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Abstract. To investigate the predictive factors for dehydration in acute diarrheal patients, this case control study was conducted using the observational analytic method. Acute diarrheal patients who were admitted to the Hospital and Outpatient Pediatric Clinic, Dr Soetomo Hospital, were included in this study. By discriminant analysis, three significant variables were determined to differentiate dehydration risk in acute diarrheal patients: frequency of stool, amount of feces in the stool, and severity of vomiting (power test: 70.0%). Significant differences were found between the groups with and without dehydration for stool frequency each day (p<0.05), amount of stool per day (p<0.05), and severity of vomiting (p<0.05). Frequency of stool, amount of stool, and severity of vomiting are predictive factors for dehydration in acute diarrhea.