

Treatment of Operative Pain in Visceral Cancer Surgery at CHU Gabriel Toure

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How to cite this paper: Tientigui, D.B., Alhassane, T., Adégné, T., Lassana, K., Ibrahim, D., Madiassa, K., Amadou, T., Boubacar, D., Amadou, B., Yoro, S., Tany, K., Madani, D.T., Djibo, D. and Gangaly, D. (2017) Treatment of Operative Pain in Visceral Cancer Surgery at CHU Gabriel Toure. *Surgical Science*, 8, 47-51.
<http://dx.doi.org/10.4236/ss.2017.81006>

Received: December 15, 2016

Accepted: January 13, 2017

Published: January 16, 2017

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Abstract

The objectives were to determine the frequency of pain in cancer patients and its intensity in cancer pathologies and to evaluate the evolution of pain intensity after analgesic treatment; the effectiveness of its management study involved 121 cases of operated gastrointestinal cancers, which accounted for 85.82% (141) of operated cancers and 16.78% (721) of all operated patients; the average age of our patients was 49.93 years with extremes 17 and 78 years. Standard deviation: 15.75; with a sex ratio of 1.46. The majority of our patients had WHO III (54/121) or 44.6%; 46.3% (56/121) of patients were in stage IV of the TNM classification. The main digestive cancers were cancer of the esophagus 4 cases (3.3%); of the stomach 61 cases (50.4%); of the pancreas 7 cases (5.8%); of the liver 4 cases (3.3%); gall bladder 2 cases (1.6%); colon 33 cases (27.3%); rectum 6 cases (4.9%) and hail 4 cases (3.3%). The average pain intensities were 3 to 6 hour; 2 to 24 hour; 1.6 to 48 hour; and 1.2 to 72 hour. The majority of our patients had a treatment protocol involving nefopam, and paracetamol was 58%. The pain was exacerbated especially during exercise. Vomiting and vein burning were the main side effects encountered.

Keywords

Pain, Cancer, Bamako Surgery, Mali

1. Introduction

Pain is the most frequently observed symptom in oncology, thus constituting for the clinician one of the main axes of its management. The incidence of pain varies depending on the type and stage of cancer. It is present in 30% to 45% of patients at the time of diagnosis or early stage of the disease and in 60% to 90% of patients with advanced disease [1].

Globally, the number of cancer patients is increasing [2]. More than half of new cases occur in developing countries. In most cases, the disease is diagnosed late [2].

More than 80% of patients with advanced metastatic disease suffer from pain mainly due to direct tumor infiltration. The pain compromises the quality of life considerably and is an important indicator in tumor progression. Cancer pain can be acute or chronic and should be treated accordingly [2].

Various ways are available to treat pain. Analgesics, neurosurgery, as well as psychological and behavioral approaches, must be adapted to the individual needs of the patient [3]. Correct management of pain not only improves the comfort of the patient but also significantly reduces the response to surgical stress, which in turn reduces the rate of complications (infection, anastomotic fistula), morbidity (pneumonia, Thrombosis, embolism), time to re-convalescence and even mortality [4].

2. Patients and Methods

This is a 12-month analytical prospective study from January 1 to December 31, 2015, carried out in the Department of General Surgery of the CHU Gabriel Touré (3rd reference), including all patients operated in the general surgery department for cancer, Assessment of the intensity of pain, the application of the management protocol and with informed and free consent (accepted by ethics committee).

The systematic administration of analgesic as soon as the surgical wound closes and not on demand (paracetamol injectable 30).

Assessment of the intensity of pain in relation to certain factors including: Pathology, procedure, rest and movement. Pain intensity and relief are measured at times T = 0 (initial time), T = 6 h, T = 24 h, T = 48 H, T = 72 H.

The scales used for this study were EVS (Echelle Verbale Simple), and EVA (Echelle VisuelleAnalogique).

As protocol: Analgesic treatment by the administration of various molecules (paracetamol injectable, Nefopam injectable, Morphine injectable).

Injectable paracetamol (administered at 15 mg/kg body weight), the vial (administered intravenously as an infusion for 15 minutes).

The first bottle (administration as soon as the wound was closed), the dose was renewed every 8 hours.

The injectable nefopam was 20 mg postoperatively; to maintain analgesia:

Continuous infusion of 4 to 6 ampoules in 24-hour isotonic serum or discontinuous slow infusion, one ampoule over 30 to 60 minutes; Renewable every 4 hours, without exceeding the dose of 120 mg (6 ampoules per 24 hours).

Tramadol Hydrochloride 100 mg (intravenous slow injection every 8 hours).

Injectable Morphine: 5 to 10 mg/kg (subcutaneously every 4 to 6 hours).

The data was entered and analyzed on SPSS and EpiInfo™ software version 6.0 Fr. The comparison test used was Chi2 (statistically significant difference if $p \leq 0.05$).

3. Results

Our study involved 121 cases of operated gastrointestinal cancers, which accounted for 85.82% (141) of operated cancers and 16.78% (721) of all operated patients; the average

age of our patients was 49.93 years with extremes 17 and 78 years. Standard deviation: 15.75; with a sex ratio of 1.46.

The majority of our patients had WHO III (54/121) or 44.6%; and 46.3% (56/121) of patients were in stage IV of the TNM classification.

The main digestive cancers are summarized in **Table 1**.

Adenocarcinoma was the most found histological type with 95%. Among the adenocarcinomas of the colon there was a cancer with independent cells in “ring with kitten”

On admission the pain was higher on exercise in the majority of our patients

The surgical procedures performed are summarized in **Table 2**.

The average pain intensities were 3 to 6th hour; 2 to 24th hour; 1.6 to 48th hour; and 1.2 to 72th hour.

The type of surgery had an effect on pain at 24 hour with a statistical test $X^2 = 144.83$

Table 1. The main digestive cancers.

Digestive cancers Operated	Number	Percentage
Esophagus	4	3.30%
Stomach	61	50.40%
Pancreas	7	5.80%
Liver	4	3.30%
Gallbladder	2	1.60%
Colon	33	27.30%
Rectum	6	4.90%
Small intestine	4	3.30%
Total	121	100%

Table 2. The surgical procedures performed.

Gestures	Number	Percentage
Biopsy	29	24%
Hepatectomie segmentaire	6	4.1%
Derivation Bilio Digestive	8	6.6%
Gastro Entero Anastomosis	17	14%
Duodeno Pancreatectomy Cephalic	4	3.3%
Cholecystectomy	2	1.6%
Gastrectomy 4/5 + lymphadenectomy	6	5%
Resection anastomosis of colon + lymphadenectomy	10	8.3%
Anterior resection of rectum + lymphadenectomy	4	3.3%
Colostomy	15	12.4%
Ileostomy	4	3.3%
Operation according to Akyama	4	3.3%
Gastrostomy	12	9.9%
Total	121	100%

Table 3. This influence.

Type of surgery	Low pain		Moderate pain		Intense Pain		Very Intense Pain	
	Num	%	Num	%	Num	%	Num	%
Gastrectomy	5	83.30%	0	33.30%	1	16.70%	0	16.60%
GEA	12	70.60%	5	29.40%	0	0%	0	0%
Gastrostomy	9	75%	3	25%	0	0%	0	0%
Biopsy	22	75.90%	7	24.10%	0	0%	0	0%
Cholecystectomy	2	100%	0	0%	0	0%	0	0%
Derivation Bilio Digestive	1	12.50%	6	75%	1	12.50%	0	0%
Duodeno Pancreatectomy	3	75%	0	0%	0	0%	1	25%
Ileostomie	1	25%	3	75%	0	0%	0	0%
Resection of anterior rectum	3	75%	0	0%	0	0%	1	25%
Anastomy resection of colon	0	0%	6	60%	3	30%	1	10%
Hepatectomy	4	66.70%	2	33.30%	0	0%	0	0%
Operation according to Akyama	3	75%	0	0%	0	0%	1	25%
Colostomy	2	13.30%	12	80%	1	6.70%	0	0%

GEA, Gastro Entero Anastomosis.

and $P < 0.05$ at 48 h with a statistical test $X^2 = 177.36$ and $P < 0.05$; and at 72 hour with a statistical test $X^2 = 192.16$ and $P < 0.05$.

This influence is shown in **Table 3**.

The majority of our patients had a treatment protocol involving nefopam, and paracetamol was 58%. The pain was exacerbated especially during exercise. The maximum doses used in the majority of our patients were paracetamol with 28 g (DPC), nefopam 480 mg (DPC), and morphine 100 mg/ml (6th hour, Gastrectomy).

Vomiting and vein burning have been the side effects encountered.

4. Comments and Discussion

All the patients had been informed in the preoperative phase of the evaluation and the interest of the management of the pain, the visual analogue scale was the evaluation tool, and the protocol of the management of the pain had been well established.

Difficulties have involved the management of certain patients due to the financial problems lack of health insurance for some patients, the shortage of major analgesics in the pharmacy of the hospital, and fear and false beliefs about opiates.

Age is not a determining factor in painful perception [5], as is sex [6].

The first six (6) hours of the procedure are very painful. The number of patients with low to moderate pain as well as those with severe to very intense pain in our series did not differ significantly from that found in the Italian series.³⁹ A large majority of our patients did not have severe pain Very intense at 24 hours postoperatively. This result was also found in the American and Canadian series [7] with no statically significant difference $P > 0.05$, which, like us, assured the management of pain according to a well-defined protocol. On the other hand, in the Chinese series [8], the proportion of

patients with severe to very intense pain of 80% (71%) and 36 (29%), respectively, was higher with a statistically significant difference $P < 0.05$. Types of surgery, and multi-modal management of postoperative pain in our patients ($P = 0.000004$).

The mean intensities of postoperative pain in our study do not differ from those reported by the authors Lithuanian [9] and Iranian [6] [10] respectively 1, 4; 0.66 and 2.6 with $P > 0.05$ however at 24 hours postoperatively there is no statistically significant difference between the average intensity of our study and that of the Lithuanian author [9]. Higher than those of Iranian authors [6] [10] with a statistically significant difference $P < 0.05$.

This difference with Iranian authors may be related to the protocol for postoperative pain management.

5. Conclusion

Surgery triggers or aggravates pain in cancer patients in the early hours of surgery. This pain should be assessed prior to management. This management requires a lot of effort because multidisciplinary (algologist, psychiatrist, surgeon, anesthetist and reanimator).

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