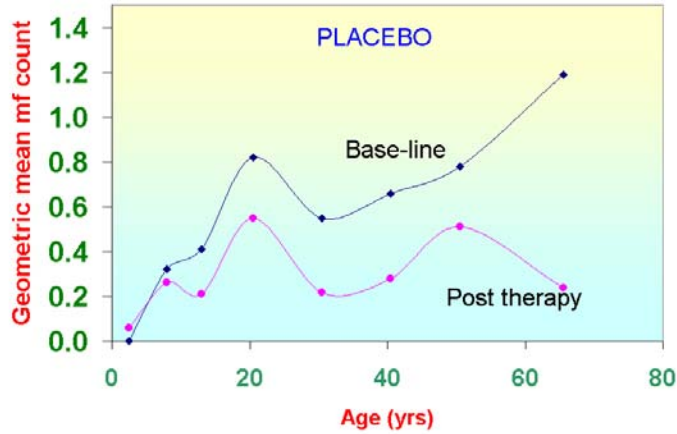


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Impact of six rounds of chemotherapy on age specific mf intensity



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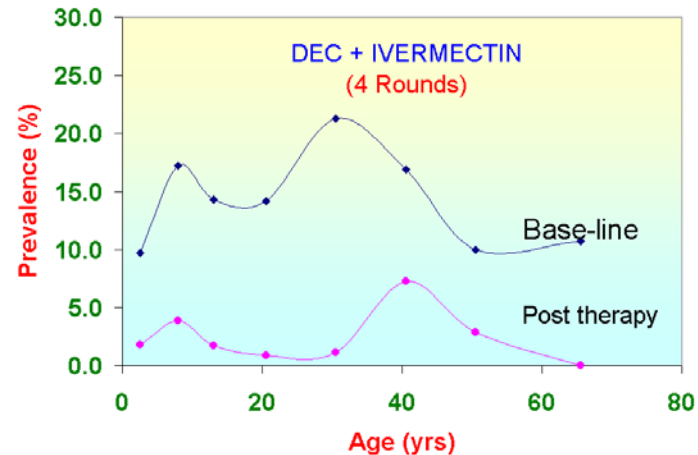
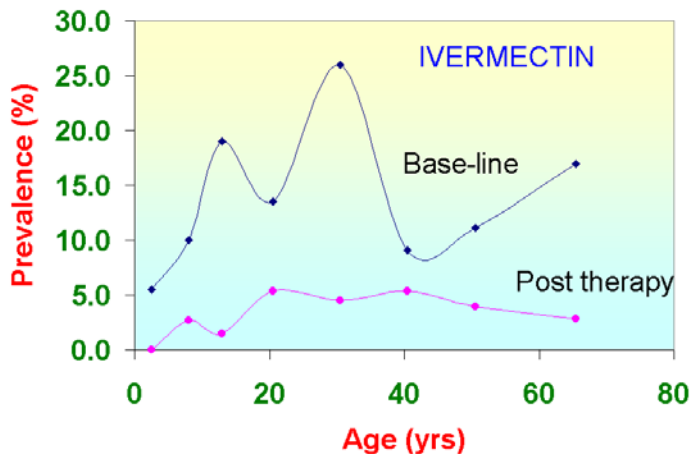
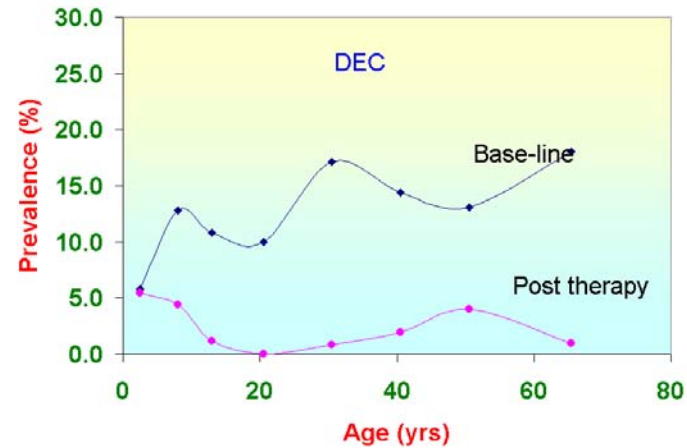
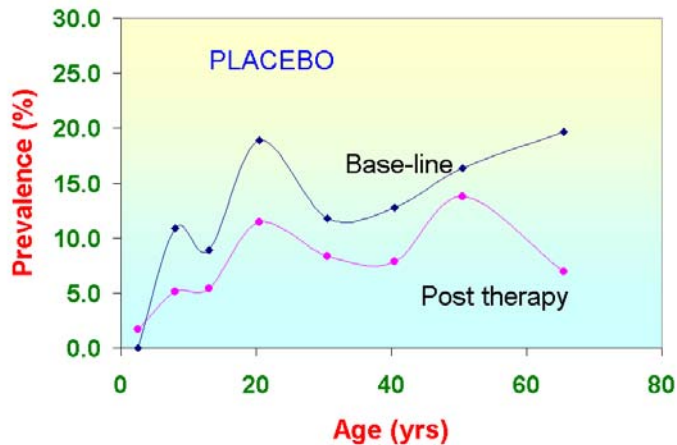
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Impact of six rounds of chemotherapy on age specific mf prevalence



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Conclusion

- **Maximum 75% compliance was achieved**
 - **Only 23% population had taken drug in all the six rounds**
 - **About 15% of the population had not taken drug in any of the rounds**
- **Six rounds of intervention with DEC or Ivermectin resulted in significant reduction in microfilaraemia intensity and transmission indices.**
- **Four rounds of combination therapy resulted in reducing the mf prevalence and intensity more than 80%**
- **The ADL is not influenced by Mass Drug Administration**

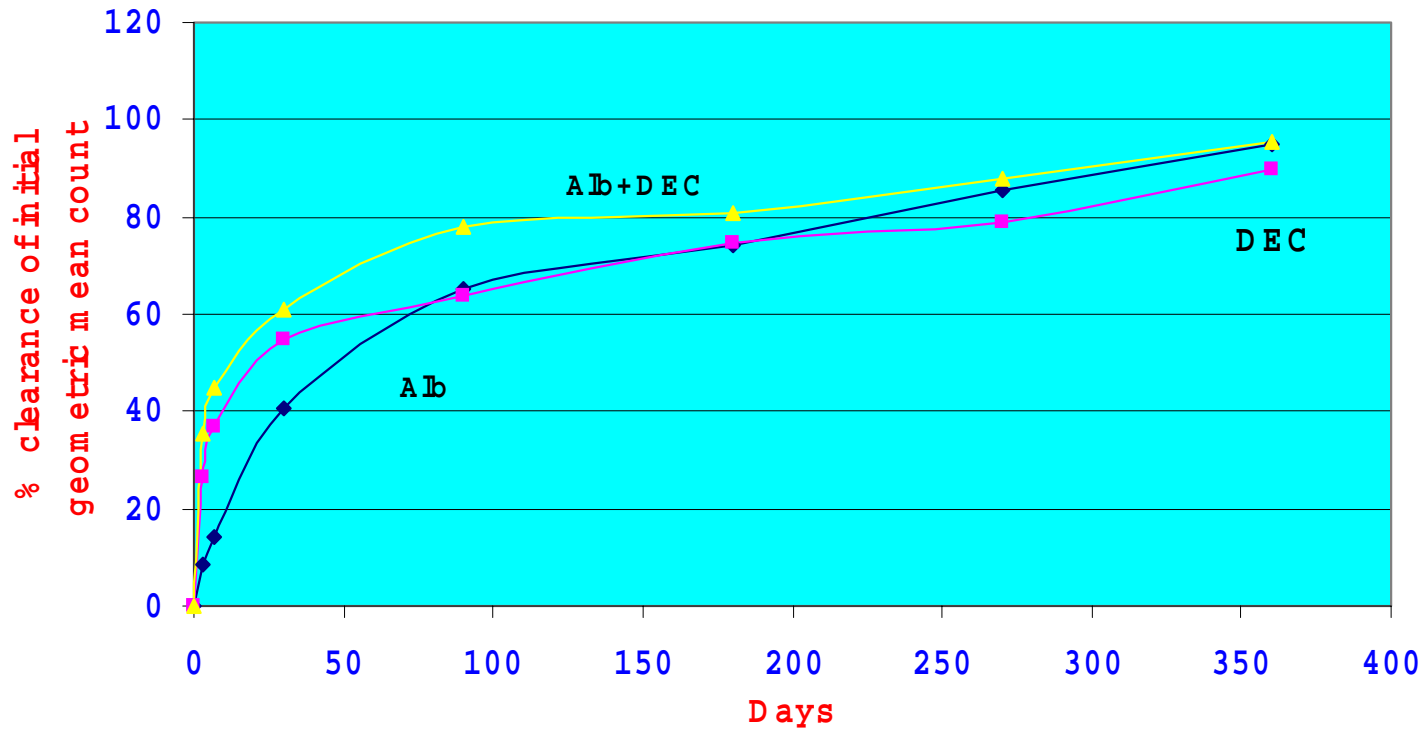


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Clearance of microfilaraemia after single dose treatment in hospital study



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