1165. Seroprevalence of Chagas Disease among Latin American Children Living in New York

Andrew S. Handel, MD[1]; Harriet Hellman, CPNP, PhD[2]; Egar Flores, MD[1]; Christy Beneri, DO[1]; [1]Stony Brook Children's Hospital, Stony Brook, NY; [2]Hampton Community Healthcare, Southampton, New York

Session: P-68. Pediatric Maternal-child infections

Background. Approximately 300,00 individuals in the United States are estimated to have Chagas disease. To date, only one seroprevalence study in the US has included children. Diagnosis during childhood prevents irreversible sequelae and is better tolerated than during adulthood. Seropositive children may be difficult to identify, as those infected vertically may have never visited an endemic region. We sought to identify children with Chagas disease through a pilot study of serology and risk factors.

Methods. Participants were recruited from Stony Brook University Hospital (SBUH) or an ambulatory pediatric office, both in Suffolk County, New York (population: 1,476,000; 20.2% Hispanic or Latino). Study participants were 1 - 25 years old, resided in Suffolk County, and either the child and/or the child's mother was born in or had long-term residence (≥ 3 years) in Latin America. *T. cruzi* serum IgG was determined with a Chagatest ELISA (Weiner Lab) or a Chagas Detect Plus Rapid Test (InBios). Positive screens were confirmed with a second serologic test at the CDC. Participants completed a survey of demographics and Chagas disease knowledge and risk factors, in English or Spanish. Descriptive statistics were applied. SBUH IRB provided study approval.

Results. We enrolled 93 children (Table 1). Three (3.2%) had a positive IgG screen, of which only one had a confirmed infection (1.1%). This was a 17-year-old who had lived in a rural adobe home and moved to the US at 8 years old. No children or their mothers recalled being bitten by or seeing triatomine insects in their Latin American homes. Of 27 children whose mothers had been screened for infection, 13 were born to 3 mothers with confirmed Chagas disease; all 13 children were seronegative. Of 8 participants reporting other family members with Chagas disease, all were seronegative.

Demographics of 93 participants screened for Chagas disease

	n (%)
Age (years ± SD)	14.5 ± 5.1
Male	48 (52%)
Country of birth among children born in Latin America	73 (78%)
Colombia	10%
Brazil	2 (3%)
Chile	1 (1%)
Ecuador	23 (32%)
El Salvador	10 (14%)
Guatemala	6 (8%)
Honduras	1 (1%)
Mexico	20 (32%)
Paraguay	1 (1%)
Venezuela	1 (1%)
Average age of child at time of immigration to the US (years ± SD)	9.5 ± 4.8
Birth country of mothers whose enrolled children were born in the US	20 (22%)
El Salvador	12 (60%)
Mexico	7 (35%)
Not stated	1 (5%)
Home construction material among children born in Latin America (may select multiple options)	
Brick	40 (55%)
Adobe	22 (30%)
Wood	4 (5%)
Mud	2 (3%)
Cement	1 (1%)
No response	8 (11%)
Setting of child's home in Latin America	
Rural	37 (51%)
Urban	30 (41%)
Suburban	6 (8%)

SD. standard deviation; US: United States

Conclusion. Without reliable tools for identifying those at greatest risk of Chagas disease, universal screening of children born in high-risk Latin American regions remains a reasonable strategy. In addition, screening mothers born in Latin America is likely a more cost-efficient means to evaluate second-generation children. A tremendous knowledge gap of pediatric Chagas disease in the US remains.

Disclosures. **All Authors**: No reported disclosures

1166. Reverse Syphilis Screening and Adherence to The Congenital Syphilis Guidelines: Institutional Experience

Brandon Chatani, MD[1]; Aida Chaparro, MD[2]; Patricia Alvarez, MD[1]; Kristopher Arheart, Professor, PhD[2]; Ivan Gonzalez, MD[1]; Gabriela Moraru, MD[3]; [1]University of Miami/Jackson Health System, Miami, Florida; [2]University of Miami, Miami, Florida; [3]Jackson Health System /Holtz Children's Hospital, Miami, Florida

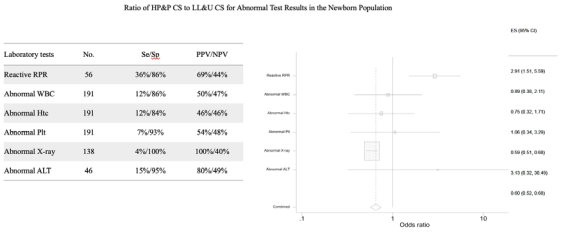
Session: P-68. Pediatric Maternal-child infections

Background. This study is analysis the consequences of the reverse syphilis screening on the management of newborns exposed to maternal syphilis, and pediatric physicians' adherence to the existing guidelines.

Methods. We conducted a 5-year retrospective review of the maternal population and their newborns diagnosed with syphilis. Women with positive results (TT+/NTT+) and discordant (TT+/NTT-/TT+) and their newborns were included in the analysis.

Results. Per American Academy of Pediatrics (AAP), the 202 newborns were divided in two groups: proved or highly probable and possible congenital syphilis (Group A, n=102) and less likely and unlikely congenital syphilis (Group B, n=100). Except for the RPR, none of the other laboratory tests showed higher odds for predicting congenital syphilis. The RPR titers above 1:16 were only identified among newborns belonging to the Group A (5%); 32 patients (31%) in the Group A and 19 (9%) in the Group B had an RPR titer equal to or below 1:8. An RPR titer equal to or above 1:4 was almost three times more likely to be identified in patients from Group A (OR 2.91; CI 1.51- 5.59, p< 0.05). The newborns with non-reactive RPRs represented 64% of the patients in the Group A and 47% of them were born to mother with non-reactive RPR also (mothers with discordant results). Among the Group B, 82% of the neonates had a non-reactive RPR and 54% were delivered to mother with non-reactive RPRs. Babies in Group B had additional work-up performed 69% (n=37) of the time; 15% of these babies were treated with intramuscular penicillin which does not follow established AAP guidelines.

Statistical analysis of the laboratory tests used for the congenital syphilis work-up



Legend: HP&P CS - highly probably and possible CS; LL&U CS - less likely and unlikely CS.
Se/Sp sensitivity/specificity; PPV/NPV positive predictive value/negative predictive value

Result table comparing the two groups of newborns

	NB diagnosis of "highly probable" and "possible" (Group A)	NB diagnosis of "less likely" and "unlikely" (Group B)	*P*-value
Full cohort, n =202 (%)	102 (50.5)	100 (49.5)	
Clinical signs of syphilis	1	0	1.00
Abnormal radiological exams/ total exam done	2/86	1/52	
Newborn RPR, n (%) Reactive 1:64 1:32 1:16 1:8 1:4 1:2 1:1 Nonreactive	 37 (36) 1 2 2 4 12 9 7 65 (64)	 18 (18) 0 0 0 1 3 8 6 82 (82)	 0.005
Abnormal serum WBC/Total tests	12/100	12/88 (67 full-term)	0.88
Abnormal serum hemoglobin or hematocrit /Total tested	12/100	13/88 (67 full-term)	0.72
Abnormal platelets/Total tests	7/100	6/88 (67 full-term)	0.85
Abnormal WBC in the CSF/Total spinal tap performed Abnormal VDRL in the CSF	3/31 1	2 /15 (7 full-term) 0	0.63
Abnormal ALT/Total tests	4 /24	1 /22 (15 full-term)	0.36
Newborn therapy, n = 120 (%) Penicillin IM (1dose) Penicillin IV Penicillin IV+IM	75 (62.5) 24 (32) 49 (65) 2 (3)	45 (37.5) 25 (56) 15 (33) 5 (11)	 0.0032
Maternal RPR, n (%) Reactive Non-reactive	 55 (53) 47 (47)	 46 (46) 54 (54)	0.29
Maternal therapy adequacy (Total treated n= 59) Adequate/ total treated Inadequate or unknown if adequate/ Total treated	 0/28 28 /28	 30 /31 1/31	0.50 <0.0001
Maternal coinfection with HIV, n (%)	14 (14)	13 (13)	0.95
Maternal coinfection with Gonorrhea/ Total tests	3/83	0/88	0.10
Maternal coinfection with Chlamydia trachomatis/ Total tests	9/83	2/88	0.018
Maternal coinfection with Hepatitis C/ Total tests	0/99	4/98	0.059
Maternal coinfection with Hepatitis B/ Total tests	2/101	1/97	1.00
Maternal toxicology screening positive/ Total tests	6/38	5/32	0.82
ID consult provided, n (%)	22 (22)	13 (13)	0.10