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EVALUATION OF SURGICAL RESIDENT STAFF KNOWLEDGE OF CANCER PAIN ASSESSMENT AND TREATMENT

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SUMMARY

Objective: Inadequate knowledge and expertise are major contributing factors to poor pain management in the cancer patient. This study was carried out to evaluate the effect of formal teaching on pain management on the current practice of the resident surgeons at the University College Hospital (UCH). Ibadan.

Method: Resident surgeons at different levels of their 4-year program responded to a questionnaire, which requested them to state their management of a hypothetical patient who had severe cancer pain and also asked questions on other issues relating to cancer pain therapy.

Results: Sixteen resident doctors responded to the questionnaire. Mean number of years spent in residency was 2.1. More than 80% of the respondents had adequate knowledge of just taking the basic history of pain. Less than 50% indicated the need to seek information about associated symptoms, previous pain history, and the psychosocial history of the patient. Only 37% would examine the patient.

On the general knowledge section, 11 (68%) of the respondents recommended parenteral opioids while only 9 prescribed oral opioids. Ten (69.5%) respondents prescribed NSAIDS in addition to opioids. All the resident doctors knew oral, IM and IV routes for analgesic therapy. The most common side effect of opioid analgesia listed was addiction. To the question of unrelieved pain, only 2 residents treated the patient appropriately.

Conclusion: It is concluded that the resident's knowledge of cancer pain management is deficient and that the College should adopt a workshop approach to cancer pain management.

KEYWORDS: ***Cancer pain management, Resident staff***

INTRODUCTION

The incidence of cancer is increasing worldwide with the disease remaining incurable in most cases[1]. An estimated 100000 new cases of cancer are seen in Nigeria annually and more than 50 % of our patients first present in the advanced stage of the disease[2]. The progression of the disease is usually accompanied by pain, the relief of which is major public health concern worldwide. This concern for effective pain management prompted the World Health Organization (WHO) to create a subdivision of Cancer Pain. This subdivision views "education as a priority for ensuring the effective implementation of a cancer pain relief program" and has since developed and circulated monographs on the issue[3]. The World Health Organization thus advocates the formal education of physician and related health care professional in cancer pain management.

To this end, formal training in pain management at undergraduate and postgraduate level of the medical curriculum has been proposed by the WHO and adopted by most institutions in the developed world[5,6]. Sub optimal cancer pain management however still persists especially in the developing world due to various reasons amongst which are inadequate training of the health care professionals, non-availability of opioids and undue fear of addiction by the physicians. Von Roenn et al[4] emphasized the problem of poor education in a study when more than 70% of their respondents rated their undergraduate and postgraduate training in cancer pain management as sub-optimal.

The West African College of Surgeons has also adopted this measure to some extent by including pain management in the contents of its annual update course in surgery. This study was conducted to assess the knowledge of resident surgeons who recently participated in such an update course.

MATERIALS AND METHODS

A modification of a similar study by Sloan et al[7] was used in this assessment. The clinical skills of resident surgeons from the second year level of our 4-year residency-training program were tested with short answer questions. The tests were administered by one of the authors and they were to be completed in 20 minutes.

The questions asked included the pain management of a hypothetical patient with terminal pelvic cancer presenting in the clinic with the complaints of severe pain. Using the same patient as the focus, other questions tested the knowledge on other

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issues relating to cancer pain management. The residents were also requested to make self-assessment of their knowledge of pain management and to indicate what areas they would like to have more training in. The performance of the residents was evaluated by descriptive statistics.

RESULTS

Sixteen resident doctors out of 45 who were eligible, agreed to participate in the; study and they were at various stages of their 4-year training programme. The mean duration of residency training of the respondents was 2.1 years. Two, (12.5%) nine (56%) and five (31%) of the residents claimed they have very good, good and fair pain management knowledge and skills respectively.

To the question "please enumerate a detailed pain assessment of Mrs. Lagbaja a 48-year old with terminal pelvic cancer who presents in the clinic with the complaints of severe pain" the responses are stated below (Table 1). Eight (50%) of the respondents asked about the onset of pain.

Table 1: **Pain Assessment.**

Parameter	No of residents who did	% of the Residents
Pain Onset	8	50
Pain location	13	81
Pain description	11	69
Intensity	13	81
Aggravating factors	14	87.5
Relieving factors	13	81
Related symptoms	5	31
Previous pain history And treatment	7	44
Past medical history	2	12.5
Psychosocial history	2	12.5
Physical examination	6	37.5

Table 2: **Prescriptions**

Analgesic	No of residents	% of the residents
Parenteral Opioids	11	68.75
Oral opioids	9	56
Opioids+ NSAIDS	10	62.5
Opioids +adjuvant drugs	1	6
Regular dosing	12	75
Breakthro' Pain	2	12.5
Laxatives	3	18.75

More than 80% had adequate knowledge of the history taking for pain but less than 50% indicated the need to seek information about associated symptoms previous pain history and the psychosocial history. Only 37% however would examine the patient and conduct necessary investigations.

To the question "Write out your analgesic prescription(s) as you would on a prescription pad", the responses are as on Table 2. Parenteral opioids in the form of pentazocine commonly and pethidine on two prescriptions were recommended by more than 50% the respondents. To this, 9 residents also added dihydrocodeine an oral opioid and a non-steroidal anti-inflammatory drug. The dosing schedules were regular in 75% of the prescriptions but of long interval such as 6-8hourly pentazocine. Only one resident recommended amitriptiline as adjuvant.

Alternative Route of Analgesia

When asked to name alternative routes of analgesia for the cancer patient, all the residents identified the oral and the intramuscular routes. Fourteen (85%) and 8(50%) recognized the intravenous and the epidural routes respectively. The subcutaneous, sublingual, dermal, and rectal routes were recognized by less than 30% of the residents.

Opioid Side Effect

On the issue of opioid side effect addiction was the most commonly cited problem followed by respiratory depression. Nausea, vomiting, and constipation were identified by more than 50% of the residents. (Table 3)

However when asked how the fear of addiction as expressed by the daughter of the patient would be managed, 11(68.75%) claimed it is not an important issue and that they would explain to the daughter and continue the analgesic.

Table 3: **Opioid Side Effect**

Side Effect	No of Residents	% of Residents
Addiction	12	75
Respiratory depression	11	68.7
Constipation	9	56
Nausea& Vomiting	8	50
Sedation	3	18.7
Pruritus	3	18.7

Non-Drug Therapy

Respondents were requested to state other non-drug therapies that might be used in the alleviation of the patient's pain, more than 50% listed acupuncture, surgery, and psychotherapy first. Other measures listed were TENS, physiotherapy, and massage.

Unrelieved Pain

The residents were asked to describe their management plan when Mrs. Lagbaja returned to the clinic still in severe pain.

Only two residents answered this question appropriately in line with WHO recommendations. They would re-evaluate the patient, increase the dose and the frequency of the opioid, change the route of administration, add an adjuvant and consider physical methods (Table 4)

More than 50 % of the residents indicated they need more training in general management, analgesia and communication

techniques in cancer patients.

Table 4: **Management of Unrelieved Pain**

Method of pain management	No of Residents	% of Residents
Re-evaluation	2	12.5
Increase dose of analgesic	10	62.5
Increase frequency	10	62.5
Stronger opioid	6	37 5
Epidural analgesia	1	6.25
Non-drug therapy	6	37.5
Tender loving care	1	6.25

DISCUSSION

The world-wide burden of cancer will shift in the next few years with the majority of new cases being diagnosed in the developing countries that have limited resources to tackle the disease. Seventy per cent of all new cancer patients will live in the developing world while only 5% of the resources available for cancer will be expended[2].

In these countries, most patients with cancer will present with advanced disease with 70-90% of them having severe pain. They therefore need only palliative care. Pain is the most feared of the complications of cancer; unrelieved it leads to suffering and poor quality of life. Hence the current emphasis on pain management.

Effective pain management is predicated on adequate knowledge and skills of the physician and the other health care professionals. Many studies have shown poor pain management to be related to physician knowledge[8,9,10]. The knowledge and indirectly skills of our resident doctors were tested by this survey. Although this study showed that more than 80% of our resident doctors possessed basic knowledge for history taking of the pain condition, the knowledge needed for comprehensive pain assessment was not demonstrated in the responses to the severe pain question. Only few surgeons asked about related symptoms, previous pain history and treatment, the past medical history and the psychosocial history in the terminal cancer patient with severe pain. Soyannwo and Amanor-Boadu[11] had previously recorded similar poor performance in this aspect of pain assessment in a questionnaire survey of the pain management practices of consultant surgeons. The psychosocial history is especially important. Ohaeri et al[12] reporting on psychosocial stresses in cancer patients stated depression and suicidal ideation are common and that some of these might be due to physical factors such as pain and poverty. The degree of social support the patients get impacts on the coping mechanisms.

Of worrisome significance is the fact that only 6 of the 16 respondents would perform a physical examination. The implication of these findings is that our formal lectures were insufficient on pain education for our residents. Our institution is one of the centres in country with comprehensive oncology practice and we therefore get a significant number of cancer patients. There is urgent need therefore to formulate policy on this important issue, and design a program for clinical courses and workshop on cancer pain management.

All the respondents recommended an opioid analgesic but the preference for the parenteral opioid might either be indicative of the non-availability of strong oral opioid preparation in the country or lack of knowledge thereof. Seventy-five per cent of our residents prescribed the analgesic on a regular dosing schedule as recommended by the WHO but the interval were long in most cases leaving the patient vulnerable to breakthrough pain resulting in failure of analgesia. Further, most of the surgeons did not know of the alternative routes for analgesic therapy. In the cancer patient, evolving problems may render the oral route unavailable. For example, with antitumour therapy and disease progression, the patient may have nausea and vomiting or the patient may be delirious, thereby necessitating non oral route of analgesia. The sublingual, dermal, rectal and the subcutaneous routes will be more applicable and affordable in our sub region than the high-tech epidural and Patient Controlled Analgesia options.

On the question of opioid side effect, the most frequently cited effect was addiction. Many studies have confirmed that one of the impediments to adequate analgesic therapy f'or cancer pain was fear of addiction by the physicians as well as the patients[13,14,15]. It is equivocal if this could be deduced from the surgeons' choice but it was relieving to note that 68% appropriately treated the daughter's fear of addiction question as not an important issue and stated they would discuss and explain and continue the opioid treatment. Sedation, tolerance, and constipation are the more common side effects and they may require dosage adjustment and laxatives.

Poor knowledge of cancer pain management was conclusively shown in our study when only two residents effectively treated the unrelieved pain question. Only the two re-evaluated the patient, and titrated the analgesic drug dose upward, gave the opioid more frequently, changed the route, added an adjuvant and considered physical measures, as recommended. In the terminal patient with pain, different pain syndromes may be operating and thus need careful re-assessment to guide an effective pain management plan.

More than 50% of the surgeons over estimated themselves by rating their pain management skills as good a finding discordant with the finding of this study. The study agreed with the' very good' self-rating of the two second-year residents. The small number did not permit analysis of correlation of the year of residency with performance in this assessment.

CONCLUSION

Overall the knowledge of the residents on cancer pain management was poor and needs an urgent review. The teaching format of giving series of lectures has been called into question and new paradigms are emerging[16]. Of these are changes in physician attitude and the prevailing culture of the institute where they work. We should aim to develop pain management programmes that would include active learning as in small group workshops in addition to the lectures. The programme should be extended to other health care professionals such as nurses, pharmacists and social workers who are involved in the management of these patients for a team approach to the care.

For clinical practice routine use of standard pain assessment tools should be encouraged for correct assessment continuity of care and thereby excellent analgesia.

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