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RESEARCH ARTICLE

PAIN MANAGEMENT IN LUNG CANCERS : EXPERIENCE OF THE MEDICAL ONCOLOGY DEPARTMENT OF HASSAN II HOSPIATL IN FEZ

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Abstract

Despite advances in drug therapy, pain management for patients with lung cancer remains complex. Lung cancer is known to be one of the most painful cancers.

Objective: In this study we evaluate the management of pain in patients treated for lung cancer, all stages combined, in the oncology department of the Hassan II University Hospital of Fez.

Mean : cross-sectional study of 71 patients collected over a period of one year using a questionnaire specifying the characteristics of the pain, its etiology, the stage of the disease, the analgesic treatments prescribed and the relief obtained by the treatment.

Results: The mean age of the patients was 63.5 years with extremes ranging from 48 to 85 years. Male gender was predominant (68%), 67% of patients had metastatic cancer: 42% had bone metastases. Nociceptive pain was assessed by the visual analog scale (VAS) and neuropathic pain by the DN4 Questionnaire. Severe pain, characterized by a VAS score higher than 7, or of moderate intensity with impact on sleep and daily activity, was reported in 60.5% of our patients, mostly young subjects, all with advanced cancer. The pain was acute in 5% of cases, subacute in 32% of patients and chronic in 63% of cases. Neuropathic pain was found in 23% of patients. The pain was controlled by analgesics, level II, in association with an anti-inflammatory agent or antidepressants in 37.3%. 62.7% of patients required morphine. An average daily dose of 60mg of morphine was required to relieve pain, 15 patients reported paroxysmal pain attacks of strong intensity requiring the prescription of sublingual Fentanyl. The use of analgesic radiotherapy in combination with morphine was noted in 10 patients (9.8%). However, a small percentage (2.8%) of patients were resistant to the above-mentioned analgesics, requiring the use of non-drug techniques to relieve them.

Conclusion: Our survey confirms the persistent problem of inadequate management of cancer pain. An interesting approach is to improve

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Introduction:-

Pain is one of the most common and unwanted symptoms in cancer patients. Between 50 and 90% of patients followed for lung cancer continue to suffer from pain despite therapeutic advances (1). This pain may be due to the tumor, its extension or even in some cases related to the diagnostic procedures and treatments, which makes management often complex.

After the failure of drug treatments, interventional treatments must be discussed in a multidisciplinary consultation meeting (interventional radiologists, anesthesiologists, radiotherapists, neurosurgeons...) in order to ensure a good control of the pain and a better quality of life.

Material and Method:-**Objective:**

In this study we will evaluate the medicinal and non-medicinal management of pain in patients treated for lung cancer, all stages combined, within the oncology department of the Hassan II University Hospital of Fez.

Means:

Cross-sectional study of 71 patients collected over a period of one year using a questionnaire specifying the characteristics of the pain, its etiology, the stage of the disease, the prescribed analgesic treatments and the relief obtained by the treatment. (Table 1)

Results:-

The mean age of the patients was 63.5 years with extremes ranging from 48 to 85 years. Male gender was predominant (68%), 67% of patients had metastatic cancer: 42% had bone metastases. Nociceptive pain was assessed by the visual analog scale (VAS) and neuropathic pain by the DN4 Questionnaire. Severe pain, characterized by a VAS score higher than 7, or of moderate intensity with impact on sleep and daily activity, was reported in 60.5% of our patients, mostly young subjects, all with advanced cancer. The pain was acute in 5% of cases, subacute in 32% of patients and chronic in 63% of cases. Neuropathic pain was found in 23% of patients. The pain was controlled by analgesics, level II, in association with an anti-inflammatory agent or antidepressants in 37.3%. 62.7% of patients required morphine. An average daily dose of 60mg of morphine was required to relieve pain, 15 patients reported paroxysmal pain attacks of strong intensity requiring the prescription of sublingual Fentanyl. The use of analgesic radiotherapy in combination with morphine was noted in 10 patients (9.8%). However, a small percentage (2.8%) of patients had a resistance to the above-mentioned analgesics, requiring the use of non-drug techniques to relieve them.

Age : - < 60ans - > 60 ans	40 (56.2%) 31 (43.8%)
Gender: - Male - Female	48 (68 %) 23 (32 %)
Performance statut : - 0-1 - 2	30 (43%) 41 (57%)
Disease stage: - localized - advanced/metastatic	22 (31%) 49 (67%)
Type of pain: - Nociceptive - Neuropathic	54 (77%) 17 (23%)
Site of pain: - Chest wall - Intercostal	23 (32.68 %) 15 (21.12%)

- Bone - Other (headache ..)	30 (42%) 3 (4.2%)
Pain intensity: - Severe (EVA \geq 7) - Moderate (3 <EVA < 7) -Mild (EVA < 3)	43 (60.5%) 21 (30.5%) 7 (9%)
Analgesics received: - Stage II (Tramal / Codeine) -Stage III (Morphine / Fentanyl) - Anticonvulsants - Antidepressants - Other (NSAIDs, corticosteroids, etc.)	26 (37.3%) 45 (62.7 %) 10 (58.82%) 7 (41.17%) 10 (14%)

Table 1:- Patient characteristics.**Discussion:-**

Pain is the most common symptom in cancer patients in general, and this is the case for lung cancer in particular. Lung cancer is the 2nd most common cancer in men and the 4th in women in Morocco according to the national registry of the greater Casablanca area (2). The often mixed component of chest wall pain (nociceptive and neuropathic) makes the management of pain complex, which can lead to the aggravation of other symptoms, including depression and fatigue, thus affecting the quality of life of patients. Hence the need for prompt and adequate analgesic management.

For good management of cancer pain, it is important to define its origin, characteristics and intensity (3). Indeed, the intensity of pain related to lung cancers is perceived differently depending on the age of the patients. According to Gagliese et al (4), patients under 60 years of age were more sensitive and less tolerant to pain. While older patients reported moderate to mild pain in 57.2% vs 42.8% for younger patients. This was also found in our series with a predominance of severe pain in the younger patients in 55.3%. High pain intensity was associated with frequent paroxysmal pain attacks. 15 patients reported paroxysmal pain attacks of high intensity requiring the prescription of sublingual Fentanyl allowing relief in a few minutes.

In most cases, the pain was explained by tumor invasion and metastasis (90.1%). About two thirds of the patients had metastatic disease, with a predominance of bone metastases, which is in line with the data in the literature (5). In 9.9% the pain was related to diagnostic procedures and treatments. Neuropathic pain represented about one third of patients. This same finding was found in the study by Wilkie et al, who collected 123 patients with pain secondary to lung cancer and whose aim was to explore the differences in the description of nociceptive and neuropathic pain. 81% of the patients described nociceptive pain compared with 59% for neuropathic pain.(6)

All patients with severe pain were put on Morphine with an average daily dose of 60mg. This dose was higher in patients with neuropathic pain. In a study by Fainsinger et al, the average dose of opioid required to achieve satisfactory pain control in patients with nociceptive pain was 30 mg versus 100 mg in patients with neuropathic pain (7). The oral route was preferred in all our patients. Tolerance to opioids was mainly marked by the occurrence of constipation in one third of the patients despite the systematic prescription of laxatives. Weak opioids are generally recommended for the treatment of moderate cancer pain. There is still a debate as to whether the second step of the OMS analgesic ladder including opioid analgesics such as tramadol, codeine, dihydrocodeine and dextropropoxyphene is still necessary for the treatment of cancer pain. Based on our experience, we believe that there is certainly a place for weak opioids in the treatment of moderate cancer pain. Indeed, pain was controlled by stage II analgesics (Tramadol, Codeine) in association with an anti-inflammatory agent or anticonvulsants (Pregabalin/Gabalin) in 37.3%. Corticosteroids administered for the management of dyspnea also contributed to the relief of pain, especially bone pain, which can be explained by the anti-inflammatory effect of corticosteroids on the inflammation caused by bone metastases (8). Biphosphonates have also shown remarkable efficacy in reducing bone pain although their mechanism of action in pain reduction is still unknown. Saad and al demonstrated in their study that zoledronic acid clearly reduced the threshold of bone pain perceived by cancer patients during their treatment

for lung cancer (9) . Other biphosphonates (Clodronate, Pamidronate) have also proven to be effective in the management of bone pain secondary to other solid cancers (prostate, breast ...)

The use of analgesic radiotherapy in combination with morphine was noted in only 10 patients (9.8%). Its realization was difficult because of the poor general state of the patients, which did not allow them to lie down for a long time or to travel several days to the radiotherapy center. All our patients received a single-fraction analgesic radiotherapy (8GY) which allowed pain relief with a decrease in morphine doses. In the subset analysis of the RADIATION THERAPY ONCOLOGY GROUP 97-14 trial, there was no difference in pain relief secondary to bone metastases between single and multi-fraction radiotherapy with less toxicity in the single fraction arm (9).

In the case of pain that is refractory to drug treatments, particularly if the escalation of opioid doses is limited by the occurrence of too many side effects, interventional techniques can be proposed. Neurolysis (chemical or radiofrequency) or epidural or intrathecal analgesia may be considered. Spinal opioids may be used in combination with a local anesthetic or clonidine in patients who are poorly tolerant of systemically administered opioids (10). These procedures should only be performed by teams that are well versed in the technique and its follow-up. In our series, 02 of our patients with intercostal neuralgia benefited from alcohol neurolysis of the intercostal nerve with a lasting benefit over time.

Conclusion:-

Our survey confirms the persistent problem of poor cancer pain management. Indeed, it seems that more than 50% of patients followed for advanced cancer are under-treated. An interesting approach is to improve communication between the physician and the patient, by making the latter a real partner in the management of pain.

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