

**Department of Urology, Medical Student Research Project**

**DO GASTROESOPHAGEAL AND VESICoureTERAL REFLUX SHARE A COMMON PATHOPHYSIOLOGIC MECHANISM? A POPULATION-BASED STUDY**

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**ABSTRACT**

**PURPOSE:** Clinical anecdotal observation suggests that gastroesophageal reflux disease(GERD) and vesicoureteral reflux (VUR) are concomitantly diagnosed at a higher rate than would be expected. If a correlation could be documented between these two conditions, it may allow for avoidance of morbidity for some patients through early recognition and intervention if appropriate.

**METHODS:** A retrospective database review of individuals aged 0-16 years registered in the Nova Scotia Medical Service Insurance (MSI) Database from January 1997 to December 2012 was completed. The baseline prevalence of GERD and VUR was calculated for this population for the same time period (n=407,609). Proportions of VUR patients with and without GERD were compared using the chi square test (p<0.05).

**RESULTS:** Of eligible individuals, 7.46% had a diagnosis of GERD (n=30,418), 0.33% had a diagnosis of VUR (n=1,344), and 0.001% had concomitant GERD and VUR (n=340). Among patients with GERD, the prevalence of VUR was 1.12%, compared to 0.27% in patients without GERD (p<0.0001). The risk of being diagnosed with VUR was higher in the presence of GERD (OR 4.2; CI 3.74-4.79; p<0.0001) and that association persisted after adjusting for gender and age.

**CONCLUSIONS:** In Nova Scotia, there is evidence of a true difference in the prevalence of VUR in pediatric patients with a concomitant diagnosis of GERD versus those without GERD. A diagnosis of VUR is more than 4 times more likely in an individual with GERD, suggesting that clinicians should have a higher suspicion for the diagnosis of VUR in pediatric patients with GERD.