Management of Varicella Zoster exposure in adult patients on sDMARDs and bDMARDs

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On behalf of Rheumatology Department (RNHRD)
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Does the person need PEP?

Recommended for individuals if fulfil all of the following 3 criteria :

1. Significant exposure to chicken pox (varicella) or shingles (zoster) during the infectious period

2. At increased risk of severe chicken pox such as immunocompromised (PHE group A and B), pregnant women and neonates

3. No antibodies to VZV – urgent VZV antibody testing can be performed within 24 hours

Proceed to slide to confirm the above

Assess exposure

1) Does the Rheumatology patient have active chickenpox or shingles themselves

Yes [click here]

No continue to Qu 2.

2. Has the patient:

a) Been in contact with someone who has

- chicken pox (infective from 24 hours before rash onset until 5 days after rash for immunocompetent or until all lesions crusted for immunocompromised infected individuals)?

OR

- Disseminated Shingles

OR

- An exposed shingles rash (infective from time of rash onset)?

OR

- Shingles (covered or uncovered) and the infected individual is immunosuppressed themselves?

AND

b) Are Household contacts OR Had

-a face – face conversation of any length?

OR

-been in the same room (house, classroom or 2-4 bed hospital bay) for >/= 15 minutes?

OR

-contact in large open wards (Florence nightingale wards) and the contact is immunosuppressed

Yes to a & b ➔ [click here]

No to a or b ➔ patient has had minimal exposure, [click here]

Risk of contracting VZV after exposure if you are immunosuppressed – sDMARDs & Biologics

Low Risk	at risk	at risk
Prednisolone (at lower dose than PHE group A) either alone or in combination with 1 low risk DMARD Methotrexate <20mg/week Azathioprine <3mg/kg/day Sulfasalazine Hydroxychloroquine [click here]	**Any of the following in the last month:** Prednisolone: > 40mg/day for > 1 week >20mg for > 10 days **Any of the following the previous 3 months:** Prednisolone: >10 mg for >4 week > 7.5 mg in combination with DMARD's (except HCQ and SSZ) IM depomedrone Methotrexate >20mg/week Azathioprine > 3mg/kg/day Mercaptopurine >1.5mg/kg/day [click here]	**Any of the following in the last 3 months:** -DMARD combination therapy except with HCQ only. -Methotrexate any dose with Leflunomide. -Mycophenolate -Leflunomide -Ciclosporin **Cyclophosphamide in the last 6 months.** **Biologics or Jak inhibitors in the last 3 months except Rituximab (unless specified by specialist).** **Rituximab in the last 6 months** [click here]

The patient is at low risk of VZV

- Advice:
  - Reassure patient they are at low risk but infection still possible.
  - Patient to report if signs of active infection occur.
  - Patient can continue with their medications unless they show signs of infection.

The patient is at medium/high risk of VZV

- Will checking VZV serology delay treatment beyond 7 days post exposure
- Yes ➔ treat with prophylaxis [click here] and check immune status non-urgently for future reference (must be done before VZIG administration)
- No ➔ check serology [click here] and withold DMARDs/biologics (except SSZ/HCQ) until result available.

Check immune status (VZV serology)

- Mark as urgent
- Add clinical comments to detail the time window remaining for post-exposure prophylaxis
- If needed call the lab to impress the time window
- When you have the result go to slide 9

The patient is at risk of VZV

- Withold DMARDs/biologics (except HCQ, SSZ) until symptom free and outside of the 21 day incubation period.
- Patient to report if signs of active infection occur.
- Treat with prophylaxis [click here]
  - Unless already receiving IVIG monthly for immunodeficiency

VZV serology results (immune status)

- Is the patient immune:
  - Yes [click here]
  - No [click here]

Prophylactic treatment of VZV exposure

First line – oral aciclovir*

- Prophylactic treatment of VZV exposure should be with *prophylactic dose* aciclovir
- Adult = 800mg** q.d.s for 7 days starting 7 days after first exposure (i.e. days 7-14 post exposure).
- **for obese or very low body weight or eGFR<30 dose may need to be adjusted (see BNF)
- If on MMF:
  - do not need to adjust aciclovir dose unless renal dysfunction
  - do monitor FBC, U&E, LFT when co-prescribed due to increased toxicity.
- If on ciclosporin + aciclovir may have increased risk of neurotoxicity.

Second line - VZIG

- VZIG is a restricted product.
- Use VZIG only if VZV <150 mlU/ml/negative

AND

  - Aciclovir is contraindicated,
  - Concern of malabsorbtion
  - Risk of aciclovir toxicity.
- VZIG is given as 1g by deep i.m. injection (e.g. upper outer buttock).
- Split injection across 2 anatomical sites if:
  - on warfarin or DOAC
  - Giving >5ml volume
- Consent:
  - Advise patient this is a blood derived product
  - Risk of bruising/bleeding particularly if on anticoagulant
  - Possible Flu-like symptoms post injection
  - Risk of allergy

If develops chickenpox or shingles rash despite prophylaxis [click here]

*Aciclovir for post exposure prophylaxis is off licence but PHE approved

Treatment for active VZV infection

- Treat if any of the following apply:
  - On medium or high risk drug combinations [click here to see risk groups]
  - Taking moderate dose Methotrexate or Azathioprine alone or in combination at clinician discretion
- Treatment is with aciclovir or valaciclovir
  - Shingles with single dermatome use oral aciclovir 800mg five times/day aiming to start within 48hr and continue until 2 days after lesions have crusted
  - Shingles >1 dermatome or organ involvement (disseminated), admit for i.v. antiviral
  - Chickenpox:
    - If mild chickenpox then give therapeutic aciclovir 800mg five times/day for 7 days.
    - If severe consider admit for i.v. ➔ aim to start within 24 hours of symptoms.
  - Consider reduced aciclovir dose if renal dysfunction (see BNF)
  - If on MMF:
    - do not need to adjust aciclovir dose unless renal dysfunction
    - do monitor FBC, U&E, LFT when co-prescribed due to increased toxicity.
  - If on ciclosporin + aciclovir may have increased risk of neurotoxicity.

Shingles vaccine on DMARDs
National vaccination programme

Who to vaccinate

Shingrix booster is routinely offered to all people aged **60-79** as part of the National vaccination programme from Sept 2023 AND those **50 years and older (no age limit)** who are severely immunocompromised. **This is not a live vaccine.** For immunocompromised individuals give 2 doses, 8 weeks – 6 months apart. For immunocompetent give 2 doses, 6-12 months apart.

Please note that whilst stocks of Zostavax (live vaccine) remain in GP practices, they may still be in use but should not be used in high risk drug exposure below.

Varivax is used for primary vaccination in people who are not immune to VZV already. **This is a live vaccine.**

Low Risk DMARDs	High risk: offer vaccination	High risk: offer vaccination
Prednisolone (at lower dose than PHE group A) either alone or in combination with 1 low risk DMARD Methotrexate <20mg/week Azathioprine <3mg/kg/day Sulfasalazine Hydroxychloroquine	**Any of the following in the last month:** Prednisolone: > 40mg/day for > 1 week >20mg for > 10 days **Any of the following the previous 3 months:** Prednisolone: >10 mg for >4 week > 7.5 mg in combination with DMARD's (except HCQ and SSZ) IM depomedrone Methotrexate >20mg/week Azathioprine > 3mg/kg/day Mercaptopurine >1.5mg/kg/day	**Any of the following in the last 3 months:** -DMARD combination therapy except with HCQ only. -Methotrexate any dose with Leflunomide. -Mycophenolate -Leflunomide -Ciclosporin **Cyclophosphamide in the last 6 months.** **Biologics or Jak inhibitors in the last 3 months except Rituximab (unless specified by specialist).** **Rituximab in the last 6 months.**
Shingrix can be given if 60-79 years. Varivax can be given for primary vaccination (non-immune individuals) as the risk of a live vaccine is low (but not zero).	**Shingrix should be offered to 50 years and over with prior VZV history. Zostavax/Varivax should NOT be given**	**Shingrix should be offered to 50 years and over with prior VZV history. Zostavax/Varivax should NOT be given**

Who to vaccinate pre-DMARDs

- For any patient starting cs/bDMARDs (other than SSz and HCQ) consider asking if they have had chicken pox or shingles?

- Age 18-49 with history of chicken pox or shingles
- Age 18-49 with no previous VZV history
- Age 50-79 with history of chicken pox or shingles
- Age 50-79 with no previous VZV history

No previous history of VZV

- Check VZV serology
- If non-immune and on 'low risk' (green) medications use Varivax (2 doses 4-8 weeks apart) which is a lower 'dose' live vaccine.
  - Avoid escalating to PHE group A and B drugs for 4 weeks after Varivax vaccination.
  - Shingrix **cannot** be used for primary vaccination to prevent chicken pox of non-immune adults in PHE group A and B drug pathway. For these patients try and avoid exposure and use post-exposure prophylaxis when needed.
  - Healthy **children** of adults who are taking medications in PHE group A or B or non-rheumatic contraindications to live vaccine, where the child has not had chickenpox could be offered the Varivax vaccine (to reduce exposure risk to the immunosuppressed adult).
    - There is no funding agreement for GPs to vaccinate the child in this *rare* situation and would need to be discussed on an individual basis.

- If age 18-49 years and immune click here
- If age 50 years or older and immune click here

Age 18-49 with previous chicken pox or shingles

- A previous VZV history in younger age groups is considered enough evidence of immunity.
- The exception is that previous high level immunosuppression may revert VZV immunity.
- Therefore in patients who are planned for Jak inhibitors, consider checking VZV serology if patient considered high risk.
- If patient is not immune click here.

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