Question 34

A 36-week pregnant woman is exposed to a child with chicken pox 24 hours prior to presentation. There is no prior history of chicken pox.

The most appropriate initial management is:

A) Urgent serology for varicella zoster virus
B) Hyperimmune globulin (ZIG)
C) Chicken pox vaccine
D) Acyclovir
E) Observation

Answer: A

Post-exposure chicken pox prophylaxis

Factors to consider

1) Determination of patient susceptibility
   - Negative history of varicella
   - No previous immunisation
   - All health and immuno-compromised children and adults (except bone marrow transplant recipients) with prior personal history of chicken pox can be considered immune

2) Degree of exposure and if that is likely to result in infection
   - High exposure: face to face contact, > 1 hour in enclosed area

3) If patient is at higher risk of developing varicella-related complications

Recommendations for prophylaxis

<table>
<thead>
<tr>
<th>Immuno-suppressed</th>
<th>Within 96 hours</th>
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<tbody>
<tr>
<td>Pregnant females (see flow chart below)</td>
<td>VariZIG (varicella zoster immune globulin IgG)</td>
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<td>Neonates</td>
<td>If &gt; 96 hours</td>
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<td>- whose mother has varicella around time of delivery (4 days before, 2 days after)</td>
<td>- IV immunoglobulin (contains anti-varicella Ab of varying quantities)</td>
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<tr>
<td>- Prem infants born &gt;28 weeks exposed in neonatal period and mother with no immunity</td>
<td>- (OR) closely monitor for signs/symptoms - start acyclovir if illness develops</td>
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<tr>
<td>- Prem infants born &lt; 28 weeks or &lt; 1kg weight exposed in neonatal period regardless of maternal Hx</td>
<td>All who receive VariZIG should receive varicella vaccine after 5 months except pregnant women (theoretical risk of inducing congenital disease)</td>
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Note: variZIG does not prevent foetal infection but prevents mother from developing complications of varicella infection

<table>
<thead>
<tr>
<th>Healthy, non-pregnant adults</th>
<th>Within 3-5 days of exposure</th>
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<td></td>
<td>Varicella vaccine</td>
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<td></td>
<td>Serological testing prior is helpful as majority with no prior history of chicken pox are actually seropositive</td>
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If varicella develops despite prophylaxis

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<tr>
<th><strong>Acyclovir</strong></th>
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<td>- in adults to prevent complications</td>
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<tr>
<td>- in those who come in contact with immuno-suppressed</td>
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For pregnant women

![Recent exposure to varicella-zoster](image)

For primary prevention: Varicella vaccination
- All children < 13 years old
- All high risk adults (day care employees, women of child bearing age) and those who are household contacts of immuno-suppressed
- NOT FOR PATIENTS WITH IMMUNODEFICIENCIES (live attenuated vaccine)

For treatment
- Not in healthy children < 12 years old as usually self-limiting disease and modest benefits (less number of lesions, less duration of fever)
- Should treat these children
  - > 12 years old
  - chronic skin/cardiovascular disease (because secondary bacterial infection can be severe)
  - on steroids (both oral and inhaled) or aspirin
  - secondary household cases (often more severe)
- Adults with uncomplicated varicella: acyclovir 20mg/kg oral QID for 5 days
- Immunosuppressed children (both complicated and uncomplicated disease): IV acyclovir
- Adults and children with disseminated disease: IV acyclovir
- Antihistamines for itch

Congenital varicella infection
- Infants whose mothers infected between 8 and 20 weeks gestation
- Risk <1% if infected < 13 weeks, 2% if before 20 weeks
- Features
  - IUGR
  - Skin lesions
  - Ocular defects eg cataracts, chorioretinitis, micro-opthalmus
  - Limb defects eg bone hypoplasia
  - CNS effects eg mental retardation