Anthony J. Schaeffer, Neha R. Malhotra, Glen A. Lau, Patrick C. Cartwright, Nora F. Fino, Flory L. Nkoy, Mark D. Ebert, Rachel Hess





@ajschaeffer md

@UtahUrology

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- Imaging follow-up for persistent post-natal hydronephrosis is variable
- Unknown if variability is due to hydronephrosis severity
- Hypothesis: Mild antenatal hydronephrosis would have less postnatal imaging follow-up



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@ajschaeffer_md

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- Retrospective cohort study, 2005 – 2013
- Electronic data warehouse
- ICD 9 codes for hydronephrosis
- Outcome = total imaging in the 1st year of life





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RESULTS Utilization of Renal Ultrasound in the 1st Year of Life 60 Degree of Hydronephrosis 50 40 30 of Patients by 20 10 % Mild Moderate Severe Number of Ultrasounds per Patient p < 0.001



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2	RESUL	.TS		
	Initial H	ydronephrosis	Grade	
# of scans in 1 st year of life	Mild (n=990)	Moderate (n=230)	Severe (n=160)	
RBUS		p < 0.001		
1	44%	27%	34%	
2	40%	48%	41%	
3+	16%	24%	26%	
VCUG		p < 0.001		
0	51%	19%	5%	
1	48%	80%	92%	
2+	1%	1%	2%	
MAG3	p < 0.001			
0	81%	36%	9%	
1	17%	48%	57%	
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KEY FINDING

 On multivariate analysis, patients with moderate (RR 1.57 [95% CI 1.42 – 1.74]) or severe RR 2.09 [95% CI 1.88 – 2.32]) hydronephrosis had higher imaging utilization than those with mild hydronephrosis





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TAKE-AWAY

- Imaging use for post-natal hydronephrosis is proportional to hydronephrosis grade
- Clinicians are using a risk stratified approach to imaging





