



## Serologic protection to routine vaccinations in children with inflammatory bowel disease

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### Abstract

Treatment for inflammatory bowel disease [IBD] frequently involves the aggressive use of immunosuppressants that increases susceptibility to and severity of other infections. Consequently, many individuals postpone or refuse immunizations due to unstable disease activity and of fear of disease exacerbation. The aim was to evaluate serologic protection to and completeness of routine vaccinations in children with IBD. In this single-center cross-sectional study, children with IBD followed at the Alberta Children's Hospital were recruited from September 15, 2011 to August 15, 2012. Demographic data, IBD medication use, infection risk factors, and vaccination records were collected. Serum was also collected for rubella, hepatitis A virus [HAV], and hepatitis B virus [HBV] serology and analyzed by the Provincial Laboratory of Public Health. From review of vaccination records, the proportion with complete series for each vaccine according to the Alberta schedule (at age of vaccination) was evaluated. 155 children with IBD (93 Crohn's disease, 46 ulcerative colitis, 16 IBD-unclassified) underwent serum collection; complete vaccine records were available for 152 of these children. At enrolment, 93 subjects (60%) were currently using immunosuppressive medications (systemic corticosteroids n=20; immunomodulators n=70; and biologic n=48); an additional 30 subjects had a past history of immunosuppressive medication use. Of 155 participants, 69.7% had up to date MMR, DTap-IPV-Hib, and HBV immunizations. Of 152 participants, 81.9% mounted serologic protection to rubella; 20.6% to hepatitis A, and 65.8% to hepatitis B. Of those who had completed the specific vaccinations, serologic immunity was mounted by 113 of the 142 participants (79.6%) to rubella, 79 of the 114 participants (69.3%) to HBV, and 100% of the participants to HAV. Children with IBD are at risk for vaccine-preventable illnesses due to lack of receiving complete vaccine series and mounting an inadequate serologic response to vaccinations. Therefore, clinicians caring for patients with IBD should be conscientious about adherence to recommended vaccination schedules, measurement of immune response to vaccines, and administering booster vaccinations where appropriate.

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### References

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