

## Surviving a hemolytic uremic syndrome

You are on-call at a community hospital and a three-year-old boy is admitted with vomiting and bloody diarrhea. Your working diagnosis of an infection with *Escherichia coli* O157:H7 (verotoxigenic enterocoliform [VTEC]) is confirmed and you notify the local Medical Officer of Health. The child develops hemolytic uremic syndrome

(HUS) with a hemoglobin of 70 g/L, platelet count  $50,000 \times 10^9/L$  and a serum creatinine of 55  $\mu\text{mol/L}$ . He is airlifted to a tertiary-care paediatric hospital where intensive care unit admission is necessary for supportive management. The child survives after a complicated and lengthy course.

### LEARNING POINTS

- HUS is the principal cause of acute renal failure in children; most cases are secondary to *E coli* O157:H7 (VTEC).
- Up to 15% of North American children infected with VTEC will develop HUS, whose case fatality rate is about 3%.
- In the acute phase of HUS, many children will require multiple blood transfusions, and approximately 50% will need dialysis.
- Long term HUS sequelae include abnormal renal function in approximately 10% to 30% of patients and there is need for dialysis in a few patients. A very small number of patients will have life-long neurological complications ranging from hemiparesis to learning disabilities.
- Prompt notification of cases of VTEC to public health officials can save lives.

*The Canadian Paediatric Surveillance Program (CPSP) is a joint project of the Canadian Paediatric Society and Health Canada's Centre for Infectious Disease Prevention and Control that undertakes the surveillance of rare diseases and conditions in children. For more information visit <[www.cps.ca/english/cpsp](http://www.cps.ca/english/cpsp)> or <[www.cps.ca/francais/pcsp](http://www.cps.ca/francais/pcsp)>.*