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PAIN MANAGEMENT IN PAEDIATRIC PRACTICE: THE VIEWS OF PAEDIATRIC HEALTH CARE PROVIDER ON THE USE OF ANALGESICS

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ABSTRACT

Background: Pain remains a common event in paediatric practice. Whether brought on by disease, injury or a necessary procedure, alleviation of pain in children remains a topical issue, an area of continuing research and debate on how and when this should be done. With very limited published data from Nigeria, this study aims to determine the beliefs and practices regarding analgesic use in paediatric pain management among child healthcare workers in Nigeria. **Method:** This was a prospective descriptive survey of doctors at a national paediatric conference. A 13-item self-administered questionnaire was used. One hundred and twenty questionnaires were distributed. **Results:** Seventy-seven (64.1%) questionnaires were returned. The respondents comprised of consultant paediatricians (41.5%), paediatric residents In training (45.5%), general practice doctors (9.1%). Acetaminophen was the commonest analgesic prescribed (97.5%) while painful crises of sickle cell disease was the commonest indication for analgesic prescription (83.1%). Reasons given for restricted use of analgesics included masking of symptoms (65 %), addiction (22.3 %), and analgesic abuse by parents (30 %). There were 55.8 % of respondents who agreed that paediatric pain should be treated with analgesics whenever it occurred. **Conclusion:** To improve the treatment of pain in children, there is a need for more training of paediatric health care workers in Nigeria.

KEYWORDS: Pain, analgesics, protocol.

INTRODUCTION

The International Association for the Study of Pain defines pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage."[1] The major aim of treating pain is to eliminate suffering, psychological and physical, resulting from the pain.[2] Children, like adults, feel pain no matter the age. However being a subjective experience, children are more vulnerable to non-treatment or under-treatment of their pain, even under the care of healthcare providers.[3,5] Their inability to communicate a painful experience led to the evolution of societal and individual beliefs and misconceptions such as children have a higher tolerance of pain, pain perception in children is low because of biologic immaturity of pain centers, children have little or no recollection of painful experience, children are more sensitive to the side effects of analgesics, children are at risk for addiction to narcotics.[1-5] These beliefs limit the use of pharmacologic agents in children and the application of research findings into clinical practice. Literature on the issue of pain management in children in Nigeria is limited but paediatric pain management is evolving and remains an important aspect of care. It is hoped that this study examining the beliefs and practise of some Nigerian child healthcare providers as it pertains to the use of analgesics in paediatric pain management, will stimulate more attention to the issue and where necessary bring about change in practice.

METHODOLOGY

This was a prospective descriptive study carried out in Nigeria. One hundred and twenty questionnaires were distributed to doctors at a scientific conference of paediatric health care workers. The 13-item questionnaire included demographic questions regarding current cadre, and practice setting. Information was gathered on the opinion and practice related to the use of analgesics, setting of analgesic use, clinical conditions in which used and types of analgesic agents used for acute painful conditions.

Analysis was done using simple descriptive statistics in the form of percentages and presented in tables and prose.

RESULTS

One hundred and twenty questionnaires were distributed. Seventy-seven (64.1%) were returned. The distribution of respondents by cadre and area of primary practice is

shown in Table I. The majority (45.5%) of respondents were paediatric residents. Consultant paediatrician were 32 (41.1%) and general practice doctors (with paediatric interest) 7 (9.1%). Three (3.9%) professors of paediatrics participated in the survey. Fifty-four of the respondents had their primary practice (where>50 percent of their practice time is spent) in a teaching hospital/specialist hospital setting 11 at general hospitals and another 11 at private clinics, and one at a mission hospital.

Common analgesics used by respondents were from the classes of opioids and non-opioids (Table II) The non-opioid analgesic Acetaminophen was the most commonly used followed by the opioid analgesics of which Pentazocine was commonly used. Only one respondent used lidocaine as an analgesic for scorpion sting.

With regards to condition for analgesic use (Table III), vaso-occlusive crisis (VOC) of sickle cell disease was the most common indication for the use of analgesic (83.1%). Analgesics were prescribed by 74.1% of respondents for nonspecific pains (referred to headaches, joint pains, ear pain, minor trauma) and by 36.1% for postoperative pain relief. Less than 10% of respondents prescribe analgesics for procedural pain.

Forty two (54%) respondents readily prescribed analgesics for children in their practice, while 6% rarely prescribed analgesics for children. Seventy (90.9%) respondents were of the opinion that analgesics should be used for both inpatients and outpatients treatment, while two (2.3%) considered that its use be restricted to inpatients treatment four (5.2%) considered its use be limited to outpatient treatment.

Thirty-six (46.7%) respondents concluded that analgesics were not used as often as indicated in paediatric practice. The reasons suggested for this included; masking of symptoms (65%), risk of analgesic abuse by parents (30%), increase of addiction (22.5%), harmful to the child (12.5%).

Forty-three (55.8%) respondents agreed that analgesics should be used as often as indicated. While thirty-four were of the opinion that analgesic use be restricted to severe painful conditions. A total of forty-one (53.2 %) were satisfied with their current rate of analgesic used in their practice.

Table I: Demographics of characteristics of respondents and their willingness to treat pain.

Characteristics	Number of respondents	%
Cadre		
Professor	3	3.8
Consultant	32	41.6
Paediatric resident	35	45.4
General physician	7	9.2
Place of primary practice		
Teaching hospital/FMC	54	70.1
General Hospital	11	14.3
Private/mission	12	15.6
Preferred area of administration		
Inpatient use only	2	2.3
Outpatient use only	4	5.2
Both inpatient and outpatient use	70	95.8

Table II: Commonly Used Analgesics.

Type of analgesic	Number of respondent	%
Acetaminophen	75	97.5
Pentazocine	35	45.5
Dihydrocodine	23	31.0
Pethidine	10	13.0
Lidocaine	5	6.5
Acetylsalicylate	3	4.0
Ibuprofen	1	1.3

Table III: Common Indications for the use of analgesics

Indication for analgesic use	Number of respondents	%
Vaso-occlusive crises	64	83.1
Non specific pains	57	74
Post perative pain	28	36.4
Pre or post procedure pain relief	7	9.1
Acute abdominal pain	6	7.8
Others (Scorpion sting)	1	1.3

DISCUSSION

This study conducted in Nigeria, shows that there are varying opinions among child healthcare providers about the use of analgesics in children. Though the small number of respondents is a limitation in this study, it does appear that there exist a divide among paediatricians as to whether or not pain should be treated in all children presenting with a painful conditions.

Pain may occur from a variety of causes. It is generally accepted that sickle cell vaso-occlusive crises is a severely painful event and paediatricians would readily use some form of analgesia for this condition. This was reflected in this study. Post-operative pain administration is also another circumstance for which respondents'

readily gave analgesics. Painful medical procedures (venipuncture, lumbar puncture, wound dressing etc.) are considered a major source of distress for children.[6-8] In this study less than 10% of respondents use analgesic either before or after a procedure. Medical procedures are essential for diagnosis and treatment of illnesses, they have both short term and long term consequences on the child.[8,9,18,19] In this circumstance the experience is not only distressing to the child, it gives the caregiver, who in most settings is usually told to hold the child for the procedure, some worry.[17] Pain elicited leads to violent withdrawal by the child which in turn may cause a failed procedure and a need to repeat thus prolonging the time of exposure to pain. A child may deny experiencing pain if only to avoid a recurrence of pain in cases of examinations to elicit tenderness.[20] Pain leaves a lasting impression in the minds of children and adults as well.[20] *Taddio et al*[15] demonstrated the long term effect of pain in her study with newborns. The results showed that newborn males circumcised without analgesic demonstrated greater pain response to immunization at 4 months than those who were uncircumcised. Rocha[16] in a similar study in older children showed that an initial painful procedure diminished the effect of analgesia in subsequent procedures. Unrelieved pain from any cause interferes with sleep, leads to fatigue and a sense of helplessness and may increase morbidity or mortality in children.[17] Participants in the study by Morsy[18] reported sleep disturbance being attributable to the pain they were experiencing.

Age long beliefs appear to be a continuing hindrance to the use of analgesics in the paediatric population. With the growing interest in childhood pain and its management leading to more research, in developed countries the issues of superstitious beliefs with no scientific basis has to a great extent been discarded for evidence based clinical practice.

A major limiting factor expressed by respondents as the reason for under-usage of analgesics was that of masking of clinical symptoms. The pain associated with an undiagnosed abdominal pain is the commonest event for which the fear of masking clinical symptoms is debated. For this the opinions vary. In this study 92.2 % of the respondents gave no analgesic to patients with acute abdominal pain. Many practitioners believe that treating undifferentiated abdominal pain would hinder an accurate surgical diagnosis by prevent its localization.[11,12] Several other such studies show that pain of acute abdomen is still an issue where barriers to analgesic administration exist.[9,10] However there are clinical trials/ that have shown that the administration of analgesics prior to surgical review does not interfere with surgical diagnosis.[11-13] There is still need for more research in this regards to determine all other confounding factors as well as best practise guidelines. The elicitation of pain as a diagnostic tool is arguably unnecessary and unethical especially with the advancement of other diagnostic modalities such as ultrasonography, computed tomography and magnetic resonance imaging. However in poor nations without these diagnostic machinery, evidence based protocols need to be developed to ensure children receive comfort from suffering.

Another factor expressed as a reason for the low use of analgesic was the likelihood of addiction. Addiction is usually reported with the continuous, prolonged use of opioid analgesics or where pain is chronic.[15,16] Addiction has not been reported in the short term use of opioids.

Analgesics are broadly classed into opoids and non-opiods. Acetaminophen is one of the most widely used nonopiod analgesic. It is well tolerated by children. Almost all respondents used this drug. Most pediatricians "feel safe" using it. Not many other types of analgesic classes were used. This narrow range of types/classes of analgesics maybe reflective of a lack of knowledge about various classes and dosages of analgesics found to be safe in the paediatric population or the operational fears expressed above. This study did not however relate analgesic type and route of administration to pain severity. Respondents who indicated using analgesics often in their practice also showed no limitation to its use whether for inpatients or out-patients.

CONCLUSION

Paediatric health care providers in Nigeria should advocate for pain free paediatric units. To accomplish this there is a need to expand their knowledge in the area of pain management and the use of appropriate culturally acceptable pain assessment tools and treatment protocols.

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