Dr Laura Byrne

Barts and The London NHS Trust

Managing the pregnancies of elite controllers: *what are we doing?*

Laura Byrne

ST5 GU & HIV Medicine
Barts Health NHS Trust

L Byrne , O de Alwis, M Toby, R Shah, A Hartley, A Umaipalan, C-E Short, S Murphy, S Oomer, A de Ruiter, H Noble, J Anderson, M Kapembwa, G Taylor, L Sarner

Background

- Elite control of HIV is the spontaneous and sustained suppression of the virus to <50c/ml, in the absence of ART
- Estimated to occur in <1/300 HIV infected persons[1]
- Specific data on managing pregnancy in elite controllers (ECs) are limited to case reports[2]

- BHIVA 2008 pregnancy guidelines do not mention ECs specifically
  - Can use zidovudine monotherapy (ZDVm) + planned lower cesarean section (PLCS) + iv ZDV in women VL<6,000-10,000

- BHIVA 2012 *consultation draft* pregnancy guidelines
  - **For ECs: ZDVm + spontaneous vaginal delivery (SVD)**

  or combination antiretroviral therapy (cART) + SVD
  - **Based on viral load data which suggest ART reduces transmission even when VL<50 c/ml**

1. Walker BD. Elite control of HIV Infection: implications for vaccines and treatment. Top HIV Med 2007;15(4):134-136.
2. Rutland E, Mani R. Management of pregnancy in an HIV elite controller. Int J STD AIDS 2010;21(8):604-605.

Aim

To describe the management of pregnancy & neonatal outcomes in HIV elite controllers across 9 UK HIV treatment centres.

Methods

Retrospective case-note audit

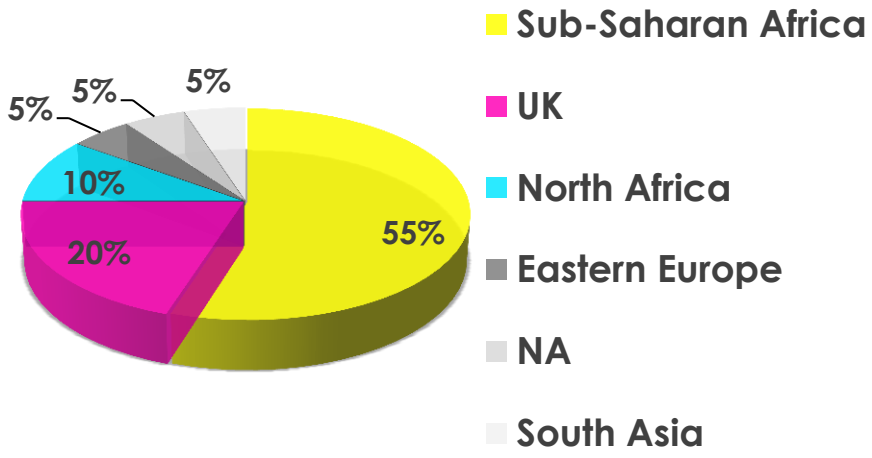
- Clinicians contacted via London HIV Perinatal Research Meeting
- Clinicians identified cases which met inclusion criteria
- Anonymised data collated from paper & electronic records
- Data analysed centrally

Inclusion criteria:

- HIV 1 Ab positive (HIV 2 negative)
- At least two sequential documented HIV VL <50 copies/ml
- VL<50 copies/ml at least 6 months after any prior ART (unless for PMTCT)
- No indication of 'surreptitious' ART
- Pregnancy managed by the HIV treatment centre

Results: baseline characteristics

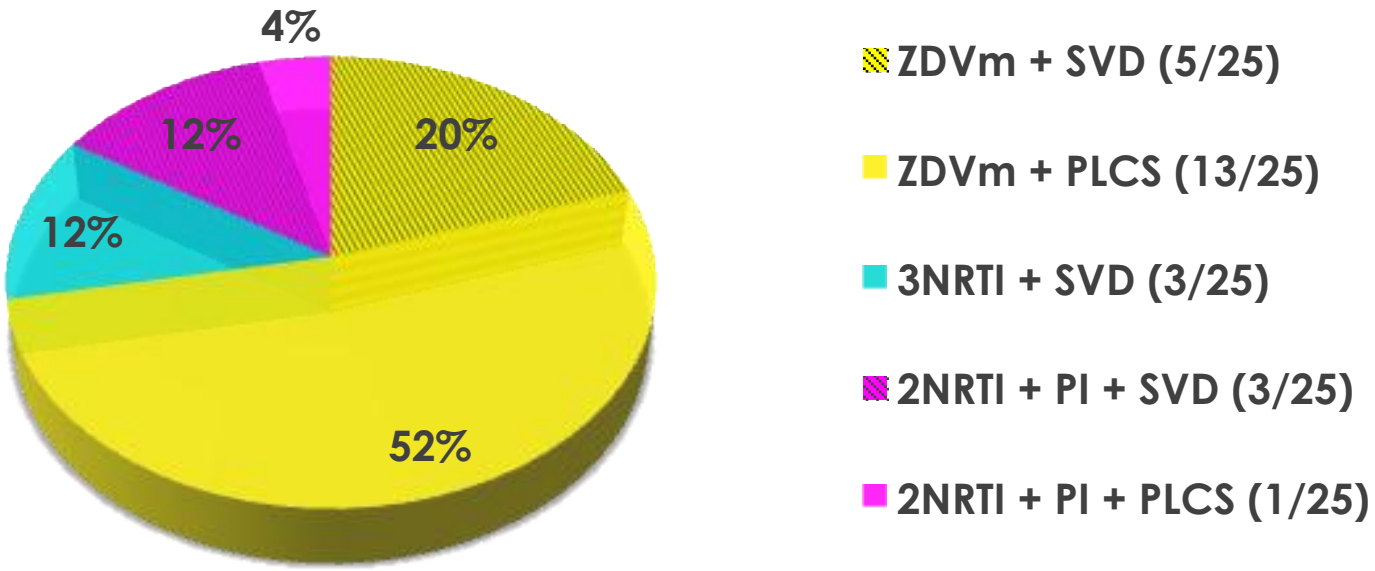
- 25 singleton pregnancies
- 20 women
- 9 HIV treatment centres
- Year of delivery 1999-2012



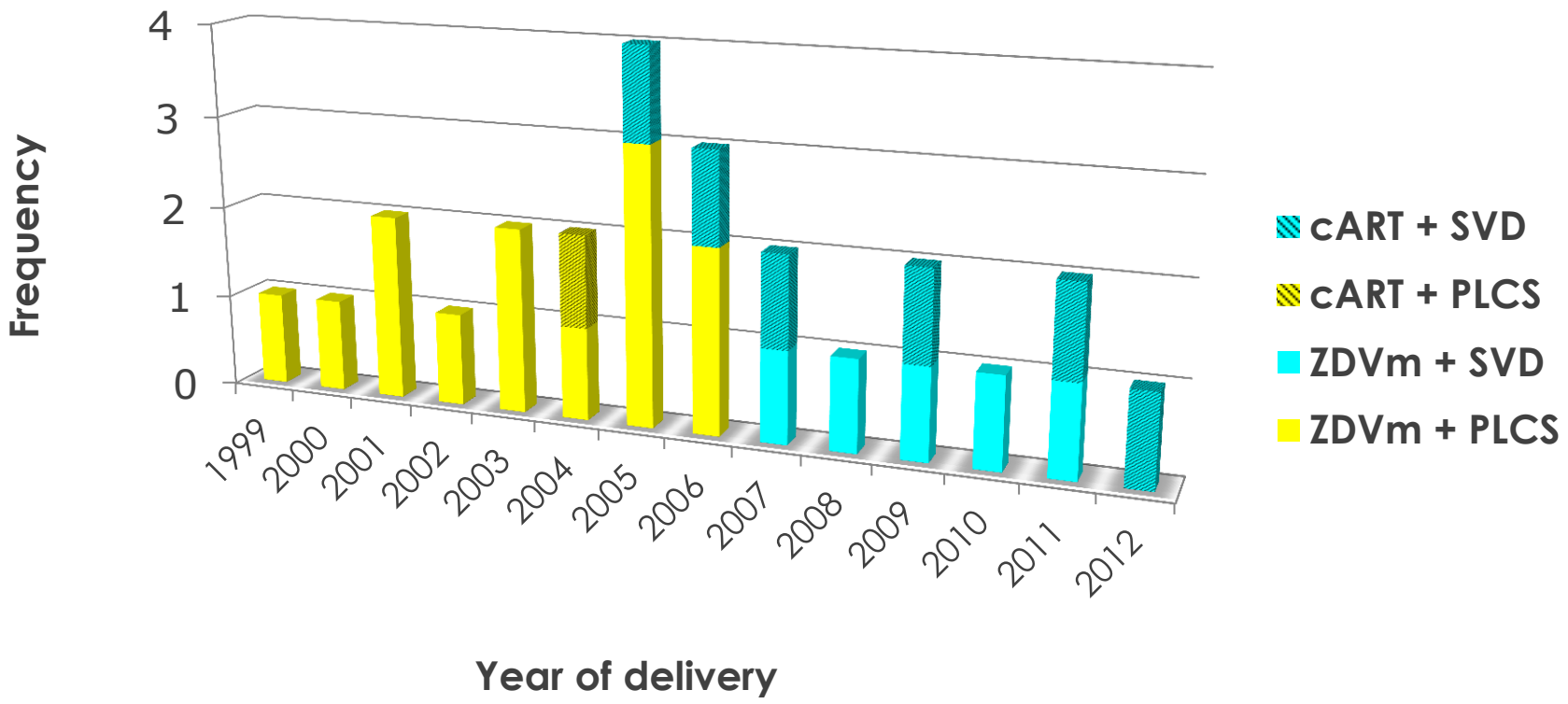
Mean age at delivery	30 years	Range 18-37
Mean CD4 at diagnosis	609 cells/μL	Range 281-931
Diagnosed during this pregnancy	9/20	45%
Hep B co-infection	1/20	5%
Latent TB co-infection	1/20	5%
Previously received ART	1/20	5%

Results: planned management

- Zidovudine monotherapy (ZDVm) 18/25
- Combination ART (cART) 7/25



Results: planned management



Results: planned management

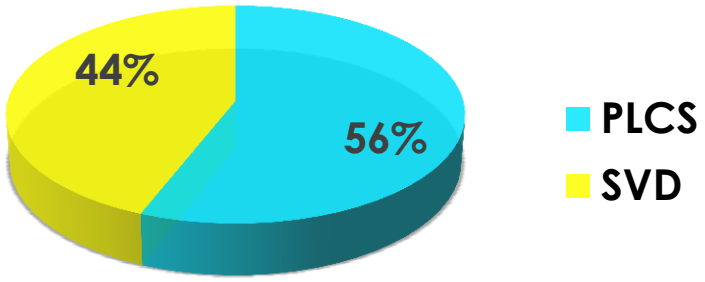
Gestation at start of ART:

	Mean gestation (weeks)	Range
ZDVm + PLCS	30	24 - 34
ZDVm + SVD	28.2	26 - 30
cART	27	24 - 33

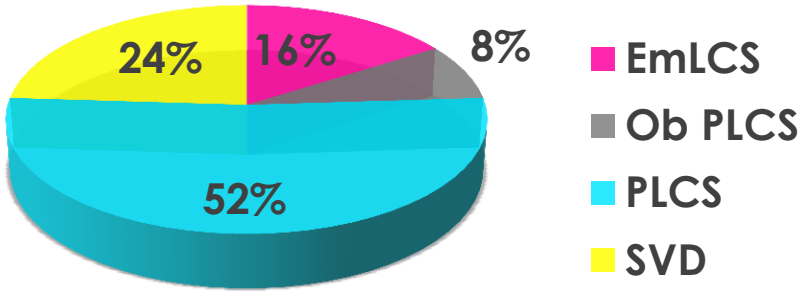
Analysis of variance F= 1.049, p=0.37

Results: actual mode of delivery

Planned mode of delivery:



Actual mode of delivery:



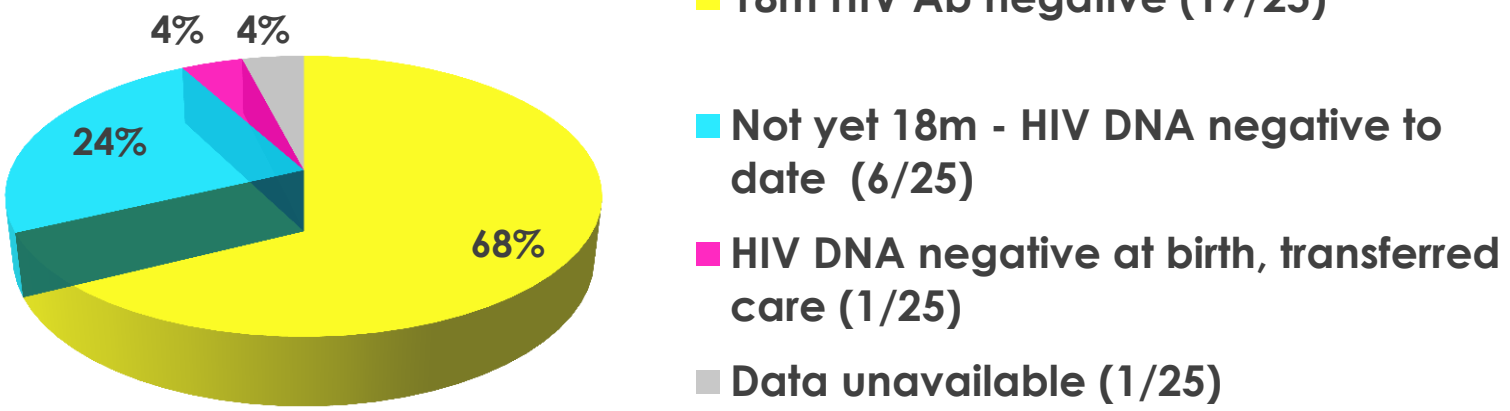
Use of intravenous ZDV at delivery (3/25 not available):

n = 22			
ZDVm + PLCS	5/10	**cART + PLCS**	1/3
ZDVm + SVD	0/2	**cART + SVD**	0/3
ZDVm + emLCS	2/3	**cART + emLCS**	0/1
Overall	**46.7%**		**14.2%**

Results: pregnancy outcomes

n = 25	Number	Data unavailable
Live births	25/25	-
Delivered at term (>37 weeks)	23/25	-
VL < 50 c/ml at delivery	23/25*	1/25
Infant given 4 weeks ZDVm	23/25	2/25

Infant HIV status:



*** 1/25 VL 205 c/ml – result available after delivery**

Learning points

- Considerable variation in practice for ART and mode of delivery
- Majority of cases were managed with ZDVm (72% vs 9% overall in UK)
- Trend towards aiming for SVD probably reflects overall shift in management of pregnancy in UK
- Increasing numbers of ECs aiming for SVD on ZDVm probably reflects increasing clinician confidence
- Data support the new draft guidance, greater numbers are needed to confirm optimal approach for efficacy & safety

Acknowledgements

Chloe Orkin	Barts Health NHS Trust
Graham Taylor	Imperial College Healthcare NHS Trust
Liat Sarner	Barts Health NHS Trust
Okavas de Alwis	Imperial College Healthcare NHS Trust
Martina Toby	Guys and St Thomas' NHS Trust
Rimi Shah	Royal Free Hampstead NHS Trust
	Barnet & Chase Farm NHS Trust
Anna Hartley	Barts Health NHS Trust
Athavan Umaipalan	Homerton University Hospital NHS Trust
Charlotte-Eve Short	North West London Hospitals NHS Trust
Siobhan Murphy	North West London Hospitals NHS Trust
Soonita Oomer	North West London Hospitals NHS Trust
Annemiek de Ruiter	Guys and St Thomas' NHS Trust
Heather Noble	Barts Health NHS Trust
Jane Anderson	Homerton University Hospital NHS Trust
Moses Kapembwa	North West London Hospitals NHS Trust