

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20173469>

Original Research Article

## Evaluation of who guided pain management protocol in cases of carcinoma cervix

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**Received:** 26 May 2017

**Revised:** 24 June 2017

**Accepted:** 27 June 2017

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### ABSTRACT

**Background:** Pain in patients with cancer cervix is a complex process that occurs from many causes. Opioids, the major class of analgesic used in management of moderate to severe pain, are usually effective and have favorable benefit to risk ratio. Morphine is the most effective and commonly used opioid in cancer pain management.

**Methods:** Patients of cancer cervix attending the Obstetrics and Gynecology Department, KRH for a period January 2016 to December 2016. 200 patients were included in the study. Pain intensity was measured by visual analogue scale.

**Results:** Maximum number of subjects were in stage IIB (46%) followed by stage IIIB (42%). Minimum number of subjects were in stage IA and stage IVB. In stage I, 55.6% patients had mild pain, 27.8% had moderate and 16.7% patients had severe pain. In stage II, carcinoma cervix patients 80.4% patients had moderate pain and only 12% patients had severe pain and stage III, 47.6% patients had severe pain and stage IV all patients had severe pain. Most common site for pain was lower abdomen in carcinoma cervix patients. The pain was recorded as moderate in maximum (49%) subjects followed by severe (39%). Mild pain was seen only in 12% subjects. Maximum response was seen for Step III (95.1%) while minimum for Step II (44.1%).

**Conclusions:** Pain is a common symptom in cancer cervix patients. Morphine is most useful drug in cancer pain management. It is easily titratable and has a favorable benefit to risk ratio.

**Keywords:** Cancer cervix, Morphine, Opioids

### INTRODUCTION

Cancer cervix is one of leading cause of cancer death among women worldwide. It is the commonest malignancy to affect women of all ages in the developing countries, accounting for an estimated 370,000 new cases and 160,000 deaths per year. The incidence of late disease in most of the affluent countries is about 10-12%. Incidence of new cancer patients in India is about 100,000 per year and 70% or more of these are stage III or higher at the time of diagnosis.<sup>1</sup> Pain is a debilitating

symptom associated with cancer cervix. It occurs in 25-50% patients with newly diagnosed malignancies, in more than 75% of those with advanced disease, and in 33% of those undergoing treatment.<sup>2</sup>

Pain in patients with cancer cervix is a complex process that occurs from many causes. Ninety percent of pain in cancer cervix results from the tumor itself or therapy in which 70% of pain develops from tumor invading or compressing uterosacral ligament and sacral plexus, and 20% of cancer pain related with its treatment (radiation

and chemotherapy related neurotoxicity). Rest 10% of pain is due to unrelated illness.<sup>3</sup>

Cancer pain can be managed effectively in about 80-90% of patients through simple means such as the appropriate use of the World Health Organization (WHO) analgesic ladder.

WHO's analgesic ladder has been the internationally recommended approach to the pharmacological management of cancer of pain for the last two decades. This approach describes a three step progression from the use of non-opioid medication to weaker opioid and then strong opioid depending on pain intensity.

Opioids, the major class of analgesic used in management of moderate to severe pain, are usually effective and have favorable benefit to risk ratio. Morphine is the most effective and commonly used opioid in cancer pain management.

## METHODS

Patients of cancer cervix attending the Obstetrics and Gynaecology Department, KRH for a period January 2016 to December 2016 were studied. 200 patients included in the study.

Demographic details were taken from all the patients. Detailed history was taken regarding present complaints, obstetric and menstrual history, past history of any chronic illness and any treatment history (chemotherapy or radiotherapy). General and systemic examination was done. Gynaecological examination including per speculum, per vaginal and per rectal examination was done. Cervical biopsy was done for histopathological examination.

Relevant investigations like hemogram, liver function test, kidney function test, blood sugar level, hepatitis B and HIV viral marker, coagulation profile (BT, CT), intravenous pyelography and cystoscopy were done on each patient and staging of the disease was done.

Patient of cervical cancer having pain was included in the study. Patients who underwent major surgery within 2 weeks, severe systemic debilitating disease-acute renal failure, chronic renal failure, diabetes, HIV, respiratory diseases and hepatobiliary disease, bleeding diathesis, thrombocytopenia and epilepsy of history of seizures were excluded from the study.

### Pain Assessment

Initial pain assessment was done by taking detailed pain history regarding various pain characteristics like intensity, location, quality, duration and its temporal pattern. Pain intensity was measured by visual analogue scale.

Patient's pain was categorized - mild (1-4), moderate (5-6) and severe (> 7). According to WHO ladder, three-step progression from the use of non-opioid medication to weaker opioid and then strong opioid depending on pain intensity. Pain management according to WHO step ladder (first line of therapy) - mild to moderate pain were given step-I drug and severe pain were given step-II drug.

## RESULTS

Maximum number of subjects were in stage IIB (46%) followed by stage IIIB (42%). Minimum number of subjects were in stage IA and stage IVB.

**Table 1: Distribution of cases according to stage.**

Stage	No.	%
IA+IB	18	9
IIA+IIB	92	46
IIIA+IIIB	84	42
IVA+IVB	6	3

**Table 2: Correlation between stage and severity of pain.**

Stage	Severity of pain					
	Mild		Moderate		Severe	
	No.	%	No.	%	No.	%
I (n=18)	10	55.6	5	27.8	3	16.7
II (n=92)	7	7.6	74	80.4	11	12
III (n=84)	12	14.3	32	38.1	40	47.6
IV (n=6)	0	0	0	0	6	100

In stage I, 55.6% patients had mild pain, 27.8% had moderate and 16.7% patients had severe pain. In stage II, carcinoma cervix patients 80.4% patients had moderate pain and only 12% patients had severe pain and stage III, 47.6% patients had severe pain and stage IV all patients had severe pain.

The general trend seen was that with increasing stage the severity of pain was increasing.

**Table 3: Distribution of cases according to site of pain.**

Duration	No.	%
Back pain	102	51
Lower abdomen pain	146	73
Perineal pain	66	33

Most common site for pain was lower abdomen in carcinoma cervix patients.

The pain was recorded as moderate in maximum (49%) subjects followed by severe (39%). Mild pain was seen only in 12% subjects.

Maximum response was seen for Step III (95.1%) while minimum for Step II (44.1%). Adjuvant therapy had a

response rate of 66% while Step I had response rate of 73%.

**Table 4: Distribution of cases according to severity of pain.**

VAS score	No.	%
1-4 – Mild	24	12
5-6 – Moderate	98	49
≥7 – Score	78	39

**Table 5: Overall stepwise response.**

Step and Drug	Response			
	Responders		Non-responders	
	No.	%	No.	%
I (n=122) Diclofenac	89	73	33	27
II and II with adjuvant (n=111) tramadol and tramadol with antidepressant	49	44.1	62	55.9
III and III with adjuvant (n=62) morphine and morphine with corticosteroid	59	95.1	3	4.9
Adjuvant (n=3) antidepressant and corticosteroid	2	66	1	34

## DISCUSSION

In present study, 200 cases of carcinoma cervix were having pain. Out of 200 patients, maximum number of the subjects were in Stage II (46%) followed by Stage III (42%) and minimum subjects were Stage I (9%) and Stage IV (3%).

Van den Beuken, in a review showed that prevalence of pain was 50% in all cancer stages, 64% in patients with metastatic or advanced stage disease, 59% in patients on anticancer treatment and 33% in patients after curative treatment.<sup>3</sup> In the present study, 71.3 % patients had pain as the presenting complaint and majority of the patients (57%) with pain were in advanced stage (3 and 4) followed by 38.2 % in stage 2 and 4.6 % in stage 1 of cancer cervix. Thus, incidence of pain increasing with stage of the disease. Bonica et al conducted a study in which it was found that the mean pain prevalence in various stages of cancer, the percentage were 71%.<sup>4</sup>

In present study, out of 18 patients of carcinoma cervix of Stage I, 55.6% patients had mild pain followed by 27.8% had moderate and 16.7% had severe pain. Out of 92 patients of stage II, 80.4% had moderate pain and only 12% patients had severe pain and in Stage III, 47.6% patients had severe pain and Stage IV all patients had

severe pain. The general trend seen was that with increasing stage the severity of pain was increasing.

In study done by Namarata Singh U showed out of 88 patients of Stage II disease, only 9 patients had severe pain and out of 90 patients of Stage III, 41 patients had severe pain and in Stage IV all patients had severe pain which correlated with our study.<sup>5</sup>

In a cancer cervix patient, pain in the back and lower abdomen occurs due to upper lumbosacral plexus involvement and pain in buttocks and perineal areas occurs due to lower lumbosacral plexus involvement.

In present study, most common site for pain was lower pain followed by back and perineal pain.

Dalmaou J et al, in a study found that infiltration of the upper plexus occurs in approx.<sup>6</sup> one third of patients with cancer cervix and these patients present with pain in back, lower abdomen and flank. Infiltration of the lower plexus occurs in approx. one half of patients in cancer cervix and these patients present with pain in the buttocks and perineum.

There are various methods for the measurement of pain intensity of which simple descriptive scale, numeric distress scale simple methods to perform. Numeric distress scale usually consists of series of numbers ranging from 0-10.

In the present study, pain intensity was measured by Visual analogue scale (VAS) score and numeric distress scale. It was found that majority of patients (49%) had moderate pain followed by severe pain in 39% patients and mild pain in 12% patients.

In study done by Singh NU, 91 patients had visual analogue scale (VAS) score 1-6 and 58 patients had VAS score  $\geq 7$ .<sup>5</sup>

In WHO guideline, drug therapy is the cornerstone of cancer pain management. The oral route is preferred. In this three steps analgesic ladder is used. Patients who had mild to moderate pain, Step I analgesic are used.

In present study, out of 200 patients, 122 patients with mild to moderate pain were given Tab. Diclofenac (Step I drug), 73% patients respond this treatment and 27% patients were not responded. These are subjected to Step II drugs and patients who had severe pain also directly start with step II drugs. The total 86 patients of step II drug 44.1% patients respond this treatment and 55.9% were not responded. These are subjected to Step III drugs (Morphine) out of 62 patients, 95.1% patients respond this treatment and only 4.9% patients were not responded. These patients are subject to adjuvant therapy.

McNicol E et al, in a study found that nonsteroidal anti-inflammatory drugs were preferred for mild to moderate

cancer pain.<sup>7</sup> If these failed to provide adequate analgesia, weak opioid will frequently provide excellent relief.

Wilder-Smith C et al observed that for strong cancer related pain, morphine was more effective than tramadol.<sup>8</sup> Grond S et al, in a study compared the efficacy and safety of high dose tramadol and low dose morphine for mild to moderate cancer pain and observed high dose tramadol to be equally effective and safe for mild to moderate cancer pain as low dose morphine.<sup>9</sup>

Morphine is the mainstay and gold standard strong opioid of choice (Hanks G et al).<sup>10</sup> It is used to treat pain of high intensity that is not responsive to non-opioid combination. These are usually effective, easily titratable, and have a favorable benefit-to-risk ratio. Morphine has been underutilized in the past for number of reasons, including misconceptions regarding its use and side effects. However, this drug in combination with non-opioids forms the basis of an effective analgesic regimen.

## CONCLUSION

Study concluded that pain is a common symptom in cancer cervix patients. Delayed treatment, poverty and poor status of women in society contribute to a high prevalence of pain from cancer cervix. Pain management can be done effectively by WHO guidelines in these patients. Morphine is most useful drug in cancer pain management. It is easily titratable and has a favorable benefit to risk ratio.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

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**Cite this article as:** Bindal J, Agrawal N. Evaluation of who guided pain management protocol in cases of carcinoma cervix. *Int J Reprod Contracept Obstet Gynecol* 2017;6:3486-9.