Research Media Watch:

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1. Ethnic differences in coeliac disease autoimmunity in childhood: the Generation R Study.

Jansen, Michelle A. E.; Beth, Sytske A.; van den Heuvel, Diana; Kiefte-de Jong, Jessica C.; Raat, Hein; Jaddoe, Vincent W. V.; van Zelm, Menno C.; Moll, Henriette A..

Archives of Disease in Childhood , Jun2017, Vol. 102 Issue 6, p529-534, 6p, 3 Charts. Publisher: BMJ Publishing Group.;

The Objective of this study was to identify whether ethnic differences in coeliac disease autoimmunity (CDA) in children at 6 years of age exist, and if present, to evaluate how these differences may be explained by sociodemographic and environmental factors.

This study was a part of other multi-ethnic population-based prospective cohort study.

This is a very large study with inclusion of 4442 six-year-old children born between 2002 and 2006 . Information on ethnicity, environmental and lifestyle characteristics was assessed by questionnaires. Ethnicity was categorised into Western (Dutch, European, Indonesian, American, Oceanian) and non-Western (Turkish, Moroccan, Cape Verdean, Antillean, Surinamese). Serum transglutaminase type 2 antibody (TG2A) levels were measured with fluorescence enzyme immunoassay. TG2A positivity was defined as TG2A≥7 U/mL, strong TG2A positivity as TG2A≥10 upper limit normal (70 U/mL).

Serum IgG levels against cytomegalovirus (CMV) were measured by ELISA.

Results: Of 4442 children, 60 (1.4%) children were TG2A positive, of whom 31 (0.7%) were strong positive. 66% of children were Western, 33% non-Western. Western ethnicity, high socioeconomic position and daycare attendance were positively associated with strong TG2A positivity (odds ratio (OR) 6.85 (1.62 to 28.8) p<0.01, OR 3.70 (1.40 to 9.82) p<0.01, OR 3.90 (1.38 to 11.0) p=0.01 resp.), whereas CMV seropositivity was inversely related to strong TG2A positivity (OR 0.32 (0.12 to 0.84) p=0.02). Together, these factors explained up to 47% (-67 to -17; p=0.02) of the ethnic differences in TG2A positivity between Western and non-Western children.

Authors concluded that there are ethnic differences in children with CDA in childhood.Factors like Socioeconomic position, daycare attendance and CMV seropositivity are probably implicated for these differences. For preventive measures of CDA, these factors may remain important.

2. Accuracy of Tests for Antibodies Against Tissue-transglutaminase in Diagnosis of Celiac Disease, Without Biopsy.

Gastroenterology. 2017 Jun 14.pii: S0016-5085(17)35736-0. doi: 10.1053/j.gastro.2017.06.002.

Of 803 children recruited for the study, 96 were excluded due to incomplete data, low level of IgA, or poor-quality biopsies. In the remaining 707 children (65.1% girls; median age, 6.2 years) 645 were diagnosed with celiac disease, 46 were found not to have celiac disease, and 16 had inconclusive results.

Findings from local laboratories of TGA-IgA 10-fold or more the ULN, a positive result from the test for EMA, and any symptom identified children with celiac disease (n=399) with a PPV of 99.75 (95% CI, 98.61-99.99); the PPV was 100.00 (95% CI, 98.68-100.00) when only malabsorption symptoms were used instead of any symptom (n=278). Inclusion of HLA analyses did not increase accuracy.

Findings from central laboratories differed greatly for patients with lower levels of antibodies, but when levels of TGA-IgA were 10-fold or more the ULN, PPVs ranged from 99.63 (95% CI, 98.67-99.96) to 100.00 (95% CI, 99.23-100.00).

Conclusions: Children can be accurately diagnosed with celiac disease without biopsy analysis.

Diagnosis based on level of TGA-IgA 10-fold or more the ULN, positive results from the EMA tests of 2 blood samples, and the presence of 1 symptom, could avoid risks and costs of endoscopy for more than half the children with celiac disease worldwide. HLA analysis is not required for accurate diagnosis. Clinical Trial Registration no: DRKS00003555.

Comments: A lot of interest is being taken for celiac disease diagnosis ,even in country like India . westernization of diet is probable cause. TGA-IgA seems to be promising moleculeand studies are needed in Indian population for further use in actual practice.

3. Does increased duration of consultant presence affect length of hospital stay for unplanned admissions in acute paediatrics?: an observational before-and-after analysis using administrative healthcare data.

Cromb, Daniel Carter, Chris Lemer, Claire Cheung, C. Ronny

Source: Archives of Disease in Childhood; Jun2017, Vol. 102 Issue 6, p516-521, 6p, 3 Charts, 1 Graph
Publication Year:2017

The aim of this study was to review whether the presence of consultant in admitted patient twice in a day is associated with reduction in length of hospital stay (LoS) in children with an unplanned admission to hospital. It is an observational study regarding , before-and-after study of all unplanned general paediatric admissions to a UK hospital between 1 September 2012 and 31 August 2015, comparing LoS and readmission rates before and after implementation of a policy mandating consultant review within 12 hours of unplanned hospital admission.

The analysis of 5367 inpatient admissions, out of which ,3386 were prior to implementation of the policy and 1981 afterwards. There was no significant difference in median LoS between the two groups or in readmission rates at 24 hours, 48 hours or 7 days. However, the difference was significant in children

who stayed in hospital for under 24 hours. This was especially true with a diagnosis of acute gastroenteritis, consultant review within 12 hours of admission was associated with a shorter LoS-respectively, 16 hours 23 min versus 15 hours 45 min (p=0.01) and 28 hours 46 min versus 19 hours 41 m (p<0.01).

It was concluded that increased duration of consultant presence was not associated with significant impact on LoS, other than in admissions of brief duration and in gastroenteritis, where diagnosis is based on clinical judgment in the absence of objective diagnostic thresholds.

Comment : Studies in our country should be carried for whether these results are generalisable or not in all sorts of settings, and other measures of cost-effectiveness of early consultant review, given the major implications on resource and workforce planning of such policies.

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4. Unwanted variation in care is a challenge to high-quality care delivery in any healthcare system.

Baylor College of Medicine, Evidence Based Outcomes Center, Texas Children's Hospital, Houston, TX; University of Pittsburgh School of Medicine, Children's Hospital of Pittsburgh, Pittsburgh,PA. Source:In Clinical Pediatric Emergency Medicine Publisher: Elsevier Inc.

Abstract:

Unwanted variation in care is a challenge to high-quality care delivery in any healthcare system. Across the Emergency Medical Services for Children (EMSC) continuum ,there is wide variation in care delivery for which best practices have demonstrated opportunities to minimize that variation through clinical standards . In order to improve services,various models of development of clinical standards is delineated and tools used in that process are described. Implementation strategies which are guidelines are framed and data and analytics done. Integration of financial data into the clinical standards processes and analytics platforms is necessary to determine value of the work. Guidelines by different authorities may create confusion and unnecessary financial burden.Document Type: Article ISSN: 1522-8401 DOI: 10.1016/j.cpem.2017.05.002; Accession Number: S1522840117300253

Comments: Our country is showing lately too much variation in healthcare standards.However government of INDIA UNICEF and WHO is trying their best for giving uniform care ,practically it will take more than decade.The unrest against doctors is probably due to non uniform services and value for money expctation from public.

5. Snake bite mortality in children: beyond bite to needle time.

Jayakrishnan, M. P.,Geeta, M. G.,Krishnakumar, P.Rajesh, T. V.George, Biju

Source: Archives of Disease in Childhood; May2017, Vol. 102 Issue 5, p445-449, 5p, 4 Charts

Publication Year:2017

Objective: To study the clinical characteristics and predictors of mortality from snake bite envenomation in children.

This Prospective observational study with a one-group cohort design was done in Paediatric intensive care unit of a tertiary care hospital in South India.

145 children (55 girls and 90 boys) <12 years of age with snake bite envenomation were included for analysis.Demographic and clinical details were recorded in a semistructured pro forma. Children were treated with polyvalent antisnake venom (ASV) as per WHO protocol. Details of treatment, complications and outcomes were recorded. Univariate analysis was done to identify statistical significance, and those variables found to be significant were analysed using binary logistic regression.

Results: Russell's viper was the most common offending snake followed by hump-nosed pit viper. Features of haemotoxicity, neurotoxicity and combined haemotoxicity and neurotoxicity occurred in 68 (47%), 39 (26.9%) and 9 (6%) children, respectively. Acute kidney injury (AKI) occurred in 36 (25%) children. The mortality rate was 10.3%.

On univariate analysis, the association of mortality was found more with nocturnal bites, severe leucocytosis on day 1, AKI, capillary leak syndrome and a need for more than 20 vials of ASV . On multivariate analysis, only severe leucocytosis on day 1 (OR 35.29; 95% CI 1.37 to 911.89) and AKI (OR 35.05 95% CI 1.74 to 706.93) were found to be independent predictors of mortality.

Conclusions: This study has identified two hitherto unrecognised risk factors-severe leucocytosis on day 1 and capillary leak syndrome. These findings need to be taken into consideration when planning management strategies for snake bite envenomation in children.

Comments: The article in NIJP was presented by Datta AK et al on snake poisoning has found almost similar findings.However due to fine statistical details it was not accepted by reputed foreign journals.We need to do a lot of work on statistical front and content presentation.

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