High-risk HPV prevalence and serostatus in women living with perinatally acquired HIV (the SHiP study)

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High risk HPV prevalence and serostatus in people with a cervix living with perinatally acquired HIV

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Conflict of Interest

In relation to this presentation, I declare that I have no conflict of interest.
Background

High-risk HPV

Cervical screening
HPV testing

Offered aged 25-64
3-yearly for gen pop
Annual for PLHIV

Cervical screening
Cytology

HPV vaccine
Cervarix
Gardasil
Gardasil 9

Offered school age 12-13
Up to age 25 in gen pop
Up to age 40 for PLHIV (BHIVA)

CIN

Cancer

Very little data on those with perinatally acquired HIV
could these individuals be at greater risk from an earlier age?
Project aims

In a cohort of young people with a cervix with perinatally-acquired HIV we aimed to identify:

1. High-risk HPV (hrHPV) prevalence

2. Serological responses to HPV vaccination
Methods

Recruitment
- People living with PaHIV with a cervix
- Aged 18+
- Able to give informed consent
- Non-pregnant

Investigation
- Clinical and demographic data
- HPV vaccine history (electronic records where available or self-reported)
- Cervical sampling
  - Cytology (CSL)
  - HPV testing (Cepheid GeneXpert)
    1. 16
    2. 18/45
    3. 31/33/35/52/58
    4. 51/59
    5. 39/56/66/68
- Blood for serology (UKHSA) HPV 6/11/16/18/45/31/33/52/58

If hr-HPV positive or abnormal cytology - Colposcopy referral for review
Results - demographics

<table>
<thead>
<tr>
<th>Demographics and lifestyle factors</th>
<th>n (%) Total = 57</th>
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<tbody>
<tr>
<td>Age, median (range)</td>
<td>25 (18-34)</td>
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<tr>
<td>Black ethnicity</td>
<td>47 (83%)</td>
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<tr>
<td>CD4 count at recruitment (cells/μL), median (range)</td>
<td>681 (78-1600)</td>
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<td>HIV VL &lt;50 copies/mL at last follow-up</td>
<td>43 (75%)</td>
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<tr>
<td>Ex/current smoker</td>
<td>24 (56%)</td>
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<td>Previous HPV vaccine*</td>
<td>40 (70%)</td>
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<tr>
<td>Previous genital warts</td>
<td>4 (7%)</td>
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<tr>
<td>Previous smear</td>
<td>22 (39%)</td>
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* From electronic records or self-reported. Does not include unsure/unknown
High-risk HPV prevalence (cervical sample)

n=46

- 70% Negative
- 30% Positive

n=14

- 0/2 vaccinated
- 9/12 vaccinated
- 14% 16
- 0% 18/45
- 43% 31/33/35/52/58
- 57% 51/59
- 29% 39/56/66/68
- 36% Multiple subtypes
Cytology results

Colposcopy (n=18)

*other = usually indicates sample or processing issue
Serology

Overall (n=56)

% seropositive

Vaccinated (n=39)

% seropositive

Unvaccinated or unknown status (n=17)

% seropositive
Conclusions

In this small observational study of young adults with a cervix and living with perinatally-acquired HIV:

• **30% had hrHPV** on rapid cervical sampling

• **70% had prior HPV vaccination:**
  • 0% were positive for hrHPV 16/18
  • But 23% were positive for ‘other’ hrHPV subtypes
  • 95% and 77% were seropositive for vaccine subtypes HPV16 and HPV18
Outstanding questions and future work

• What are the acceptability and preferences in this cohort?

• What are the implications for those already vaccinated? Is there any benefit of re-vaccination with the nonavalent vaccine?

• Are there any implications for future guidelines within this unique cohort including those who are under 25?

We should offer HPV vaccination to anyone previously unvaccinated <40 years or with an unknown vaccination history (nonavalent preferable if available)
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