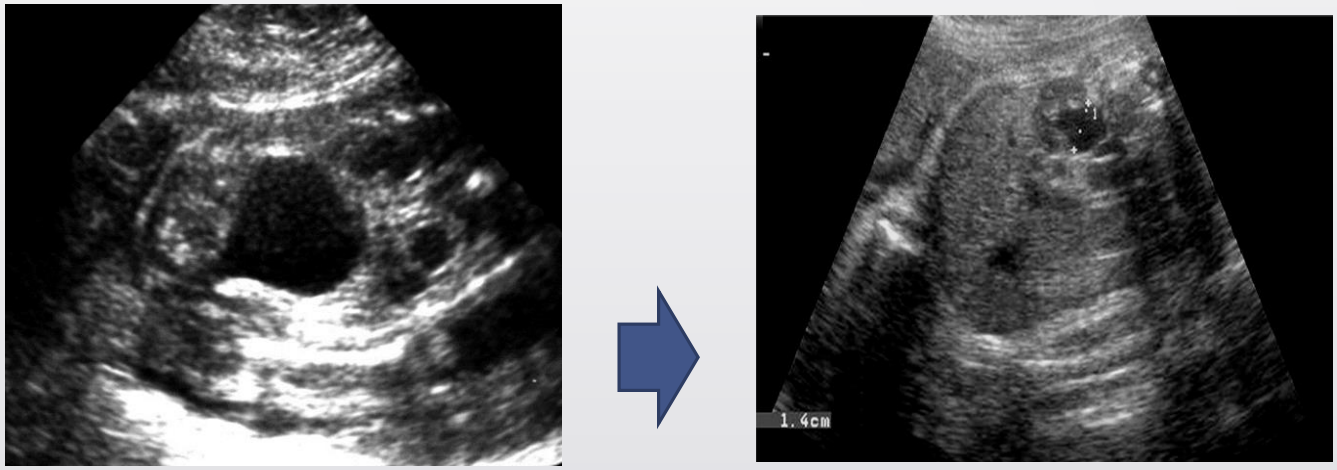
IPNA TEACHING COURSE ARGENTINA-CHILE 2019

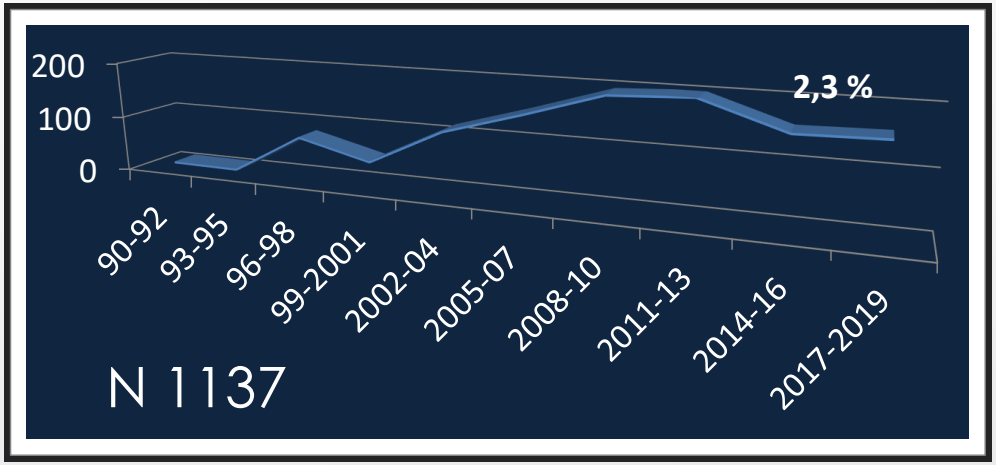
Experiencia de 25 años avala la estratificación en grupos de riesgo propuesta por el Consenso Multidisciplinario Americano para las dilataciones del tracto urinario detectadas intrautero.

Laura Alconcher

Unidad de Nefrología Pediátrica del Hospital Penna Bahía Blanca

Inicialmente pensamos que todo lo que se detectaba era patología y creíamos que el estudio y tratamiento precoz, evitaría las complicaciones y el daño renal.





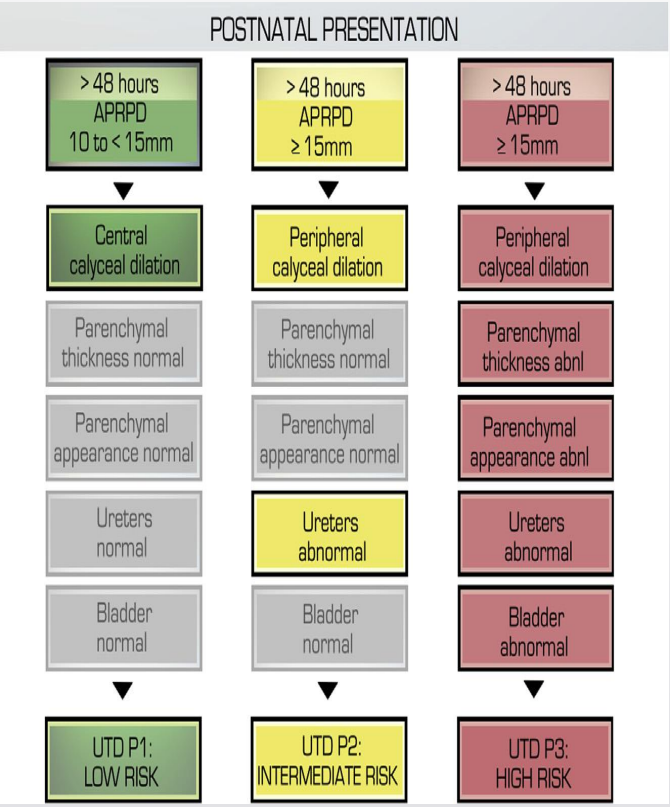
Dimensión problemática en Argentina: 756000 RN por año y 17388 casos nuevos.

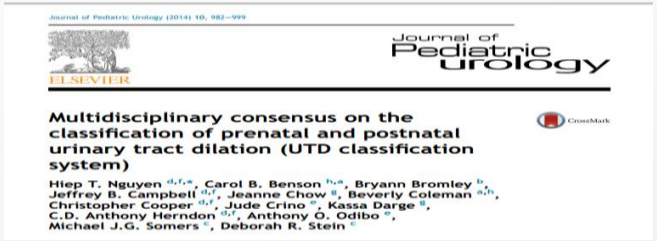
En EEUU nacerían 40000-80000 RN con DTU

- Estima que si **TODOS** los RN se estudiaran con:
  - 1-3 US prenatales
  - 1-3 US postnatales
  - Profilaxis ATB
  - 1 CUGm

90000000 de dólares por año, sin considerar costo de lucro cesante, costo de movilización, radiación, ansiedad familiar.

- Por el contrario, no evaluar a **NINGÚN** niño con DTU podría retrasar el diagnóstico de una uropatía severa como VUP y sus consecuencias.


POSTNATAL PRESENTATION
>48 hours APRPD 10 to <15mm
>48 hours APRPD ≥15mm
>48 hours APRPD ≥15mm
Central calyceal dilation
Peripheral calyceal dilation
Peripheral calyceal dilation
Parenchymal thickness normal
Parenchymal thickness normal
Parenchymal thickness abnl
Parenchymal appearance normal
Parenchymal appearance normal
Parenchymal appearance abnl
Ureters normal
Ureters abnormal
Ureters abnormal
Bladder normal
Bladder normal
Bladder abnormal
UTD P1: LOW RISK
UTD P2: INTERMEDIATE RISK
UTD P3: HIGH RISK


Journal of Pediatric Urology (2014) 10, 982–999
ELSEVIER
Journal of Pediatric Urology
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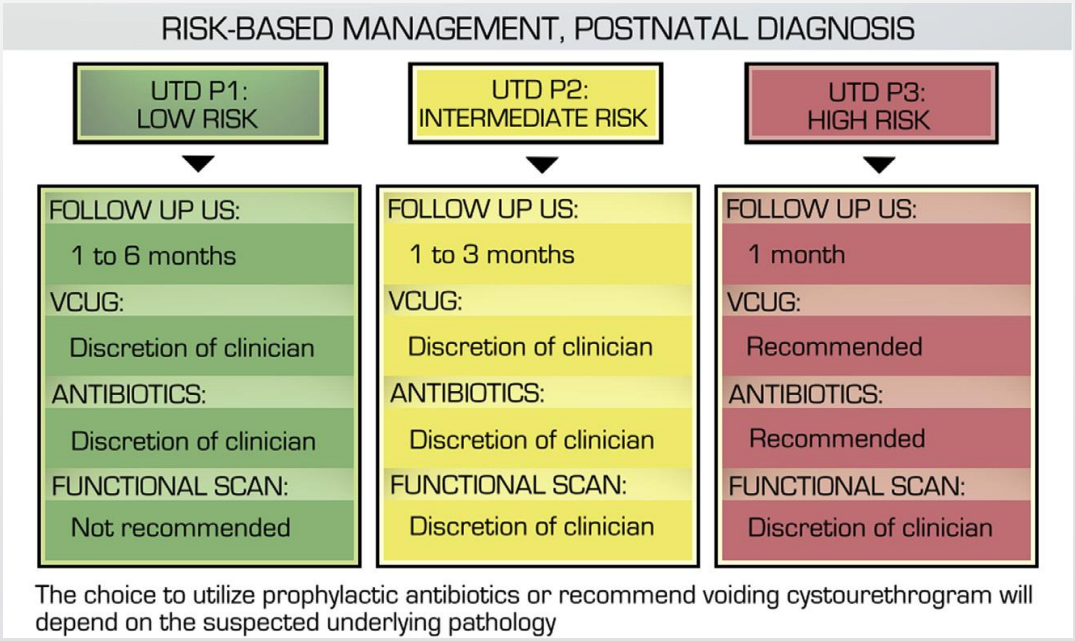
RISK-BASED MANAGEMENT, POSTNATAL DIAGNOSIS
UTD P1: LOW RISK
UTD P2: INTERMEDIATE RISK
UTD P3: HIGH RISK
FOLLOW UP US:
1 to 6 months
VCUG:
Discretion of clinician
ANTIBIOTICS:
Discretion of clinician
FUNCTIONAL SCAN:
Not recommended
FOLLOW UP US:
1 to 3 months
VCUG:
Discretion of clinician
ANTIBIOTICS:
Discretion of clinician
FUNCTIONAL SCAN:
Discretion of clinician
FOLLOW UP US:
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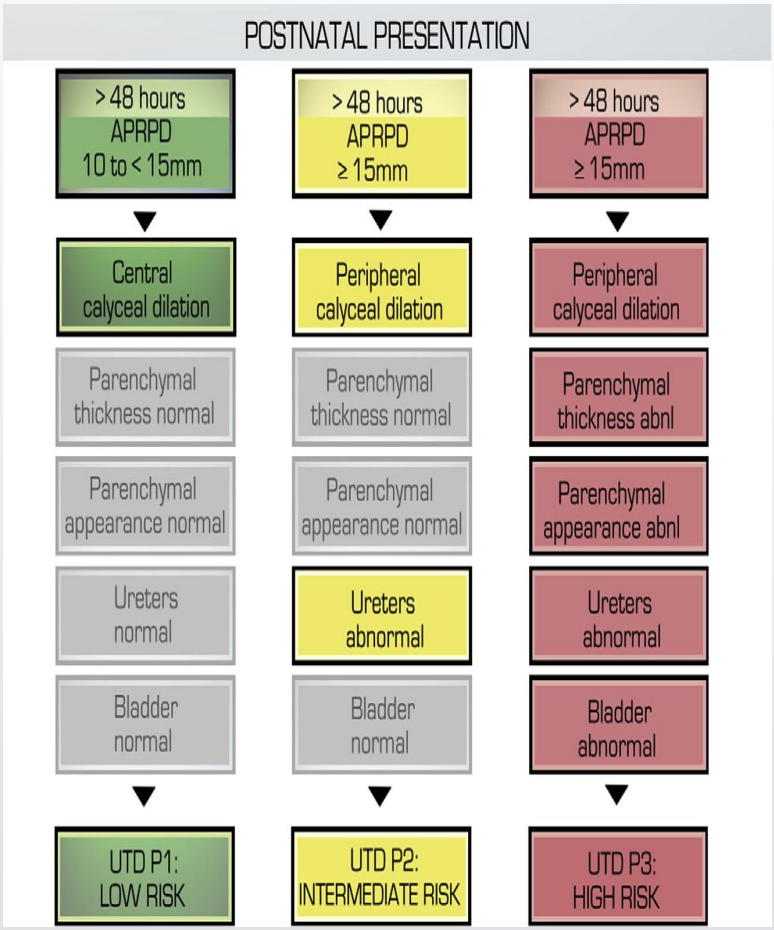
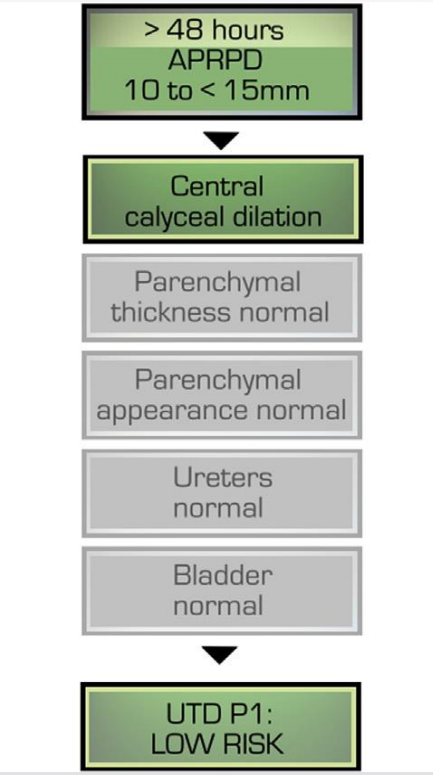
The choice to utilize prophylactic antibiotics or recommend voiding cystourethrogram will depend on the suspected underlying pathology

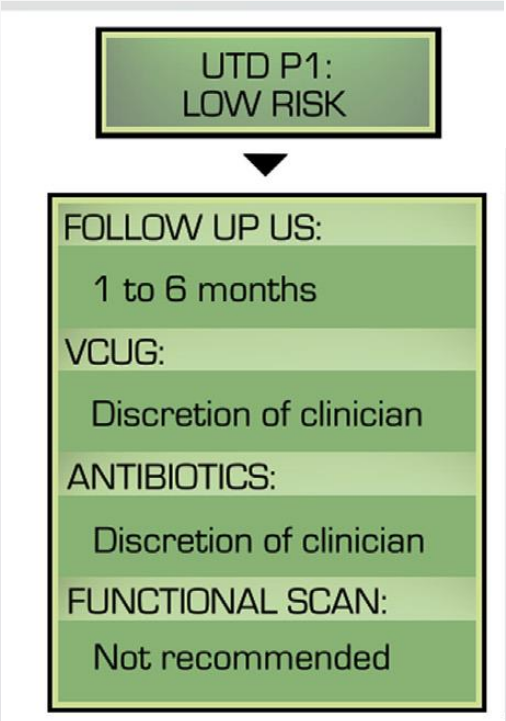


Homsy YL,. J Urol 1990;144:579-583

- Leve dilatación de la pelvis en corte transversal y en sentido A-P 5-15 mm sin dilatación de cálices.
- Moderada pelvis > 15mm con dilatación de cálices y parénquima normal
- Severa pelvis 15 mm, dilatación de cálices y afinamiento del parénquima

No incluyó anomalías de uréteres y vejiga





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Pediatr Nephrol (2004) 19:819–820
DOI 10.1007/s00467-004-1476-2

LETTER TO THE EDITORS

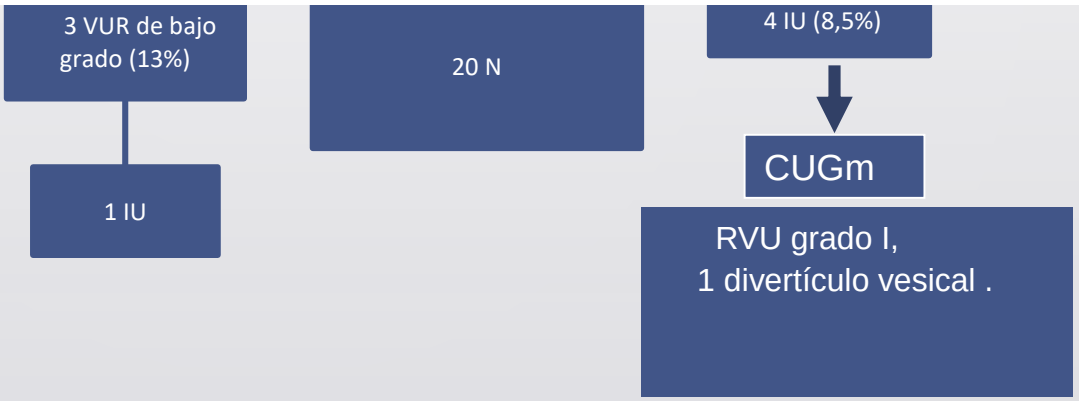
Laura Alconcher · Marcela Tombesi

Mild antenatal hydronephrosis: management controversies

Entre 1989 y 2003, de 150 RN con el antecedente de anomalía del tracto urinario detectada prenatalmente, 70 tuvieron una HNA unilateral leve aislada.

IU:*p*=0.24.
Evolución similar en ambos grupos

Ni la CUGm ni la PA deberían indicarse sistemáticamente en RN asintomáticos con HNA aislada leve. Los padres deben ser alertados sobre la posibilidad de tener un RVU e instruídos para tomar urocultivo en caso de fiebre. Seguimiento hasta el año es aconsejado.



Journal of Pediatric Urology (2012) 8, 129–133

ELSEVIER

Journal of Pediatric urology

Short-term outcome of mild isolated antenatal hydronephrosis conservatively managed

María Marcela Tombesi [a,*], Laura Fernanda Alconcher [b]

Table 1 UTI by APPD in newborns with mild isolated antenatal hydronephrosis.

23 NB with UTI	Yes	No
APPD 11–15 mm	1	32
APPD 5–10 mm	22	138

$P = 0.15$.

Table 2 Hydronephrosis outcome based on APPD of 277 renal units.

	IUR$^{\neq}$ and TR$^{\propto}$		PR$^{\pm}$	S$^{\infty}$	P$^{\times}$
APPD 11–15 mm	23	67%	5	5	1
APPD 5–10 mm	179	76%	15	47	2

$p = 0.71$. IUR$^{\neq}$ intrauterine resolution, TR$^{\propto}$ total resolution, PR$^{\pm}$ partial resolution, S$^{\infty}$ stability, P$^{\times}$ progression.

Un límite de 15 mm de DAP cuando se trata de dilataciones aisladas **es seguro**
Profilaxis y CUGm no deberían indicarse sistemáticamente.

Pediatr Nephrol (2012) 27:1119–1123
DOI 10.1007/s00467-012-2113-0

ORIGINAL ARTICLE

Natural history of bilateral mild isolated antenatal hydronephrosis conservatively managed

Laura Fernanda Alconcher · Maria Marcela Tombesi

Table 1 Bilateral and unilateral mild isolated antenatal hydronephrosis outcome

NBs diagnosed with mild isolated antenatal hydronephrosis (n = 236) Outcome

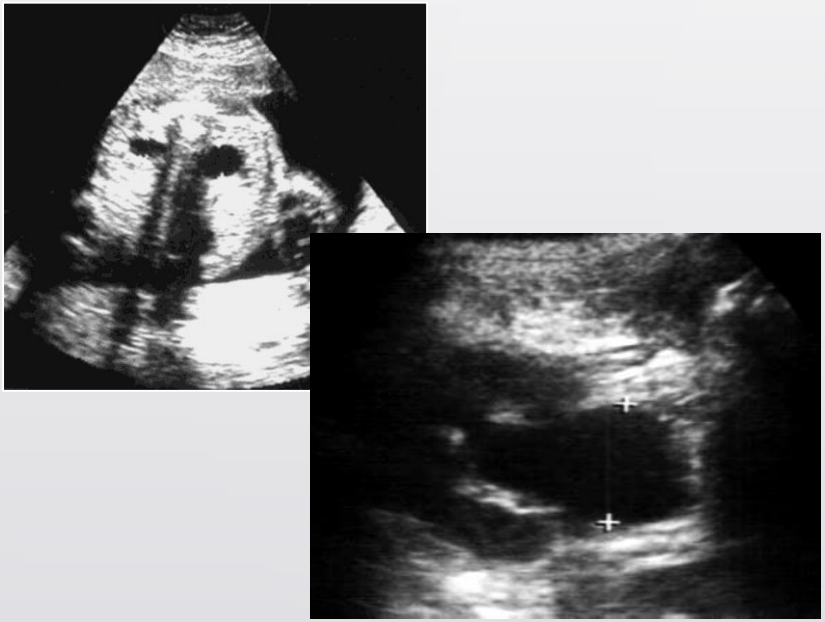
Profilaxis antibiótica y la CUGm no eran mandatorias en RN con HNA leve bilateral aislada, pero se recomendaba seguimiento clínico y ecográfico hasta el año de vida.

p=0,07

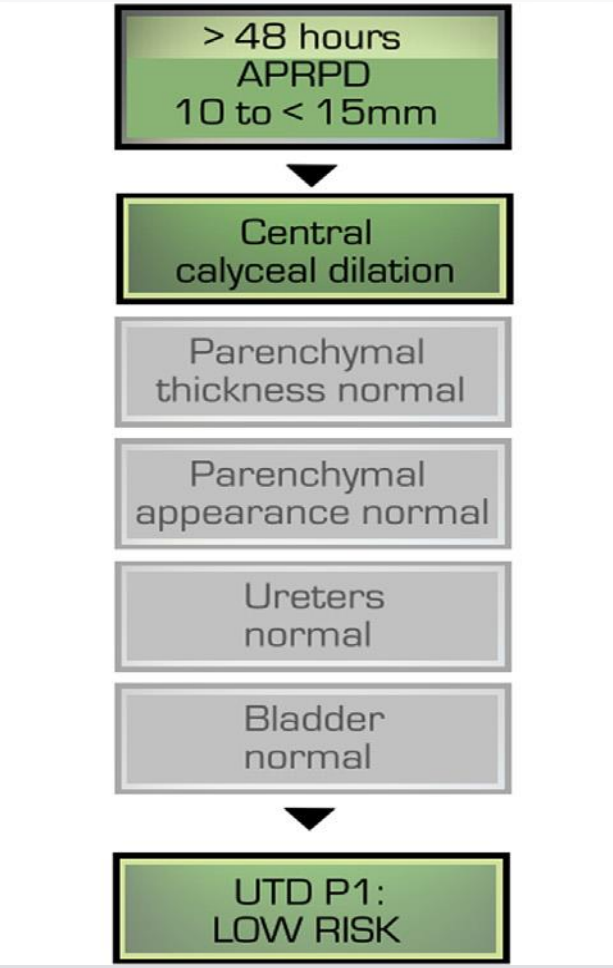
p=0,82

Hidronefrosis antenatal leve	UTI	NO UTI	Total
Bilateral	9 (9%)	89	98
Unilateral	14 (10%)	124	138

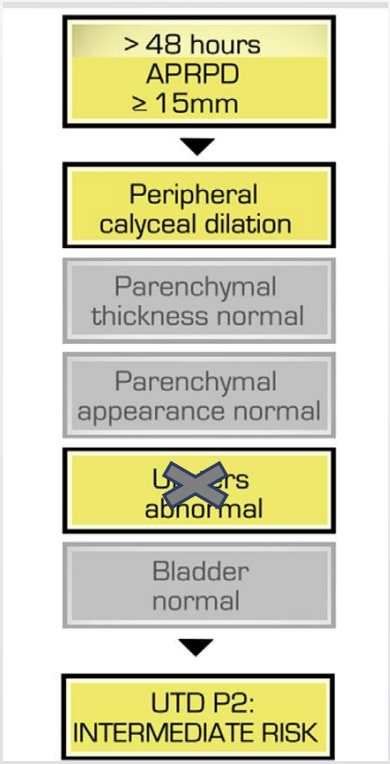
Sidhu G,Beyene J,Rosenblum ND. Outcome of isolated antenatal hydroneprosis: a systematic review and meta-analysis. Pediatr Nephrol (2006) 21:218-224

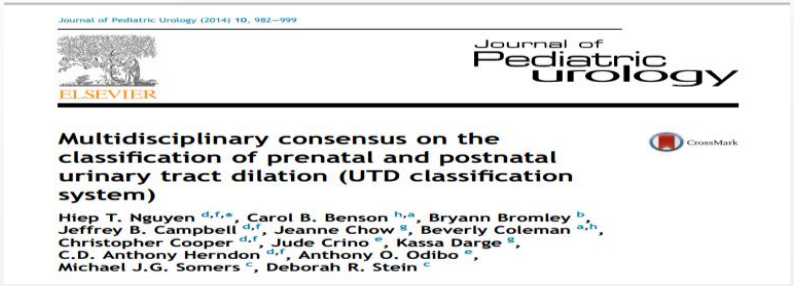


Meta-análisis : 98% de las DTU leves mejoró Las dilataciones leves son condiciones benignas que requieren mínimas investigaciones (US) durante el 1er año de vida.


> 48 hours
APRPD
10 to < 15mm
Central
calyceal dilation
Parenchymal
thickness normal
Parenchymal
appearance normal
Ureters
normal
Bladder
normal
UTD P1:
LOW RISK


Si se infecta
CUGm
ANTIBIOTICS:
NO recomendado
FUNCTIONAL SCAN:
Not recommended

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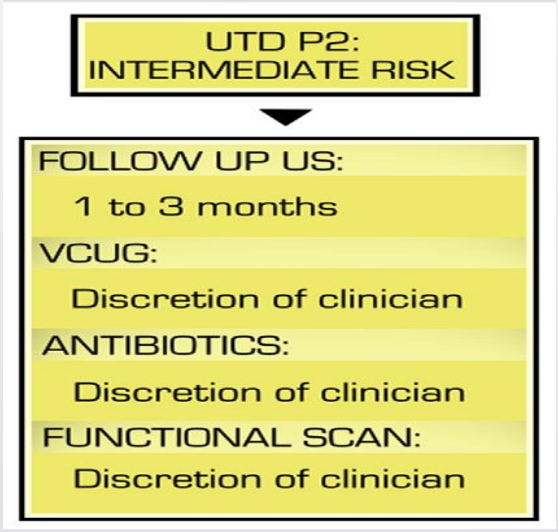
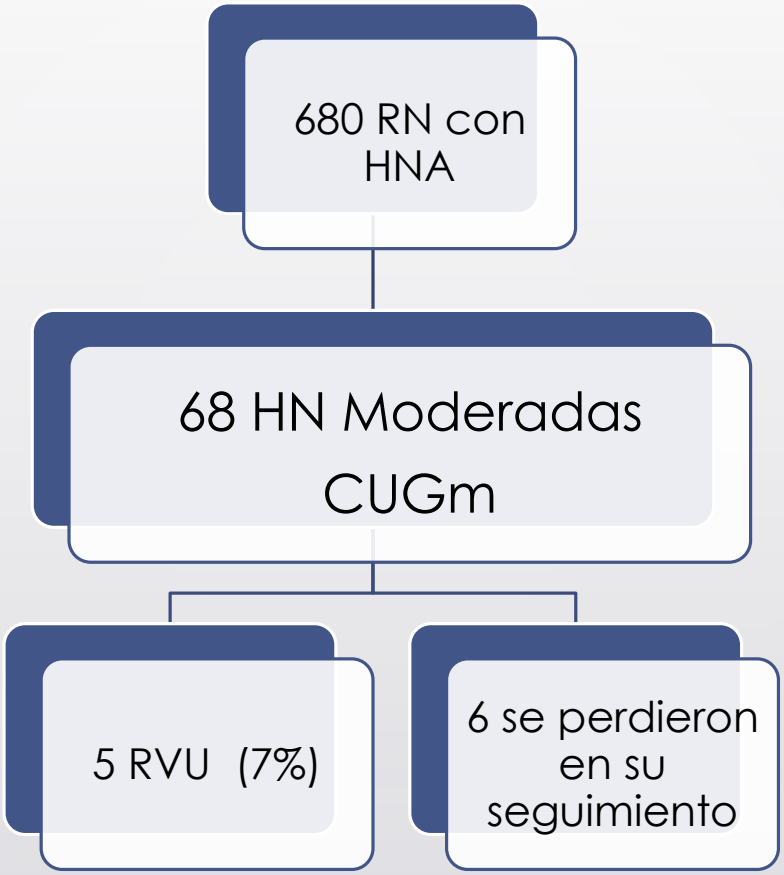
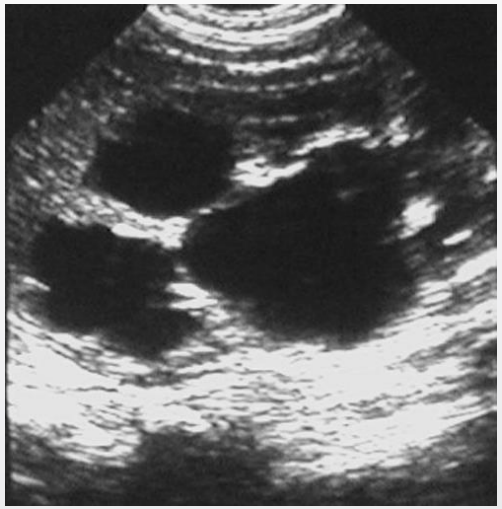
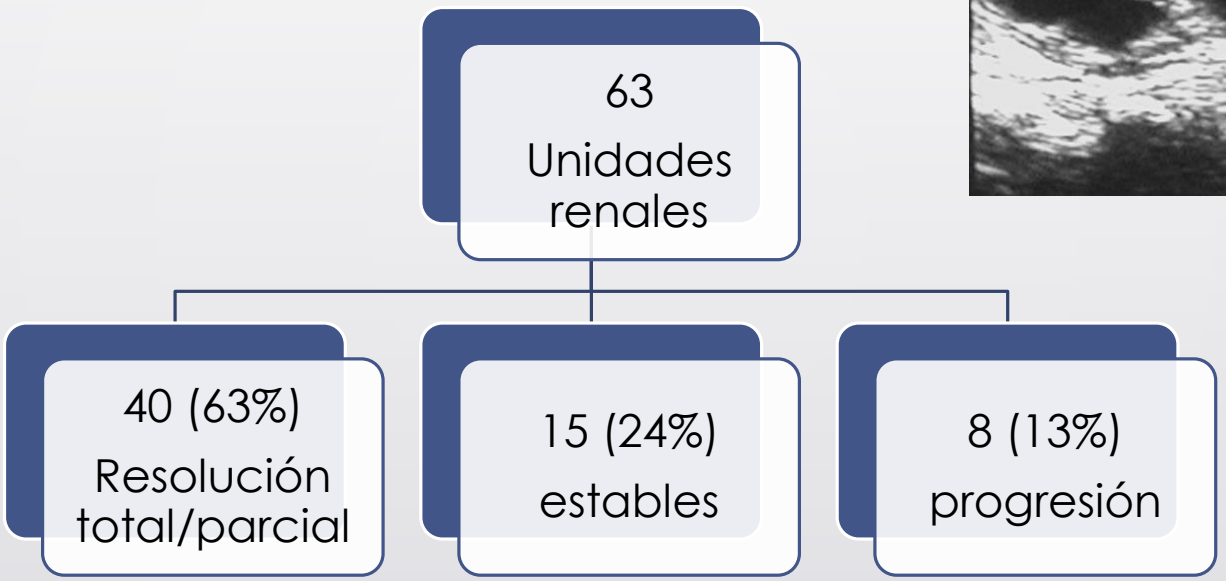


Entre 1989 y 2014



Mediana de seguimiento 26 meses.
Promedio de 51 m (4-212 m)





www.renal.org.ar nefrología, diálisis y trasplante, volumen 35 - nº 3 - 2015

ARTÍCULO ORIGINAL

FACTORES DE RIESGO ASOCIADOS A INFECCIÓN URINARIA EN PACIENTES CON HIDRONEFROSIS ANTENATAL DE ALTO GRADO

RISK FACTORS ASSOCIATED TO URINARY INFECTION IN PATIENTS WITH HIGH GRADE ANTENATAL HYDRONEPHROSIS

Laura F. Alconcher, María M. Tombesi, Lucas I. Lucarelli

Ni el sexo, ni el grado de HNA, ni el uso de PA se relacionaron con la incidencia de IU.
La PA NO fue un factor protector.

2009

2009

Pediatric Urology

Occurrence of Urinary Tract Infection in Children With Significant Upper Urinary Tract Obstruction

Christopher C. Roth, J. Mikel Hubanks, Brianna C. Bright, Jonathan E. Heinlen, Ben O. Donovan, Bradley P. Kropp, and Dominic Frimberger

OBJECTIVES Ureteropelvic junction obstruction and obstructive megaureter are common causes of upper urinary tract obstruction. Recent data have demonstrated that the rate of urinary tract infection (UTI) among children with upper tract obstruction not treated with prophylactic antibiotics is >36%. The aim of this study was to evaluate the occurrence of UTI in our patients with ureteropelvic junction obstruction and megaureter to better assess the role of prophylactic antibiotics.

METHODS A retrospective analysis was conducted. The inclusion criteria were grade 3 or 4 hydronephrosis secondary to obstructive megaureter or ureteropelvic junction obstruction in children not maintained on prophylactic antibiotics. UTI was defined as a culture-documented symptomatic infection. Fisher's exact tests were used to evaluate for an association between the occurrence of UTI with sex, level of obstruction, grade of hydronephrosis, and circumcision status.

RESULTS A total of 92 patients met the study criteria. The rate of UTI in all patients was 4.3% (95% confidence interval 0.2%-8.6%). No statistically significant difference in the infection rate was noted according to sex, obstruction level, hydronephrosis grade, or circumcision status.

CONCLUSIONS Our results have demonstrated a low occurrence of UTI in antenatally diagnosed patients not maintained on antibiotics. We have concluded that antibiotic prophylaxis is unlikely to benefit most children with grade 3 or 4 hydronephrosis secondary to upper tract obstruction. UROLOGY 73: 74–78, 2009.

2013

Risk Factors for Febrile Urinary Tract Infection in Infants with Prenatal Hydronephrosis: Comprehensive Single Center Analysis

Piotr Zareba, Armando J. Lorenzo and Luis H. Braga*

From the Division of Urology (PZ) and McMaster Pediatric Surgery Research Collaborative, McMaster University (LHB), Hamilton and Division of Urology, Hospital for Sick Children (AJL), Toronto, Ontario, Canada

Abbreviations and Acronyms

AHN — prenatal hydronephrosis

UPJO — ureteropelvic junction obstruction

UTI — urinary tract infection

VCUG — voiding cystourethrogram

VUR — vesicoureteral reflux

Accepted for publication October 7, 2013.

Study received Hamilton Integrated Research Ethics Board approval.

*Correspondence. Division of Urology, McMaster University, McMaster Children's Hospital, 1200 Main St. West, Hamilton, Ontario, Canada, L8N 3Z5 (telephone. 905 521 2100, extension 76692, FAX. 905 521 9992, e mail. braga@mcmaster.ca).

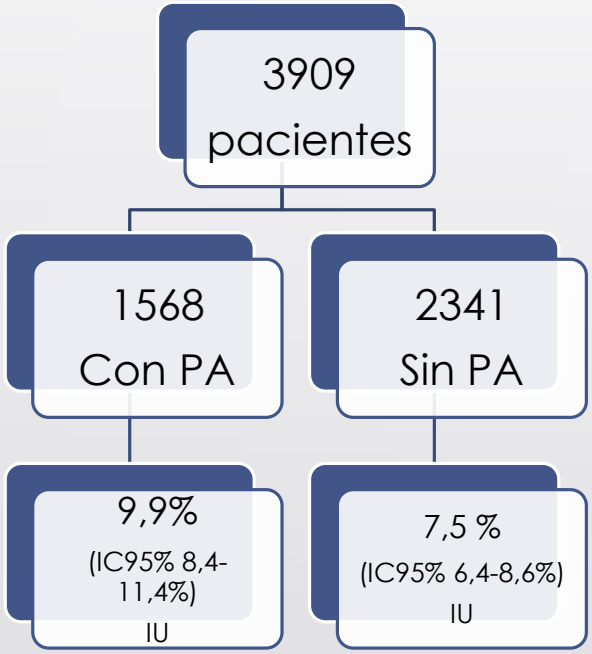
Purpose: We assessed risk factors for urinary tract infection in children with prenatal hydronephrosis

Materials and Methods: We identified 376 infants with prenatal hydronephrosis in an institutional database. The occurrence of febrile urinary tract infection in the first 2 years of life was ascertained by chart review. Febrile urinary tract infection was defined as a positive culture from a catheterized urine specimen in a patient with a fever of 38.0C or greater. Multivariate logistic regression was used to assess gender, circumcision status, hydronephrosis grade, vesicoureteral reflux grade and antibiotic prophylaxis as predictors of the risk of urinary tract infection.

Results: Included in analysis were 277 males and 99 females. Hydronephrosis was high grade in 128 infants (34.0%) and vesicoureteral reflux was present in 79 (21.0%). Antibiotic prophylaxis was prescribed in 60.4% of patients, preferentially to females vs males (70.7% vs 56.7%), those with high vs low grade hydronephrosis (70.3% vs 55.2%) and those with vs without vesicoureteral reflux (96.2% vs 50.8%). On multivariate analysis there was an association between high grade hydronephrosis and an increased risk of urinary tract infection (adjusted OR 2.40, 95% CI 1.26–4.56). Females (adjusted OR 3.16, 95% CI 0.98–10.19) and uncircumcised males (adjusted OR 3.63, 95% CI 1.18–11.22) were also at higher risk than circumcised males. Antibiotic prophylaxis was not associated with a decreased risk of urinary tract infection (adjusted OR 0.93, 95% CI 0.45–1.94).

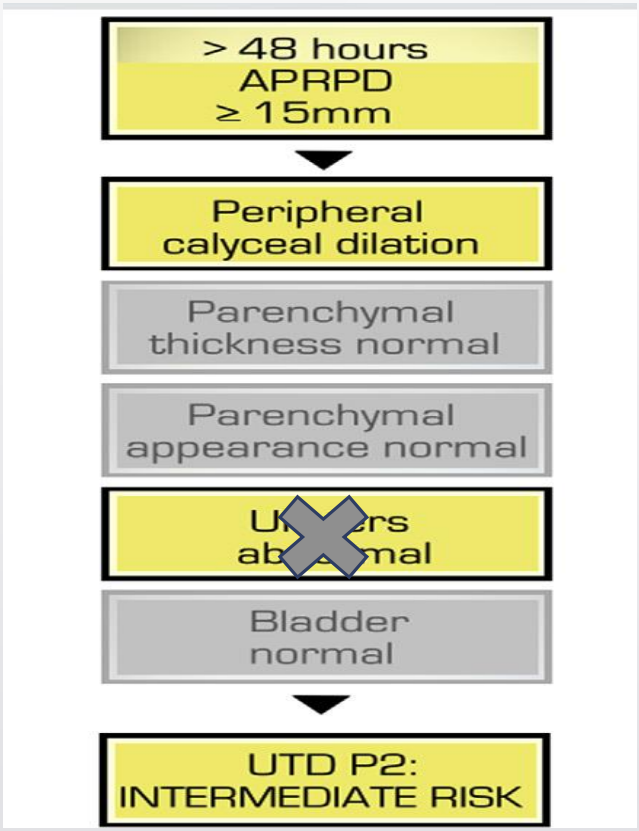
Conclusions: High grade hydronephrosis, female gender and uncircumcised status in males are independent risk factors for febrile urinary tract infection in infants with prenatal hydronephrosis. Antibiotic prophylaxis did not reduce the risk of urinary tract infection in the study group.

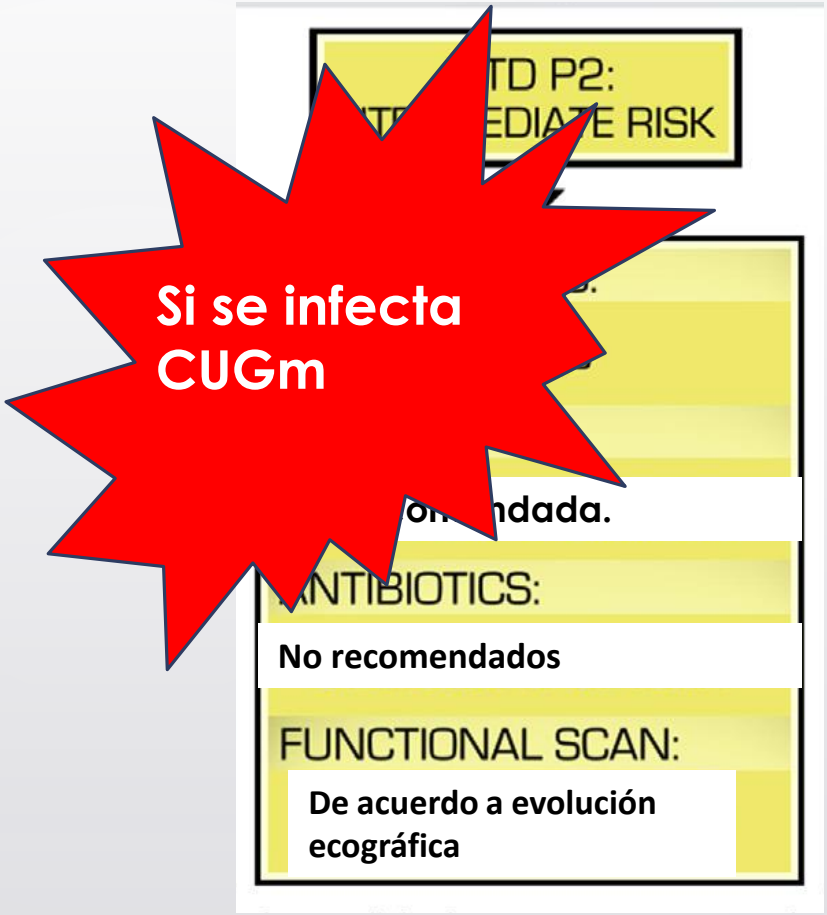
Antibiotic Prophylaxis for prevention of UTI in prenatal hydronephrosis. An updated an systematic review. Can Urol Assoc J 2017; 11S3-11 Luis Braga

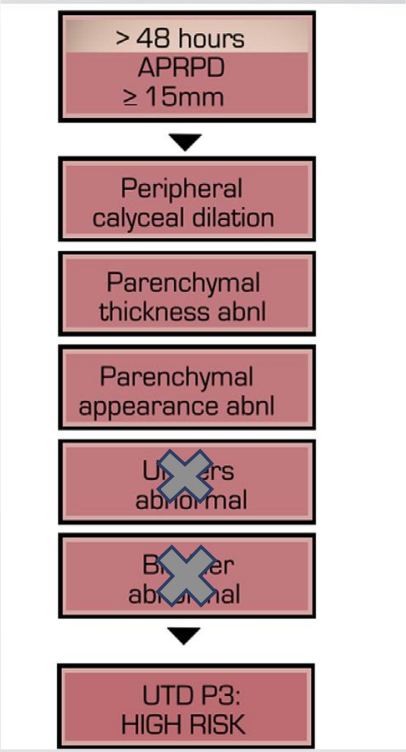


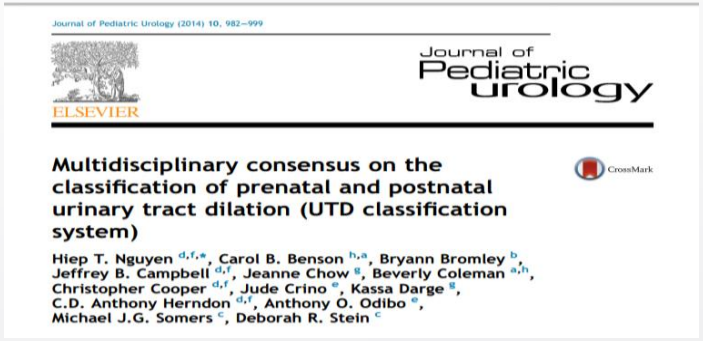
OR: 0,84 (IC 95% 0,45-1,55)

La profilaxis antibiótica no tiene un efecto protector estadísticamente significativo para evitar IU en RN con HNA


> 48 hours
APRPD
≥ 15mm
Peripheral calyceal dilation
Parenchymal thickness normal
Parenchymal appearance normal
Bladder normal
UTD P2:
INTERMEDIATE RISK


Si se infecta CUGm
ANTIBIOTICS:
No recomendados
FUNCTIONAL SCAN:
De acuerdo a evolución ecográfica





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1989-2014

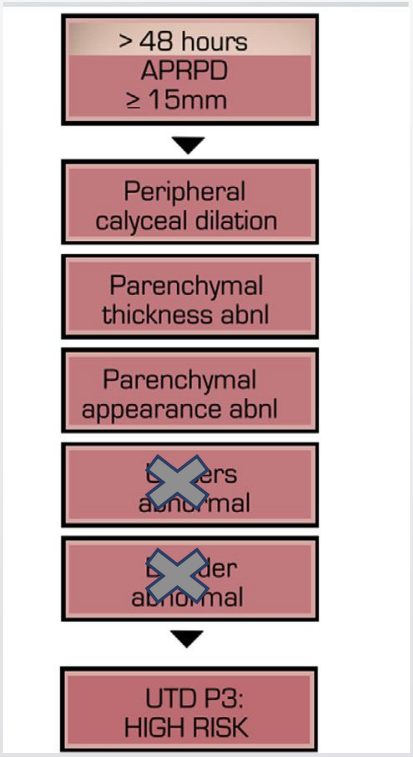
HN SEVERAS AISLADAS

DAP de la pelvis > 15 mm , con dilatación de cálices y afinamiento del parénquima.

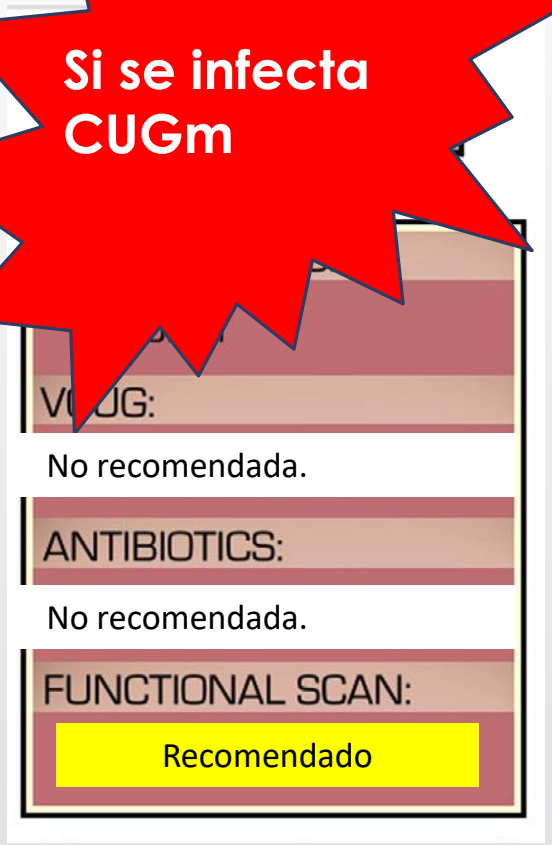
21 pacientes **(3%) A todas se les realizó CUGm. Ninguno tuvo RVU**

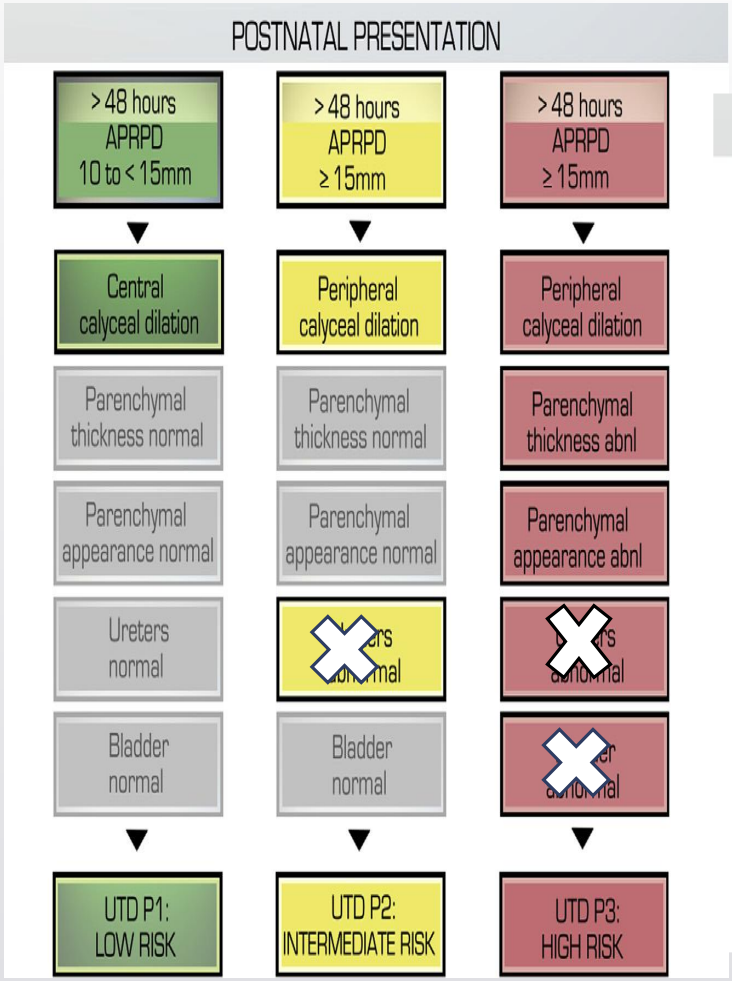
La mayoría quirúrgicas, hay excepciones.

Un diagnóstico certero de obstrucción debe incluir un período de observación



Si se infecta CUGm

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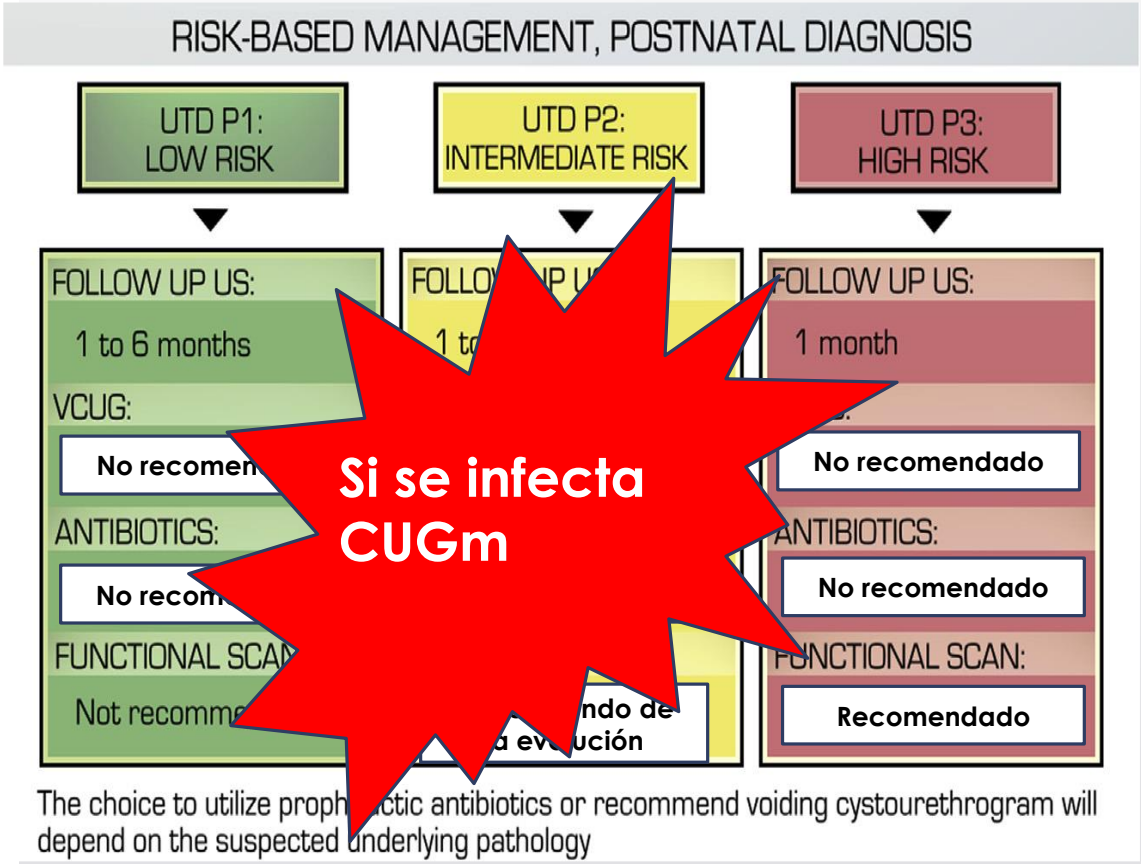
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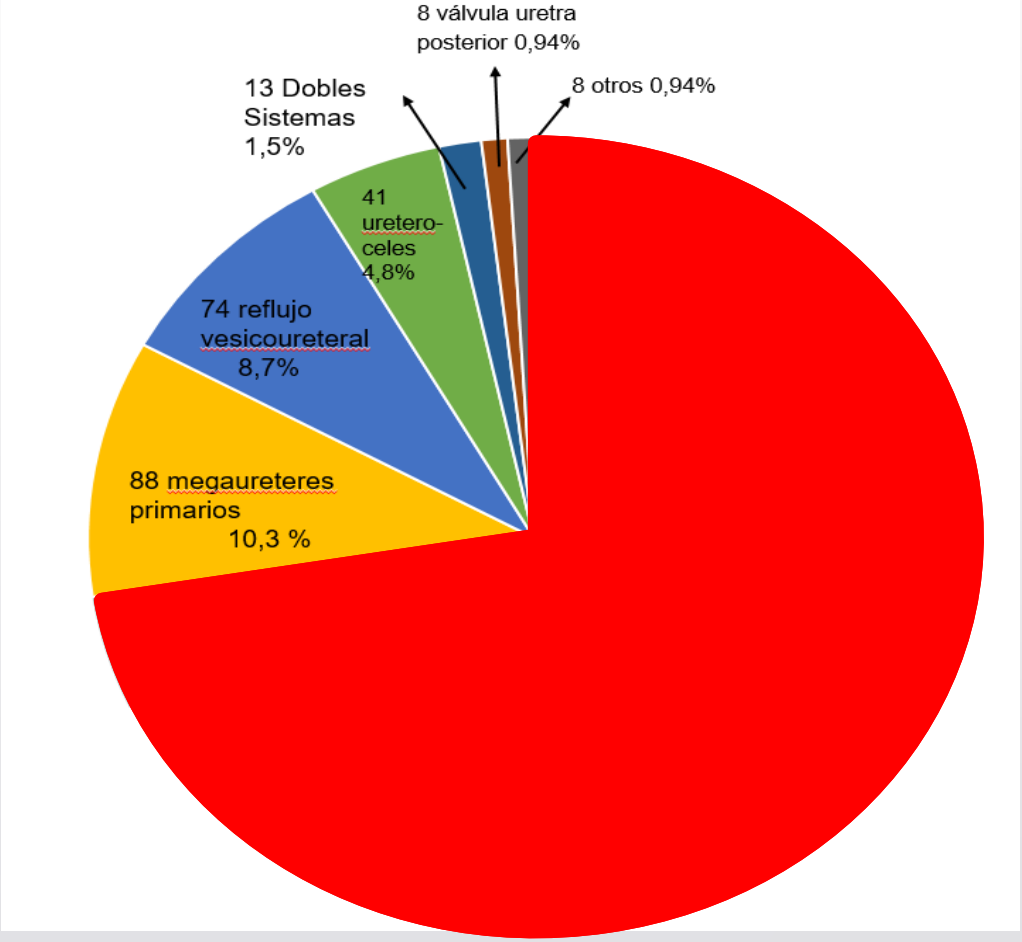
FOLLOW UP US:
1 to 6 months
1 month
VCUG:
No recomendado
ANTIBIOTICS:
No recomendado
FUNCTIONAL SCAN:
Recomendado
Si se infecta CUGm
The choice to utilize prophylactic antibiotics or recommend voiding cystourethrogram will depend on the suspected underlying pathology

Espectro diagnóstico de las anomalías dilatadas (n 848) 1989-2017



2014

Evaluation of Prenatal Hydronephrosis: Novel Criteria for Predicting Vesicoureteral Reflux on Ultrasonography

Nora G. Lee, H. Gil Rushton, Craig A. Peters, Danja S. Groves and Hans G. Pohl*

From the Department of Urology, Children's National Medical Center, Washington, D. C., and Department of Anesthesia, University of Virginia Medical Center, Charlottesville, Virginia (DSG)

262 con DTU
Eco + CUGm

47 (18%)
RVU

- ✓ Los predictores ecográficos independientes más importantes de R… < 0,001
- ✓ …o
- ✓ …ón de
- ✓
- ✓ …VU.

Sumarle costos económicos, dosis de radiación, tiempo, ansiedad, riesgo de IU

Usando esos criterios sólo se hubiera omitido el diagnóstico del 2% de los RVU de alto grado y 2% de los de bajo grado y se hubieran evitado 165 CUGm (63%).

Resumiendo: DTU alto

- **Riesgo Bajo:** tiene muy buen pronóstico, resolución total en el 80-90%. Sólo merece seguimiento ecográfico.
- **Riesgo intermedio:** son el grupo más difícil de definir pueden resolverse, mantenerse estables o progresar. Deben seguirse con ecografía y estudios funcionales de acuerdo a cada caso particular.
- **Riesgo alto:** la mayoría son quirúrgicas.

- **En ninguno de estos 3 grupos hay evidencia que apoye el uso de profilaxis antibiótica ni la realización sistemática de CUGm.**

PERO…. Los padres deben ser informados sobre las probabilidades de evolución, el riesgo de IU, sobre cómo tomar un urocultivo, de la importancia del diagnóstico precoz de IU y la necesidad de hacer CUGm si desarrolla IU

- **CUGm estaría indicada en:**

1- Sospecha de VUP

2- Hidroureteronefrosis

3-Malformaciones complejas: DS, ureteroceles,etc

4- Riñones displásicos

- **Profilaxis antibiótica:**

1- RVU de alto grado o de bajo grado pero que se infecta

2- En cualquier otra malformación que lleve a IUR

Muchas gracias!!!!!

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