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Idiopathic musculoskeletal pain in Indian
children – prevalence and impact on daily routine

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ABSTRACT

Objectives: To study the prevalence of idiopathic musculoskeletal pain (IMSP) in school going children and its impact on daily life.

Methods: One thousand eighteen apparently healthy school children aged 5–16 years were assessed and analysed for IMSP and its associated problems. Standard tests for significance were applied.

Results: One hundred and sixty-five (16.2%) children mostly males (55.2%) reported IMSP. Lower limbs (52.1%) were the most common location of pain. More than 1 year of pain history was present in 15%. Thirty-seven percent children complained of discomfort during walking, 30.9%, had pain during physical exercise, 29.2% had difficulty attending lessons and 4.2% had interference in pursuing hobbies. The children were also further sub grouped into preadolescents and adolescents. There was significant difference in pain duration and duration of each pain episode in the two groups ($p = 0.01$). A significant number of children (21.2%) with IMSP reported school absenteeism ($p < 0.001$). A significant number of adolescents had history positive for contact sports ($p = 0.001$). Sleep disturbances were also reported to be higher in children with IMSP (29% vs. 5.7%, $p = 0.001$). Other associated problems in children with IMSP found were day time tiredness (51.1%), headache (47.3%) and abdominal pain (24.8%).

Conclusions: Prevalence of IMSP in school children aged 5–16 yrs was found to be 16.2% and a significant percentage of these children experience interference with daily activities including school absenteeism.

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Prevalência e impacto nas atividades diárias da dor musculoesquelética idiopática em crianças da Índia

R E S U M O

Palavras-chave:

Dor musculoesquelética idiopática
Prevalência
Impacto

Objetivos: Estudar a prevalência de dor musculoesquelética idiopática (DMEI) em crianças em idade escolar e seu impacto nas atividades diárias.

Métodos: Foram avaliadas e analisadas 1.018 crianças em idade escolar aparentemente saudáveis entre cinco e 16 anos quanto à presença de DMEI e seus problemas associados. Foram aplicados os testes de significância padrão.

Resultados: Relataram DMEI 165 (16,2%) crianças, em sua maior parte do sexo masculino (55,2%). Os membros inferiores (52,1%) foram a localização mais comum da dor. A história de dor presente havia mais de um ano foi encontrada em 15% das crianças; 37% delas queixaram-se de desconforto durante a caminhada, 30,9%, tinham dor durante o exercício físico, 29,2% tinham dificuldade de frequentar as aulas e 4,2% sofriam interferência na participação em passatempos. As crianças foram ainda subagrupadas em pré-adolescentes e adolescentes. Houve diferença estatisticamente significativa na duração da dor e na duração de cada episódio de dor nos dois grupos ($p=0,01$). Uma quantidade significativa de crianças com DMEI (21,2%) relatou absentismo escolar ($p<0,001$). Uma quantidade significativa de adolescentes tinha história positiva de prática de esportes de contato ($p=0,001$). Os distúrbios do sono também foram relatados como maiores em crianças com DMEI (29% vs. 5,7%, $p=0,001$). Outros problemas associados encontrados em crianças com DMEI foram o cansaço durante o dia (51,1%), a cefaleia (47,3%) e a dor abdominal (24,8%).

Conclusões: A prevalência de DMEI encontrada em crianças entre cinco e 16 anos foi de 16,2%. Uma porcentagem significativa dessas crianças relata interferência nas atividades diárias, incluindo absentismo escolar.

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Introduction

Amongst children presenting with chronic musculoskeletal pain (MSP), pain without any identifiable cause in appendicular or axial locations of the body constitute a significant proportion of these cases (5–15%) and is called as idiopathic musculoskeletal pain (IMSP).¹ A variable duration (<6 weeks to 3 months) and frequency (once/week to 3 times/week) have been taken to define IMSP by various authors.^{2,3}

Though considered benign, in literature mostly from west, IMSP has been reported to have significant effect on daily activity; psychosocial functioning and health related quality of life.^{4–8}

IMSP has been a neglected area of research in India and there is paucity of data on its various aspects including prevalence.

We conducted this study with, a primary objective of finding out the prevalence of idiopathic musculoskeletal pain in school children and a secondary objective to find its impact on daily lives of these children.

Materials and methods

Study design

Cross sectional Study.

Study duration

From March 2010 to December 2011.

Sample size calculation

Sample size was calculated taking mean prevalence of IMSP as 10%, with an α error of 2% and confidence interval of 95, it was required to include 864 subjects for the study.

Enrolment and data collection

For the purpose of this study, any appendicular/axial musculoskeletal pain of ≥ 6 weeks, and frequency of at least once/week, without any identifiable cause on detailed history and examination were considered as IMSP.

After selecting two co-ed schools (one public and one private) from the list of school within 5 km of hospital, by lottery, children from class 1 to 10 (aged 5–16 years) were given invitation and consent form. All children who agreed to participate were inquired in detail for the presence of musculoskeletal pain. When present, detailed information including location of pain, duration of pain, pain frequency, character and description of pain in each episode was obtained. The intensity of pain was graded using the visual analogue scale of 1–10. A score of 1–4 was taken as mild pain, 4–7 moderate pain and 8–10 severe pain. History regarding associated complaints like headache, abdominal pain, feeling sad (by asking if the child felt sad or miserable due to pain at any given point of time), day time tiredness, sleep disturbances (difficulty in falling asleep, waking up during night due to pain) and school absenteeism (defined as more than 10 percent absenteeism of total school days) was taken. The information obtained was verified from the parents.

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