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32nd World Pediatrics Conference

December 04-05, 2019 | Barcelona, Spain

Scientific Tracks & Abstracts Day 1

World Pediatrics 2019

..... Day-1

SESSIONS

Clinical Pediatrics | Pediatrics Neurology | Pediatrics | Neonatology | Pediatrics Allergy and Infections | Pediatrics Surgery

Chair: Harvinder Kaur, Post Graduate Institute of Medical Education & Research, India

SESSION INTRODUCTION

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- Title: Clinical spectrum of pneumonia children aged 1 month to 18 years by serum PCR in a tertiary care hospital-Kims hospital, Bangalore, India Vivetha Elango, Kempegowda Institute of Medical Sciences, India
- Title: Association between serum magnesium and serum bilirubin levels in neonates Meghana Nannapaneni, Kims Hospital and Research Centre, India
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- Title: Evaluation of measles epidemic in Albania, Balkan and Europe Ledia Qatipi, ABC Health Center, Albania
- Title: Percentile growth charts for symmetric & asymmetric small for gestational age infants Harvinder Kaur, Post Graduate Institute of Medical Education & Research, India
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Effectiveness of surgical treatment in patient with PFAPA and congenital syndrome

Natalia Antonova Tallinn Children´s Hospital, Estonia

The pathogenesis of the pediatric disorder periodic fever, aphthous stomatitis, pharyngitis and cervical adenitis (PFAPA) syndrome is unknown. It is regarded as an autoinflammatory process. Disease onset is usually before the age of five and generally resolves before puberty with no consequences for the patient. Children are asymptomatic between episodes and show normal growth. No specific diagnostic test for PFAPA is currently available. Syndrome has overlapping symptoms with other periodic fever syndromes with a known genetic cause. Genomic analysis of familial cases by genome-wide linkage analysis and whole-exome sequencing did not reveal rare variants in a single, common gene. In addition, genetic variants that are known to cause other autoinflammatory syndromes have been found in PFAPA patients, but the impact of these genetic variants in PFAPA syndrome is still unknown. In 2-year Caucasian/Azerbaijan girl demonstrated repeated fever episodes with high levels (90-200mg/L) of C-reactive protein (CRP) since 6 months. She was observed regularly because of microcephalus, slight developmental delay and growth retardation, muscle hypotonus and dysmorphic phenotype (broad forehead, hypertelorism, micrognathia and retrognathia, fluffy eyebrows, long and tight eyelashes, long filtrum, narrow lips). On genetic consultation, she was diagnosed with 7p22 microdeletions. During a period of January-October 2018, she was hospitalized 6 times with high fever, cervical/adenitis and sore throat (3 times with aphthous pharyngitis). Different laboratory tests and instrumental investigations were performed and were normal: abdomen ultrasound, chest X-ray, EKG and EHHOKG, ANA, HIV, Borreliosis serology and Quantiferron test, urine test and urine culture. Cervical ultrasound revealed increased lymphoid nodules with normal structure. In a period of January-July of 2018, she received 4 antibiotic courses because of high CRP levels and pharyngitis.

A blood test revealed no neutropenia, sedimentation rate was always increased up to 20-40mm/t, procalcitonin level and blood culture repeatedly negatives. Brain MRI with spectroscopy was performed to exclude intracranial pathology because of congenital problems. ENT repeated consultations excluded otitis media, but adenoid hypertrophy was considered. PFAPA was suspected because of typical clinical symptoms (repeated episodes of fever with aphthous pharyngitis, cervical/adenitis and high CRP levels, absence of neutropenia). Prednisolone treatment 1mg/kg per os was used twice with excellent effect. Adenotomy with tonsillectomy was performed in October 2018. After this treatment in a period of November 2018- May 2019 the patient was ill 4 times with no high fever (gastroenteritis, conjunctivitis, rhinopharyngitis and varicella with otitis media) and just once needed antibiotic treatment. Sequencing of genes was performed to exclude MEFV, MVK, TNFRSF1A, IL1RN and other gene abnormalities, using Illumina TruSight One expanded panel (6700 genes). No monogenic fever syndrome was revealed.

Recent Publications

- 1. Artyushenko NK, Influence of connective tissue dysplasia on hemodynamics in a maxillary artery and mucosal vessels in children with anomalies and deformations of maxillofacial area.
- 2. Artyushenko, Antonova (2011) New technologies in stomatology, International conference of maxillofacial surgeons and stomatologists. Page 28-29.
- Antonova N.S (2011) Features of clinical manifestations of CTD in children with congenital anomalies and deformations of maxillofacial area/N.S. Antonova/Materials XVI of the International conference of maxillofacial surgeons and stomatologists "New technologies in stomatology" Page 26-27.
- 4. Antonova N.S (2012) Features of treatment of children with congenital anomalies and acquired deformations of maxillofacial area and accompanying connective tissue dysplasia, Page 86-87.

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Biography

Natalia Antonova completed her PhD in the year 2013 from North-Western State Medical University named after I.I. Mechnikov, St-Petersburg, Russia. She works as a Paediatrician and children at the Tallinn Children's Hospital. She is an author of 15 articles and 10 oral presentations and lectures for family doctors in Estonia. In 2011 she completed clinical attachment in paediatric at Al Wasl Maternity and Paediatric Hospital in Dubai, UAE. She is a member of Open American/ Austrian University and participated in 2 in Saltzburg CHOP seminar in Pediatric Pulmonology in 2010 and Pediatric Infectious Diseases in 2017 with the clinical cases presentations. X.2016-VI.2017 she completed a EULAR on-line course in Paediatric Rheumatology.

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Salmonella typhimurium meningitis in an exclusively breast fed infant-who is the source

Sanjay H R, K Shreedhara Avabratha and Rashmi Alva Father Muller Medical College, India

Introduction: *Salmonella typhimurium* is a pathogenic Gram-negative bacteria predominately found in the intestinal lumen. Route of spread is fecal-oral. *Salmonella meningitis* is a rare complication that typically occurs in neonates and children less than 1 year.

Case: Five and a half month old exclusively breastfed male child presented with fever, poor feeding and irritability. General examination revealed irritable cry, GCS of 10/15, hypertonia of all four limbs and exaggerated reflexes.

Lumbar puncture showed features of pyogenic meningitis. CSF and blood culture grew *Salmonella typhimurium*. Mother's stool culture also grew *Salmonella typhimurim*. MRI Brain showed acute infarcts in bilateral cerebral hemispheres. Child was treated with IV Ceftriaxone for four weeks and IV Ciprofloxacin for two weeks. Child recovered completely at the time of discharge.

Conclusion: *Salmonella typhimuium meningitis* requires prolonged IV antibiotic treatment. Hand hygiene plays an important role in preventing spread of the disease.

Biography

Sanjay H R is a Resident in the Department of Pediatrics in Father Muller Medical College, Mangalore, India. He graduated from the prestigious JJM Medical College, Davangere, India before finding Pediatrics as his calling. He has also served as a Chief Medical Officer in a community health center. His current research pursuit is his thesis on Neonatal hypoglycemia and Persistent pulmonary hypertension in newborns.

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Clinical spectrum of pneumonia in children aged 1 month to 18 years by serum PCR in a tertiary care hospital-Kims hospital, Bangalore, India

Vivetha Elango

Kempegowda Institute of Medical Sciences, India

Introduction: Pneumonia accounts for 15% all deaths in children under 5 years of age, being the single largest infectious cause of deaths in children worldwide according to WHO. This study was conducted to study the clinical spectrum of pneumonia. Establishing the exact etiological factor is a difficult task, as there are no definite clinical, radiological markers to differentiate between causative organisms. Hence by detecting the genetic material of causative organism by serum PCR and correlating it with the clinical and radiological features can help in appropriate use with antibiotics.

Material and Methods: It is a observational study conducted in department of paediatrics KIMS hospital Bangalore, India which included inpatients admitted with clinical and radiological features of pneumonia over a study period from February 2018-July 2019. In this study we excluded Immunocompromised children and children on long term steroids >6 months. After obtaining informed written consent, detailed history and clinical examination was done. Investigations including complete hemogram, CXR were done. Under sterile precautions, Blood samples for serum PCR and blood culture and sensitivity were obtained. Serum PCR was done for a panel of 33 respiratory pathogens.

Results: Etiological agents were identified in 62% (93/150) of cases. 39% caused by solely *Streptococcus Pneumoniae* and an additional-13% coinfection of *Streptococcus pneumoniae* with other bacteria or viruses. In total 52% (78/150) positive for *Streptococcus pneumoniae*. *Staphylococcus aureus* has been detected to be the second common organism 14% (21/150), 6% with *Staphylococcus aureus* as the sole causative agent and 8% as coinfection. *Klebsiella pneumoniae* in 3% and *Bordetella Pertussis* in 3% cases. Viruses were identified in 3% (5/150).

Conclusion: In our study *Pneumococci* was identified in 52% of cases. In the study population most of them where from the lower to middle socioeconomic status, with overcrowding, lack of proper hygiene, inadequate nutrition and none of them had received vaccination against *pneumococci*.

Biography

Vivetha Elango has completed MBBS in the year 2016. She is pursuing her postgraduate in MD pediatrics at Kempegowda Institute of Medical Sciences Bangalore. This is currently the first paper that has been done.

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Association between serum magnesium and serum bilirubin levels in neonates

Meghana Nannapaneni and Poornima Shankar Kims Hospital and Research Centre, India

Introduction: Unconjugated bilirubin is known to cause neurotoxicity by causing neuronal injury as it has the affinity to phospholipids of the plasma membrane. Plasma membrane structures such as N-methyl-D-aspartate (NMDA) receptor/ion channel complex located within neuronal membranes on the synaptic surface of neurons are disrupted by prolonged activation. This Bilirubin-induced neurotoxicity may share common features with HIE-induced brain injury by mechanisms mediated by the NMDA receptor. NMDA antagonist might help in blocking this injury. Magnesium (Mg) ion, is one of the most important antagonistic regulators of the NMDA receptor. It protects the CNS against hypoxia and exerts its neuroprotective effects by blocking excitotoxic and NMDA receptor-mediated neuronal injury mechanisms. So this study is taken up to know the magnesium relationship with bilirubin levels in the neonate.

Aims and Objectives: Association between neonatal hyperbirubinemia and serum magnesium levels; Serum magnesium levels in hemolytic disease of newborn vs. non hemolytic disease of newborn with hyperbilirubinemia.

Methodology: Case control study on 100 neonates as cases and 100 controls which are being matched, serum bilirubin levels measured along with serum magnesium levels. Conducted in KIMS hospital Bangalore, India. For a period of 1 year May 2018 to May 2019.

Results: In this study it was noticed that cases had higher magnesium levels (avg: 2.8mg/dl) along with serum bilirubin (avg: 15mg/dl) than controls and magnesium levels were higher in hemolytic disease of newborn than non hemolytic disease of newborn.

Conclusion: In conclusion, there is a positive correlation between plasma Mg levels and severity of hyperbilirubinemia in new-borns; it could be a neuroprotective compensatory mechanism to reduce bilirubin toxicity. And also in hemolytic disease of newborn, magnesium levels were much higher. So this relationship and interactions between serum Magnesium levels and hyperbilirubinemia will make it possible to use cord blood or early postnatal Mg measurements in predicting the development of significant hyperbilirubinemia and questioning the value of Mg treatment in the therapy of neonatal hyperbilirubinemia.

Biography

Nannapaneni Meghana currently pursuing my Masters in Pediatrics from the prestigious Rajiv Gandhi University of Health Sciences, Bengaluru, India. I was honoured for securing distinctions in ophthalmology and otolaryngology and my prime area of interest has always been Neonatology. As a post graduate student, I have proactively presented oral papers and poster presentations in my State and National conferences and had received an award for an oral paper presentation in the state. When I am not into books and patients I take timeout for sports like tennis and swimming. I have always been fascinated by how medicine is evolving and wanted to make my own contribution to it specifically in the field of Neonatology and be a Beacon of inspiration to my predecessors.

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Fatal meliodosis in siblings

Sanjay H R, K Varadaraj Shenoy, Anil Shetty, Praveen, Zohara Parveen and Sujonitha John Father Muller Medical College, India

Introduction: Melioidosis is an infection caused by gram negative bacterium, *Burkholderia pseudomallei*. In 2015, it is estimated that there may have been 1,65,000 melioidosis cases globally, with 89000 deaths. The predominant mode of transmission is percutaneous inoculation during exposure to soil or contaminated water.

Case series: Case 1: A six month old female child presented with complaints of fever, cough, hurried breathing and convulsion. On examination child was irritable, tachypnoeic with chest wall retractions and rhonchi. Child was not maintaining saturation at room air. Lab investigations showed leucopenia and elevated CRP. Chest X-ray - opacity in left midzone. Child had 2 more episodes of convulsions, loaded on anticonvulsants and IV antibiotics were started. Child went to refractory shock the following day and sudden cardiac arrest, could not be revived. Blood culture report showed growth of *Burkholderia pseudomallei*; Case 2: Four year old male child, elder sibling of the same child, presented with fever since 3 days. On examination child was tachypnoeic, tachycardic, maintaining saturation at room air. Mild icterus was present. Lab investigations showed elevated CRP. Chest X-ray was normal. On day 2 fevers persisted, icterus increased, child went into shock with increased work of breathing. IV antibiotics were hiked up. Despite all resuscitative measures, child could not be revived. Blood culture report showed the growth of *Burkholderia pseudomallei*.

Conclusion: Meliodosis is commonly seen in adults, its presentation in infants is rare. Most common clinical manifestations are pneumonia and localized skin infection. Probable route of infection in case 1 may be from aerosols (presence of sprinkler system in the vicinity of the house). Culture is the mainstay of diagnosis. IV ceftazidime is the drug of choice. Consuming safe drinking water and avoiding contact with wet soil plays an important role in preventing spread of meliodosis.

Biography

Sanjay H R is a Resident in the Department of Pediatrics in Father Muller Medical College, Mangalore, India. He graduated from the prestigious JJM Medical College, Davangere, India before finding Pediatrics as his calling. He has also served as a Chief Medical Officer in a community health center. His current research pursuit is his thesis on Neonatal hypoglycemia and Persistent pulmonary hypertension in newborns.

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Evaluation of measles epidemic in Albania, Balkan and Europe

Ledia Qatipi ABC Health Center, Albania

ccording to WHO in 2017 there were 110,000 Measles deaths globally, mostly among children 0-5 years old. European countries have reported an increase in number of Measles cases in the last 3 years (114,682), 83,540 cases in 2018. 25,869 cases in 2017, compared to only 5,273 cases in 2016. In Albania there were 1,955 confirmed cases, the majority in non immunized children 0-5 years old. Outbreaks in France, Italy, Serbia, Ukraine, Greece and North Macedonia placed measles cases at record-breaking levels in Europe. There was a 300% increase in Measles confirmed cases in European countries such as Ukraine with 113,693 cases, followed by Romania (12,275), Italy (9,572), France (5,734), Serbia (5,793), Greece (3,288), North Macedonia (1,953), Bosnia Hercegovina (1,493) and Bulgaria (1,294). In Albania the incidence rate of Measles was 4,141 / 1,000,000 children (0-5 years old), compared to 13,599 / 1,000,000 in Ukraine, 17,459 / 1,000,000 in North Macedonia and 7,724 / 1,000,000 in Bosnia and Herzegovina. It is crucial to understand the reasons behind these Measles epidemics. Measles is almost entirely preventable through two doses of MMR, a safe and effective vaccine. According to WHO the recommended immunization rate is above 95% for general population. Unfortunately, European countries have reported a fast decline in immunization rates. In Albania, immunization rates have shown regress in recent years from 94% in 2008-2009 to 75% in 2017-2018 according to Albania Demographic and Health Survey 2017-2018. According to WHO/UNICEF in North Macedonia there is a decrease in immunization rates from 96% in 2013 to 83% in 2019, while Ukraine reports 80% immunization rates in 2019. In Bosnia and Herzegovina there is a decrease from 87% immunization coverage in 2013 to 77% in 2017.

We agree that elimination of Measles epidemic and ultimately complete eradication of this deadly infectious disease will depend largely on EVAP (European Vaccine Action Plan 2015-2020) actions. Obtaining political commitment, achieving high coverage and closing immunity gaps and ensuring high quality, case based surveillance will improve the current Measles epidemic in Europe. We believe that parents are the key to achieve maximum immunization rates. Finding the socio-economic parental groups that hesitate to vaccinate their children and understanding their concerns it would be as important as providing high quality vaccines and case based surveillance.

Biography

Ledia Qatipi has completed her Medical School in 1999 from University of Medicine, Tirana, Albania and postgraduate studies in Internal Medicine and Pediatrics from Staten Island University Hospital, New York, USA. Currently she works as Senior MD at ABC Health Center, part of ABC Health Foundation, a nonprofit organization in Tirana, Albania, that gives affordable medical care to the urban and rural communities and underserved children. She also served for 10 years as a Quality Improvement Committe Board member of BCCHC (Beacon Christian Community Health Center, Staten Island, New York). She has published more than 10 papers in reputed journals in USA and Europe.

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Percentile growth charts for symmetric and asymmetric small for gestational age infants

Harvinder Kaur, A K Bhalla and Praveen Kumar Post Graduate Institute of Medical Education and Research, India

A ge and sex specific percentile growth charts for body weight and crown-heel length (CHL) of full-term 100 symmetric small for gestational age (SGA) (boys: 50, girls: 50), 100 asymmetric SGA (boys: 50, girls: 50) and 100 appropriate for gestational age (AGA) (boys: 50, girls: 50) infants representing upper socioeconomic strata have been presented. Ponderal Index (PI) was used to categorize SGA babies into symmetric SGA (PI \geq 2.2 g/cm³) and asymmetric SGA (PI < 2.2 g/cm³). Body weight and CHL of the babies were measured at birth, 1, 3, 6, 9 and 12 months of age in the Growth Laboratory/Clinic of Advanced Pediatrics Centre, PGIMER, Chandigarh, India using standardized techniques and instruments following a mixed-longitudinal growth research design. The 3rd, 5th, 10th, 25th, 50th, 75th, 90th, 95th and 97th percentiles were computed using formulae given by Tanner et al., (1966) after applying Healy's (1962) correction. The 50th percentile plotted for body weight and CHL of SGA and AGA infants demonstrated a continuous increase throughout infancy. As compared to their normal Indian, Western, MGRS and AGA counterparts, the curves plotted for SGA infants of the two types and sexes ran below throughout infancy. However, the magnitude of this deficit was recorded to be more in symmetric than asymmetric SGA infants. Growth charts provided may be used for comparative purpose and to detect nutritional deficits and growth aberrations of full-term SGA and AGA infants inhabiting north-western parts of India.

Biography

Harvinder Kaur obtained her PhD degree on the Growth of Symmetric and Asymmetric SGA infants from PGIMER, Chandigarh, India. Currently, she is working as Assistant Professor in Child Growth and Anthropology Unit of the Department of Pediatrics. She has over 15 years of experience in conducting longitudinal, auxological, nutritional and maturational studies on normal and sick children. She has published 22 research papers in Journals of National and International repute.

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Fulminant hepatic Failure with Endophthalmitis

Meghana Nannapaneni Kims Hospital and Research Centre, India

Introduction: Vision an important sense organ for every person. A disease can be so threatening that it can take away a child's vision. In this report we see how a liver pathology can effect eye (endophthalmitis) liver an endocrine gland required for many functions of the body. Failure of it can be acute or chronic or fulminant. Fulminant hepatic failure is defined as condition in which coagulopathy and encephalopathy occurs within 8 weeks of onset of liver disease, in a patient with no previous liver disease, biochemical evidence of liver injury, coagulopathy not corrected by vitamin k administration, INR>1.5 with encephalopathy, INR>2 without encephalopathy are criteria proposed for diagnosis. Endophthalmitis infection of inner eye (vitreous and anterior chamber) can be exogenous or endogenous. Exogenous is because of external trauma, foreign body, post-surgery, that can cause bacterial or fungal infection. Endogenous endophthalmitis is because of hematogenous spread usually seen in immune compromised or children on steroid therapy etc.

Case Report: A 4 year old child came with complaints of fever since 11days, convulsions since 5 days sudden onset, GTCS type lasting for 10 to 15 mins, 2 to 3 episodes per day, vomiting since 2 days. on examination child was not conscious with a GCS of E2V1M4, pupils mid dilated, vitals- PR-102/min RR-22/min, B.P-100/60mm of hg, TEMP-101 0F pallor present mild icterus present, head to toe examination normal, on systemic examination revealed motor hypotonicity, reflexes exaggerated, no signs of meningitis. Investigations revealed deranged coagulation profile (INR – 2.8) and raised liver enzymes, raised ammonia levels, with increased total counts, negative for all hepatic viruses, lumbar puncture normal, MRI was normal, immune globin levels normal, ANA profile normal. With anti-oedema measures and NAC infusion antiviral acyclovir therapy and symptomatic treatment, gradually child improved gcs normal but there was persistent fever and redness of eye developed on 3rd day of admission, on ophthalmic evaluation, redness of conjunctiva, hypopy on, it was proved that child had endogenous endophthalmitis of right eye, for which core vitrectomy was done and placed with an artificial prosthesis, now the child is blind in one eye. A unusualcase of fulminant liver failure with endogenous endophthalmitis.

Discussion: Fulminant hepatic failure is life threatening condition. And an unknown and rare complication seen in this condition is endogenous endophthalmitis, a study done by change sue showed the association of endopthalmitis with pyogenic liver abscess, studies have shown association between staph aureus and liver infections, also how staph aureus can cause endophthalmitis. So now that a rare case scenario is seen it is duty of doctor to be well aware of the complication when a liver pathology is involved. That could save any limitation of child's health and vision.



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Biography

Meghana Nannapaneni currently pursuing my Masters in Pediatrics from the prestigious Rajiv Gandhi University of Health Sciences, Bengaluru, India. I was honoured for securing distinctions in ophthalmology and otolaryngology and my prime area of interest has always been Neonatology. As a post graduate student, I have proactively presented oral papers and poster presentations in my State and National conferences and had received an award for an oral paper presentation in the state. When I am not into Books and patients I take timeout for sports like tennis and swimming. I have always been fascinated by how medicine is evolving and wanted to make my own contribution to it specifically in the field of Neonatology and be a Beacon of inspiration to my predecessors.

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Video Presentation Day 1

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The social impacts of wearing a scoliosis brace

Bridget Yang Valencia High School, USA

A variety of back braces are used to treat scoliosis, but there is no data that shows that one brace is the most effective or the most preferred by patients. Moreover, little data is available on how different types of scoliosis braces affect one's quality of life. An online survey was conducted to gather data on patients with scoliosis; the data collected included the subjects' demographics and clinical information. In addition, exploratory questions concerning the subjects' social interactions, attitudes towards their brace treatment and their involvement in the selection of the brace used in their treatment were collected; the Scoliosis Research Society-24 (SRS-24) questionnaire was used to determine subject satisfaction and performance. This study examined whether any of these exploratory questions were correlated with the SRS-24 score or the type of brace worn. Overall, the respondents were unhappy that they had to wear a scoliosis brace with 75% reporting they "hated" or "disliked" their brace. Almost half of the respondents, 45%, reported they were teased because of their scoliosis brace. Also, almost all of the respondents had no involvement in the selection of their scoliosis brace with 20% having a parent/guardian choose their brace and 77% having their physician choose their brace. The exploratory questions showed no correlation to the SRS-24 score, nor did the type of brace used in treatment correlate with any of the exploratory questions. However, this study did find that a significant number of patients with scoliosis report being teased for wearing a scoliosis brace and that patients have little choice in the selection of their back brace.

Biography

Bridget Yang is a senior at Valencia High School. She was diagnosed with scoliosis at the age of 11 and is deeply interested in scoliosis related research. Bridget hopes to improve the quality of life of those affected by scoliosis through her research.