POS1291

PROFILE OF LUMBAR SPINE DEGENERATIVE PATHOLOGY IN RHEUMATOLOGIC CONSULTATION IN NORTHERN TOGO

P. Houzou¹, V. E. S. Koffi-Tessio², E. Fianyo², K. Tagbor², K. Kakpovi³, O. Oniankitan², M. Mijiyaw². ¹University of Kara, Rheumatology, Kara, Togo; ²University of Lomé, Rheumatology, Lomé, Togo; ³University of Lomé, Rheumatology, Kara, Togo

Background: Degenerative spine pathology is a common reason for consultation in rheumatology. The lumbar spine is the first seat.

Objectives: To determine the epidemiological and semiological profile of degenerative lumbar spine damage in Kara.

Methods: It was a cross-sectional study based on patient records who had consulted for a degenerative lumbar spine pathology in the rheumatology department of the CHU-Kara (Northern Togo) over a three-year period.

Results: Of the 1,767 patients examined during the study period, 745 (42.16%) suffered from a degenerative pathology of lumbar spine. They were 285 men (38.3%), and 460 women (61.7%) H/F ratio of 0.62. Traders (30%), civil servants (12.5%), teachers (9.5%), and housewives (8.7%) were the most affected occupational categories. The average age of patients at the consultation was 50.6 ± 12.3 years, and the average duration of disease progression was 4.3 years ± 1.8 years. The clinical forms of degenerative lumbar spine damage were: common low back pain (194 cases; 26.04%), common lomboradiculalgia by probable disco-radicular conflict (457 cases; 61.34%) and the narrowed lumbar canal (94 cases; 12.62%). Common low back pain was acute in 56.7% of cases. The path of radiculalgia during the probable herniated disc was truncated in 19.2% of cases, L5 in 46.4% of cases, S1 in 32.9% of cases, and L4 in 2.7% of cases. The walking perimeter was less than 500 meters in 48% of patients with narrowed lumbar canal. Signs of degenerative disc disease (536 cases), spondylolisthesis (102 cases) and isthmus lysis (37 cases) were the main radiological lesions observed.

Conclusion: Degenerative damage to lumbar spine is dominated in North Togo by common lomboradiculalgia by probable herniated disc.

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Paediatric rheumatology

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REAL-WORLD EFFECTIVENESS OF ETANERCEPT AND ADALIMUMAB IN CHILDREN AND YOUNG PEOPLE WITH JUVENILE IDIOPATHIC ARTHRITIS (JIA) WITHOUT UVEITIS

L. Kearsley-Fleet¹, E. Baildam², M. Beresford^{2,3}, H. Foster^{4,5}, T. Southwood⁶, W. Thomson^{7,8}, K. Hyrich^{1,8} on behalf of BCRD and BSPAR-ETN study groups.

¹The University of Manchester, Manchester Academic Health Science Centre, Centre for Epidemiology Versus Arthritis, Manchester, United Kingdom; ²Alder Hey Children's NHS Foundation Trust, Clinical Academic Department of Paediatric Rheumatology, Liverpool, United Kingdom; ³University of Liverpool, Institute of Life Course and Medical Sciences, Liverpool, United Kingdom; ⁴Newcastle University, Population Health Institute, Newcastle Upon Tyne, United Kingdom; ⁵Great North Children's Hospital, Paediatric Rheumatology, Newcastle Upon Tyne, United Kingdom; ⁶University of Birmingham and Birmingham Children's Hospital, Institute of Child Health, Birmingham, United Kingdom; ⁷The University of Manchester, Centre for Genetics and Genomics Versus Arthritis, Centre for Musculoskeletal Research, Faculty of Biology, Medicine and Health, Manchester, United Kingdom; ⁸Manchester University NHS Foundation Trust, Manchester Academic Health Science Centre, National Institute of Health Research Manchester Biomedical Research Centre, Manchester, United Kingdom

Background: Biologic therapies have revolutionised treatment pathways and outcomes for patients with juvenile idiopathic arthritis (JIA). Although there is a choice of approved TNF inhibitors available as a first biologic, there lacks data to inform treatment choices in clinical practice.

Objectives: To compare short-term outcomes on etanercept and adalimumab in children and young people with JIA without uveitis, including drug survival, arthritis disease activity and function ability at 1 year.

Methods: All patients starting a first biologic (etanercept/adalimumab including biosimilars) from 2010 in the UK JIA biologic registers (BCRD and BSPAR ETN) were included. Those with systemic JIA or with any history of uveitis were excluded. Data were collected at start of therapy, 6 months, 1 year, and then annually, including patient demographic, disease activity and drug therapy. In this analysis, drug survival and arthritis disease activity / function ability at 1 year (range 3-15 months) were investigated; comparing between therapies using logistic / linear regression, adjusted for propensity deciles.

Results: There were 550 patients with outcome data available (to 30 Sept 2020); 384 etanercept, 166 adalimumab. At registration, 68% female, median age 12 years old (IQR 8-14), median disease duration 1 year (IQR 1-4), 72% on concomitant methotrexate. Disease activity was similar between both therapies at baseline and one year. At one year, 70% were still on biologic therapy; most stopping therapy for ineffectiveness (45%), adverse events (31%), or patient / family choice (15%). Inactive disease and minimal disease activity was achieved in 26% and 46% respectively, 48% achieved a minimally clinical important improvement in their functional ability (CHAQ improvement >0.13).

	All Patients	Adalimumab	Etanercept
N	550	166	384
Females	68%	59%	71%
Age (years), median (IQR)	12 (8-14)	12 (10-14)	11 (8-14)
Disease duration (years), median (IQR)	1 (1-4)	1 (0-3)	1 (1-4)
ILAR			
Persistent oligo	9%	6%	11%
Extended oligo	20%	14%	23%
RF negative	37%	32%	39%
RF positive	11%	11%	12%
Psoriatic	5%	8%	4%
Enthesitis-related	16%	27%	11%
Undifferentiated	1%	2%	1%
Concomitant oral steroids	16%	20%	15%
Concomitant methotrexate	72%	84%	66%
Follow-up time, years			
Median (IQR)	2.5 (1.4-3.8)	2.1 (1.2-3.1)	3.0 (1.6-4.0)
Min-Max	0.4 - 8.2	0.4 - 7.3	0.4 - 8.2
Drug Survival			
Still on drug at one year	70%	67%	71%
Still on drug at two years	47%	50%	46%
CHAQ			
Baseline, mean (SE)	0.9 (0.04)	0.8 (0.06)	1.0 (0.04)
One Year, mean (SE)	0.7 (0.03)	0.5 (0.06)	0.7 (0.04)
Change, mean (SE)	-0.2 (0.04)	-0.2 (0.06)	-0.2 (0.04)
Regression coef (95% CI)	-	-0.09 (-0.2, 0.04)	Ref
PD Adjusted coef (95% CI)	-	-0.08 (-0.2, 0.07)	Ref
MCID (CHAQ)			
Proportion achieved	48%	48%	48%
OR (95% CI)	-	1.0 (0.6, 1.5)	Ref
PD Adjusted OR (95% CI)	-	1.2 (0.8, 1.9)	Ref
JADAS			
Baseline, mean (SE)	14 (0.4)	14 (0.7)	14 (0.4)
One Year, mean (SE)	5 (0.3)	4 (0.5)	6 (0.3)
Change, mean (SE)	-9 (0.4)	-9 (0.7)	-8 (0.5)
Regression coef (95% CI)	-	-1.1 (-2.3, -0.01)*	Ref
PD Adjusted coef (95% CI)	-	-1.0 (-2.8, 0.8)	Ref
Inactive Disease (JADAS<1)			
Proportion achieved	26%	32%	24%
OR (95% CI)	-	1.5 (1.0, 2.4)	Ref
PD Adjusted OR (95% CI)	-	1.5 (0.9, 2.4)	Ref
Minimal Disease Activity (MDA)			
[excludes enthesitis-related JIA]			
	N=473	N=121	N=352
Proportion achieved	46%	49%	45%
OR (95% CI)	-	1.2 (0.8, 1.9)	Ref
PD Adjusted OR (95% CI)	-	1.2 (0.8, 2.0)	Ref

Childhood Health Assessment Questionnaire (CHAQ), confidence interval (CI), International League Against Rheumatism (ILAR), interquartile range (IQR), odds ratio (OR), propensity decile (PD), rheumatoid factor (RF), standard error (SE). *p<0.05

Conclusion: This is the first comparative effectiveness analysis of adalimumab and etanercept within UK children receiving TNFi therapies for JIA. Despite large patient numbers, there was no evidence of difference between adalimumab and etanercept regarding arthritis disease control or treatment persistence. For children without uveitis, both adalimumab and etanercept can be considered as effective treatment options for children and young people with JIA.

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POS1293

RISK FACTORS OF NON-PROTECTIVE LEVELS OF ANTIBODIES TO VACCINES IN PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS

N. Lybimova¹, I. Fridman², O. Goleva³, S. Kharit4, M. Kostik^{5,6}.

¹Almazov National Medical Research Centre, Saint Petersburg, Russian Federation, Department of Pediatrics and Medical Rehabilitation N 1,

Saint Petersburg, Russian Federation; ²Pediatric Research and Clinical Center for Infection Diseases, Saint-Petersburg, Russia, Prevention of Infectious Diseases and Immunodeficiency States, Saint Petersburg, Russian Federation; ³Pediatric Research and Clinical Center for Infection Diseases, Saint-Petersburg, Russia, Department of Virology and Molecular Biological Research Methods, Saint Petersburg, Russian Federation; ⁴Pediatric Research and Clinical Center for Infection Diseases, Saint-Petersburg, Russia, Prevention of Infectious Diseases and Immunodeficiency States, Saint Petersburg, Russian Federation; ⁵Saint Petersburg State Pediatric Medical University, Hospital Pediatrics, Saint-Petersburg, Russian Federation; ⁶Almazov National Medical Research Centre, Autoimmune and Autoinflammatory Diseases, Saint-Petersburg, Russian Federation

Background: Immunosuppressive drugs, decreased vaccine coverage, aberrant immunity might be factors of low anti-vaccine antibodies in JIA patients.

Objectives: The study aimed to evaluate risk factors of non-protective levels of antibodies against measles, mumps, rubella, hepatitis B and diphtheria in JIA patients.

Methods: A prospective study included 170 children diagnosed with JIA aged 2 to 17 years, who received routine vaccinations against measles, rubella, mumps, diphtheria and hepatitis B. In all patients, the levels of post-vaccination antibodies (IgG) for measles, rubella, mumps, hepatitis B and diphtheria measured with ELISA.

Results: Protective level of antibodies were 50% against hepatitis B, 52% diphtheria, 58% measles, 80% mumps, 98% rubella. The best coverage for MMR had patients with enthesitis-related arthritis 85%, compare to oligoarthritis 70%, polyarthritis 69%, systemic arthritis 63%. Diphtheria coverage was 50%, 51%, 46%, 63%, respectively. Incomplete MMR vaccination had 39% patients, treated with biologics, 22% with methotrexate and 14% with NSAID ($p=0.025$), and 61%, 46%, 36% for diphtheria ($p=0.021$). Incomplete vaccination was a risk factor of non-protective level of antibodies against measles (HR=2.03[95%CI: 1.02; 4.0], $p=0.042$), parotitis (HR=6.25[95%CI: 2.13; 17.9], $p=0.0008$) and diphtheria (HR=2.39[95%CI: 1.18; 4.85], $p=0.016$) vaccines. The lowest probability of having a protective level of antibodies was observed in systemic arthritis compared to oligoarthritis ($p=0.008$) and polyarthritis ($p=0.005$). JIA patients, with non-protective levels of antibodies against measles, had more extended methotrexate treatment (2.8 [1.3; 6.4] vs 2.2 [0.9; 3.9] years, $p<0.05$) and increased applying of the biologics (76% vs 52%, $p<0.05$). Patients treated with biologics had the lowest probability of having protective levels of antibodies against measles, mumps, hepatitis B, and diphtheria than MTX and NSAID. Patients with non-protective antibodies had lower vaccine coverage against mumps (56% vs 67%, $p<0.05$) and diphtheria (38% vs 61%, $p<0.01$), longer duration of methotrexate 3.3 [1.4; 6.7] vs 1.8 [1.0; 2.9] years, $p<0.01$ and biologic treatment 3.1 [1.1; 5.4] vs 0.9 [0.0; 1.9] years, $p<0.05$) compare to patients with protective levels. The main risk factors to have non-protective levels of antibodies against specific vaccines are in Table 1 below.

Conclusion: Children with JIA may have lower anti-vaccine antibodies levels and required routine check, especially in children with incomplete vaccination, biologics, systemic arthritis and long-term methotrexate treatment. Funding statement:

Footnotes: CI confidence interval, GCS glucocorticosteroids, HR hazard ratio, MTX methotrexate, na not applicable, soJIA systemic onset of juvenile idiopathic arthritis.

* Data were not calculated due to a small number of patients with a non-protective level of antibodies against rubella and no patients with incomplete vaccination against hepatitis

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POS1294

EFFECT OF EMOTIONAL TRIGGERS ON THE FREQUENCY OF PFAPA ATTACKS - A MULTICENTER STUDY

Y. Levinsky^{1,2}, Y. Butbul³, M. Gafner², M. Broide², S. Kagan², R. Tal¹, M. Natur⁴, K. Kaidar⁴, N. Dagan⁴, G. Amarilio^{4,5}, L. Harel^{1,5}. ¹Tel Aviv University, Sackler Faculty of Medicine, Tel Aviv, Israel; ²Schneider Children's Medical Center of Israel, Pediatrics, Petach Tikva, Israel; ³Technion - Israel Institute of Technology, Haifa, Israel, Pediatric Rheumatology Service, Ruth Rappaport Children's Hospital, Rambam Health Care Campus, Haifa, Israel, Haifa, Israel; ⁴Tel Aviv University, Sackler Faculty of Medicine, Tel Aviv, Israel; ⁵Schneider Children's Medical Center of Israel, Pediatric Rheumatology Clinic, Petach Tikva, Israel

Background: The fact that mental state may serve as a trigger for attacks of periodic fever diseases is known in Familial Mediterranean fever (FMF). There is a lack of information regarding the role of emotional triggers for PFAPA attacks.

Objectives: To examine whether emotional distress may trigger PFAPA attacks.

Methods: Enrolled were patients with active PFAPA, from two Israeli medical centers. Researchers contacted their parents by phone in two occasions: a. within the two weeks of returning to school after the first COVID-19 lockdown; b. during the summer vacation (i.e., non-stressful period). Parents were asked regarding the occurrence of PFAPA attacks within the two weeks preceding the calls. The relative stress levels of the two periods were validated by an emotional distress scale questionnaire. Differences between occurrences of attacks during these two periods of time were recorded.

Results: One-hundred and six pediatric patients enrolled in the study. Mean age was 7.37 ± 2.9 . In the stressful period, 41 (38.7%) reported at least one attack during the preceding 2 weeks, compared to 24 (22.6%) in the non-stressful period ($p = 0.017$). Scores for the mean emotional distress questionnaire were higher in the stressful period compared to the non-stressful period (35.6 ± 8.1 vs. 32.1 ± 7.7 , respectively, $P = 0.047$).

Conclusion: This study shows that during a period of stress for children there were more PFAPA attacks compared to a relaxed period. These findings indicate that mental factors such as stress or excitement may be triggers for PFAPA attacks.

Table 1. Attacks status during prior 2 weeks during stressful or non-stressful event

Outcome	First call (May 2020)	Second call (August 2020)	P-value
Pediatric emotional distress score (PEDS), mean ($\pm$ SD)	35.6 ($\pm$ 8.1)	32.1 ($\pm$ 7.7)	0.047
Any attacks during last 2 week, n (%)	41 (39.8%)	24 (24.2%)	0.017
Number of attacks			0.04
One, n (%)	27 (25.5%)	19 (17.9%)	
Two, n (%)	14 (13.2%)	5 (4.7%)	

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Table 1.

Parameters	Measles		Parotitis		Rubella		Diphtheria		Hepatitis B	
	HR (95%CI)	p	HR (95%CI)	p	HR (95%CI)	p	HR (95%CI)	p	HR (95%CI)	P
soJIA, yes	1.84 (0.84; 4.03)	0.128	1.43 (0.53; 3.95)	0.492	0.99 (0.05; 18.6)	0.995	2.04 (0.91; 4.59)	0.08	2.52 (1.27; 5.0)	0.008
GCS, yes	1.54 (0.91; 2.61)	0.104	0.31 (0.45; 1.84)	0.799	0.736 (0.11; 4.88)	0.736	1.89 (1.1; 3.24)	0.02	1.34 (0.77; 2.32)	0.295
MTX, yes	0.86 (0.39; 1.88)	0.703	1.55 (0.49; 4.88)	0.453	1.53 (0.08; 28.64)	0.776	2.02 (0.71; 5.76)	0.187	0.6 (0.31; 1.15)	0.122
Biologics, yes	2.02 (1.22; 3.32)	0.006	1.76 (0.98; 3.15)	0.057	2.26 (0.5; 9.87)	0.293	1.67 (0.99; 2.8)	0.053	1.2 (0.75; 1.92)	0.453
>1 biologics, consequent, yes	1.57 (1.13; 2.2)	0.007	1.4 (0.93; 2.09)	0.104	1.82 (0.71; 4.7)	0.213	1.4 (0.98; 2.0)	0.062	1.11 (0.78; 1.58)	0.572
Incomplete vaccination, yes	2.02 (1.02; 4.0)	0.042	6.25 (2.13; 17.9)	0.00008	na*	na*	2.39 (1.18; 4.85)	0.016	na*	na*