Travel and Special Risk Groups [case study]

Nigel Crawford
Background

1. Special risk groups
   – Increasing use of immune suppressive medication
     • Includes biologics
   – Patients feel well….but increased risk of infectious diseases

2. Travel
   – Adolescents and the “world challenge trips”
Special risk groups

• Who are they?

• Why are they at risk?

• How can we optimise their protection?
PART 3 VACCINATION FOR SPECIAL RISK GROUPS

Persons with autoimmune diseases and other chronic conditions
Special risk categories

Patients who have:

– special immunisation requirements
  • (e.g. children/adolescents with a chronic medical condition)

  and/or

– a suboptimal response to immunisation
  • (e.g. due to impaired immunity)
Risk: Underlying conditions or their therapy

- Chronic medical condition
  - e.g. congenital heart disease
- Anatomical breach of defences
  - Eg CSF leak
- Immune deficiency
  - Developmental e.g. preterm
  - Primary
  - Secondary
Immunocompromised from disease +/- immunosuppressive therapy

Chronic disease

Outpatient visits/hospitalization (exposure VPD)

Special risk groups

Loss of protection from previous immunizations

Increased risk of VPD

Caution with live attenuated vaccines if on immunosuppressive therapy

Vaccinate to optimize protection from VPD

Variable immunogenic response

Additional vaccines & 'booster' vaccine doses may be required (see special risk group specific guidelines)

Potentially diminished long-term protection
Case

16 years

- Stable IBD (Crohn’s)
  - Dx age 11 years
- Previously on Imuran
- Stable past 18 months on Infliximab (TNF inhibitor)
  - 6 weekly

- Routine IUTD
At World Challenge, we believe that life skills are developed through real life experience.

Adding a student-led expedition to your curriculum will add an opportunity for your students to develop resilience and become educated global citizens. An expedition program can work side by side with your school curriculum and the framework of personal learning and thinking skills that your school delivers to students.

World Challenge has unrivalled knowledge and support resources for overseas school trips & expeditions. We can provide a no-obligation meeting with a representative from World Challenge who will discuss with you all aspects of an expedition program.

Request a meeting for your school here.
Inflammatory bowel disease in travelers: Choosing the right vaccines and check-ups

Maria Esteve, Carme Loras, Ester García-Planella
TRAVELLING OVERSEAS

Whether you’re going on a short trip or you’re off on that dream holiday, travelling with the unpredictability of inflammatory bowel disease (IBD) can present special challenges. By planning ahead and knowing how to reduce the chances of encountering problems, you can enjoy your holiday to its fullest extent.
IBD patients and VPD- case series

- Tim Ford et al. 2016 [PHAA abstract]
- Advanced paediatric trainee
- George Alex and Di Simpson [Gastro Dept RCH]
IBD abstract [PHAA 2016]

• **Background**

• Recent literature has suggested that whilst 90% of patients with IBD are up to date with vaccinations, uptake of additional recommended vaccinations is low

• Identification of IBD patients prior to immunosuppression allows for optimisation of vaccination, including timely administration of live vaccines at the same time as additional recommended vaccines.
• Process:
• Patients in a tertiary paediatric hospital with a new diagnosis of IBD were referred by the Gastroenterology Unit to a specialised Immunisation Clinic for assessment of their immunisation status and provision of relevant vaccines
• Data collected via a standardised questionnaire.
• Preliminary Results
• 37 patients - median age at diagnosis 12 yrs
  – 84% of patients were up to date with NIP
  – 43% additional vaccines prior to review
  – Seroprotection:
    • 38% Hepatitis B
    • 34% to all of Measles/Mumps / Rubella
    • 57% to Varicella

• Additional vaccines administered included:
  • pneumococcal (84%), influenza (76%), dTPa/ HPV (62%).
Our Case: further history

• Nil previous travel- going for 6-weeks
• Did not have Year 7 vaccines as IBD unstable at time
• Had clinical varicella in childhood
• Serology:
  – Hep B sAby 2 IU/l (low titre- not protective)
  – MMR & varicella “positive”
  – Quantiferon Gold- negative
Focus on NIP vaccines

• Ensure UTD with routine vaccines
  – Year 7 [dTpa; HPV4]

• Special risk
  – Pneumococcal
    • PCV13
      – PPV23 2-months later
  – Influenza (2-doses QIV; 1-month apart)
Invasive pneumococcal disease

Notified cases of confirmed invasive pneumococcal disease by age, 1 Jan 2002 to 31 Dec 2014

- 65+
- 4 to <65
- 1 to <4
- <1

NIP 01/05: 7vPCV for children born 2003 onwards

NIP 07/11: 13vPCV introduced

Department of Health
QIV (inactivated)

• In 2016 QIV on the NIP [available April]:
  - A H1N1/09 pandemic strain
  - A (H3N2) (A/Hong Kong/2014)
  - B /Phuket/2013
  - B/Brisbane/2008
Meningococcal disease epidemiology

- Invasive meningococcal disease is rare
- Overall incidence: 1 per 100,000, but....
  - < 1-year: 14 per 100,000 (CFR 5.8%)
  - Adolescent (15-19 years)
    - 2.8 cases per 100,000  (CFR 2.9%)

- ~ 85% meningococcal disease in Australia is Men B
  - Expect ~75% covered by the 4CMenB vaccine
- Recent Men W 135 increase esp. Victoria
Confirmed and probable invasive meningococcal disease notifications by serogroup, Victoria, 1 Jan 1995 to 28 Apr 2014

MenCCV 12mo close (from Jan 2003) catch-up 1-19yo's (2003-2006)

Number of notified cases

Year of notification

Department of Health
Welcome to MVEC

The Melbourne Vaccine Education Centre (MVEC) is a new web-based initiative, providing up-to-date immunisation information for healthcare professionals, parents and the public.

It is a collaboration between The Royal Children's Hospital (RCH) and its Melbourne Children's campus partners (Murdoch Children's Research Institute and The University of Melbourne) and Monash Health.

MVEC aims to address common queries around vaccines and to promote the benefits of immunisation for both children and adults.

Meningococcal B vaccine position statement

A joint statement between the Royal Children’s Hospital and Monash Children’s Hospital Immunisation Services June 2014

A Meningococcal B vaccine is now available on the private market (Bexsero™, Novartis). It is the first ever vaccine registered for the prevention of serogroup B meningococcal disease. This 4-valent vaccine [4CMenB] was licensed for use by the Therapeutic Goods Administration (TGA) in November 2013. The Australian Technical Advisory Group on Immunisation (ATAGI) provided advice regarding use of the vaccine in March 2014.\(^{(1)}\)
Back to our case

• IBD
  – Travelling in May to Vietnam
  – 6-weeks duration
    • Between Infliximab doses
Health Information for Travelers to Vietnam
Clinician View

Vaccines and Medicines

Prepare travelers to Vietnam with recommendations for vaccines and medications.

Details of vaccination recommendations and requirements are provided below.
Back to our case

• IBD
  – Travelling in May to Vietnam
  – Going to be working on a farm outside Hanoi

Japanese encephalitis in Vietnam
JE occurs in this country. The transmission season is typically from May to October. Rarely cases in travellers are reported outside these months. The highest rates of JE have been reported in and near Hanoi.

http://travelhealthpro.org.uk/
Vaccinations

Last Updated: 30/07/2015

Vaccinations, risk of travel-related infection and IBD
This information is to give you an overview of vaccinations in relation to inflammatory bowel disease and is not intended to replace the individual and comprehensive information that your travel clinic can provide.

Vaccination is a highly effective method of preventing certain travel-related infectious diseases but there is no single vaccination schedule that fits all travellers. This will vary according to your current medication, previous immunisations, countries to be visited, and type/duration of travel.

You should visit a travel clinic 8 weeks before your intended departure to get information regarding the risk of disease in the country or countries you plan to visit and the steps to be taken to prevent illness. Various travel clinics, such as Nomad Travel http://www.nomadtravel.co.uk/travel-vaccination-information offer expert advice to help with planning your trip and ensuring your safety whilst abroad.

Does having IBD make my immune system weaker?
No, having Crohn’s disease or ulcerative colitis does not make your immune system weaker (immunocompromised) but the medication you take to treat the IBD may do. This is not something that should prevent you from traveling or doing normal day-to-day things. People taking medication that weaken the immune system will always be closely monitored by their IBD team and have regular blood tests to check for side-effects.

http://www.ibdpassport.com/travelling-ibd/vaccinations
Table of Vaccinations

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<th>Recommended vaccinations</th>
<th>Required vaccines</th>
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<td>Cholera</td>
<td>Yellow fever</td>
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<tr>
<td>Hepatitis B (Hep B)</td>
<td>Hepatitis</td>
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<td>Haemophilus influenzae type b</td>
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<td>Human papilloma virus</td>
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<td>Influenza</td>
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<td>Measles, mumps, and rubella</td>
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<td>Pneumococcal</td>
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<td>Poliomyelitis</td>
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<td>Rotavirus</td>
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<td>Tuberculosis (BCG)</td>
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<tr>
<td>Varicella</td>
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For country specific vaccination advice, please see the [interactive world map](http://www.ibdpassport.com/travelling-ibd/vaccinations)
## Vaccine recommendations

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<th>Routine (funded)</th>
<th>Travel (private)</th>
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<td>PCV13- PPV23</td>
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<td>Twinrix [Hep A-B]</td>
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<td>dTpa</td>
<td>Anti-malarial (malarone)</td>
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<td>Influenza (2-doses)</td>
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<td>Consider: Men B &amp; ACWY</td>
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BCG clinics for children

Background
The BCG vaccine helps protect children from tuberculosis, with more information on this infectious disease available at the RCH Kids Health information website: http://www.rch.org.au/kidsinfo/fact_sheets/TB_tuberculosis/

The main reason for referral to an RCH BCG clinic is for children < 5 years of age.
The vaccine is discussed with paediatricians and immunisation nurses prior to administration.

Making an appointment
RCH runs a number of outpatient clinics each week that provide BCG vaccine.

They include:
- Immunisation Service- Tuesday am (0900-1230)
- Infectious Diseases Service- Monday pm and Tuesday pm

A general practitioner or specialist referral is required to attend one of these clinics.

- To make an appointment please call our RCH Immunisation Hotline 1300 882 924 (option 3)
- An appointment should be made 4-6 weeks prior to departure to give enough time for the vaccine to be effective
Contact us

Immunisation hotline

1300 882 924

After dialling, please select the option that suits your needs and your call will be redirected.

Option 1: SAEFVIC*, the Victorian vaccine safety service
Option 2: The Royal Childrens Hospital immunisation service Drop-In Centre & general vaccine enquiries
Option 3: BCG vaccines for children
Option 4: Travel clinic enquiries
Option 5: Monash Immunisation Service
Option 6: Victorian Department of Health Immunisation
Events

Travel Vaccine Update (TVU)

Wednesday 23rd March 2016

In March we will be introducing the Travel Vaccine Update (TVU), an event similar to the CVU. The TVU will run from 5:30pm – 9:00pm on Wednesday 23rd March at the Larwill Studios inside the ART series hotel of the same name at 48 Flemington Rd, Parkville. The Larwill Studios provide a more intimate space and tickets are limited. Supper and light refreshments will be served. Please see below for tickets and the TVU program.