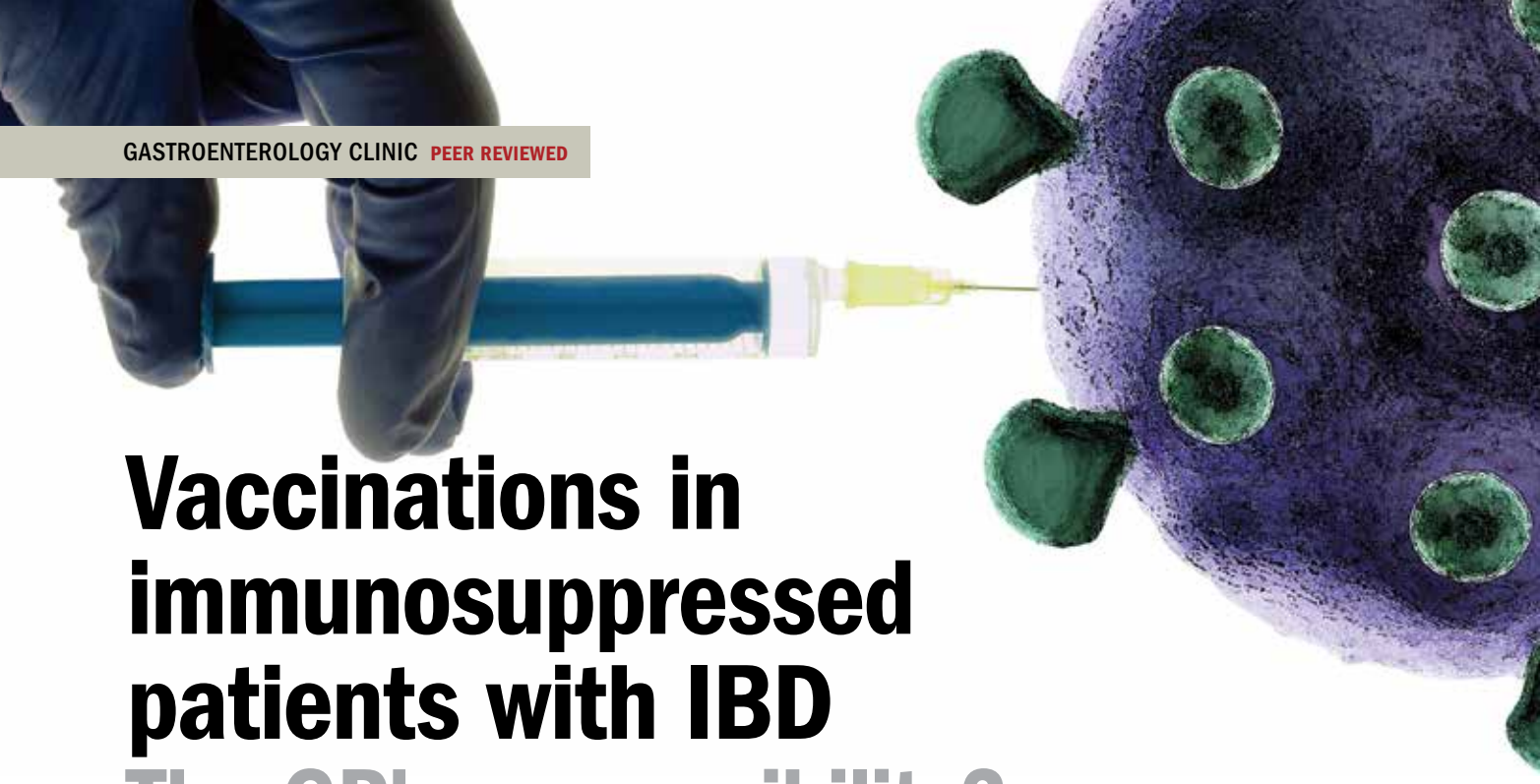

Vaccinations in immunosuppressed patients with IBD

The GP's responsibility?

KATHERINE ELLARD MB BS, FRACP

Opportunistic infection in always a risk in patients treated with immunosuppressant medication, such as those with inflammatory bowel disease (IBD). The risk can be reduced by vaccination, and shared care between the gastroenterologist and the GP can help ensure patients have the appropriate vaccinations.

Corticosteroids, 5-aminosalicylic acid (5-ASA) drugs and thiopurines (azathioprine and 6-mercaptopurine) have been the cornerstone of treatment of patients with inflammatory bowel disease (IBD) for decades. Methotrexate is also used occasionally. The introduction of the antitumour necrosis factor (anti-TNF) agents infliximab and adalimumab has been invaluable for people with severe Crohn's disease and these biological agents also have a place in the treatment of people with moderate to severe ulcerative colitis who are not responding to usual therapy. However, these potent immunosuppressive drugs come with an increased risk of opportunistic infection. Appropriate vaccination is helpful in reducing this risk, but does not prevent it completely.[1]

Gastroenterologists as a group have been shown in several studies to be unaware of the recommendations for routine vaccination schedules and to be less than obsessional in ensuring that patients who are immunosuppressed receive appropriate vaccines at the appropriate times. GPs are much more experienced in this area, and it is an area where there needs to be shared care.

Remember

- Immunosuppression is defined as more than 20 mg/day of prednisone being required to control the symptoms of IBD, or the use of thiopurines or anti-TNF drugs within the past three months.
- The best time to assess the vaccination status of the patient and address any issues is before definitive investigations have been performed and any immunosuppressant medications have been prescribed, if at all possible.
- There is often concern that people who have active IBD or are on immunosuppressive medication will not mount a response to vaccination, but this is generally not the case. It is reasonable to go ahead with usual practice, except in the case of live vaccines.[2]
- Live vaccines should not be given to immunosuppressed patients. Live vaccines include MMR (measles, mumps, rubella), yellow fever, rotavirus, varicella and zoster vaccines. Less commonly administered live vaccines include BCG, Japanese encephalitis vaccine and oral typhoid vaccines.

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Dr Ellard is a Consultant Gastroenterologist in private practice in Sydney, NSW.

SERIES EDITOR: Dr Katherine Ellard MB BS, FRACP, Honorary Secretary of the Gastroenterological Society of Australia (GESA).

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Assessment

- Patient assessment needs to occur at the time of diagnosis of IBD and then on a regular basis. When first contemplating commencing medication that suppresses the immune system it is important to consider whether the patient is up to date with usual vaccinations, including diphtheria, tetanus and pertussis. Has the patient received vaccination against hepatitis B? Does the patient have a clear history of chickenpox or should their antibody status be assessed? Has a young female patient had a full course of human papillomavirus (HPV) vaccine?
- Immunosuppression due to use of thiopurines with or without anti-TNF agents can be associated with overwhelming varicella infection. For this reason, if there is any doubt about a past history of chickenpox then the patient's varicella antibodies level should be checked; if antibodies are absent or low, the patient should be vaccinated. Because the varicella vaccine is a live attenuated vaccine it needs to be given at least a month before immunosuppressive therapy is commenced. In the real world, however, where sick patients may need to be started on therapy immediately after diagnosis, such vaccination may not be possible.
- If the patient is to commence an anti-TNF agent then it is the responsibility of the gastroenterologist to screen for latent tuberculosis using a Quantiferon gold blood test or a tuberculin skin test (although these are not always reliable), and on occasion a chest x-ray. It is also important to take a history of exposure to tuberculosis as infliximab and adalimumab can cause reactivation of the disease, which can present as overwhelming infection.
- Chronic hepatitis B can also reactivate as a result of immunosuppression. Screening for it is therefore also required.

Management

- Be vigilant. If an immunosuppressed patient presents with new symptoms, consider opportunistic infections early in the differential diagnosis. Be on the look out for unusual presentations of common conditions, such as herpes zoster in young people who are immunosuppressed, and treat promptly with appropriate antiviral therapy.
- Make sure that immunosuppressed patients have annual influenza vaccinations and five-yearly pneumococcal vaccinations. These patients are considered to be at increased risk from influenza and pneumonia by virtue of their chronic illness.[3]
- Meningococcal vaccine can be given if indicated.
- The anti-TNF agents may be used during pregnancy; babies of these mothers should not receive a live vaccine until six months after delivery.

Conclusion

The increased risk of opportunistic infection in patients treated with immunosuppressant medication can be reduced in some cases by vaccination. Shared care between the gastroenterologist and the GP can help ensure patients have the appropriate vaccinations as GPs have more experience than gastroenterologists of routine vaccination schedules. The best time to consider the issue is before commencement of the immunosuppressant therapy. MT

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