International Journal of Medicine and Nanotechnology
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An International Peer Review Journal
e ISSN: 2394-4269

Review Article

Know Pain for No Pain

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Article Info - Received: 11-02-2016 Accepted: 07-03-2016

Abstract: Pain is one of the most important complaints of patients suffering from cancer. The pathophysiology of pain involves many nerve fibres .However the subjective and objective scoring of pain perception is very important. Objective scoring by WHO analgesic ladder for both somatic and neuropathic pain needs to be followed. For severe pain oral morphine must be judiciously used. The availability of morphine is a matter of great problem and narcotics rules needs to be more liberalized.To address and palliate pain there should be absolute stoppage of s.o.s pain medications by intramuscular route. The role of palliative radiotherapy in painful bone metastasis should be always given priority and its role is imperative.

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1. INTRODUCTION

For In the textbooks of physiology pain has been defined as –'a physical adjunct of an imperative protective reflex.[1] Yet some others have defined pain as- ***"an unpleasant sensory and emotional experience associated with actual or potential tissue damage,or described in terms of such damage*** [2].Moresover pain is as we may say that -- *more terrible lord of mankind than even death itself…*

Physiology of pain involves pain perception by peripheral receptors like- Free nerve endings. The sensation is carried by the afferent nerve fibres to the spinal cord, relayed in the laminated areas of the anterior horns- I to v (Tracts of lissauer, substantia gelatinosa rolandii,lamina marginalis). Then the sensations are carried over after crossing over to the contralateral side and then relayed up by anterior and lateral spinothalamic tract to the thalamus.The sensation is then relayed to the higher centre- to the cortex and the pain perception is then felt via the efferent fibres which relay back to the effector organ. Fast pain is mediated by myelinated Aδ fibres and slow pain byCfibers.[3]asinfig1.

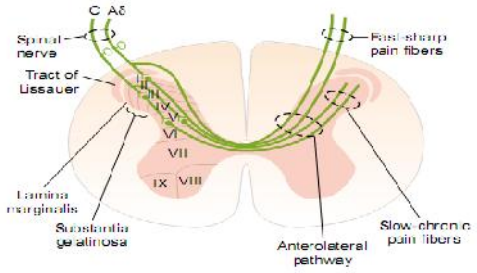

Fig 1: slow pain by C fibers.

Pain in cancer has got many domains apart from the physical ailment and suffering .Social, spiritual,psychological and even cultural taboos have a lot of influence on the pain perception and its outcome.This is called 'total pain'.[4] Out of all cancers,almost more than 50% patients who are suffering from advanced head and neck cancers suffer the most.Though patients of lung cancer , breast cancer , cervical and prostate cancers may suffer from bone metastasis and severe pain from the sites of spread.

- Pain is subdivided into – somatic, visceral and neuropathic types. Somatic pain is due to stimulation of nociceptors in cutaneous or

deep tissues. It is dull aching pain but well localized. Visceral pain is due to stimulation of nociceptors due to infiltration, compression or stretching of thoracic, abdominal or pelvic viscera. Neuropathic pain can be peripheral or central as per the stimulation, compression or infiltration of nerves. It is very severe pain, burning with a vice like quality.

- Apart from this pain can be constant or episodic. Constant pain can be like—somatic as in bony metastasis, visceral pain like stretching of the liver capsule and chemotherapy induced neuropathy. Episodic pain can also be somatic, visceral or neuropathic like in pathological fractures ,radiation induced cystitis and in brachial plexopathy respectively.

- In our daily clinical practice in an oncology OPD a comprehensive and pragmatic approach is necessary to deal with pain due to cancer. The aim of the entire management centres around 4 cardinal goals- beneficence,non-maleficence ,patient autonomy and above all doing justice. The idea is to give relief and comfort round the clock, specially during movements and an undisturbed night sleep.

- Step 1.-To begin with one should always take a proper history and do a thorough clinical examination and note down the vital points . The essential point is to draw a pictorial diagram of the anatomical site of the pain or the most severe area of pain as shown in Fig 2.

Fig 2: Mark the anatomical area of severe pain.

Step 2.-Next- categorise the type of pain- i.e .- somatic/visceral/neropathic.and constant/ episodic.

Step 3. After doing this the single most important step is to analyse the pain in a pain score module. Various authors have recommended using various types of pain scoring scales- like the Visual Analogue scale, the Numeric scale, the verbal descriptor scale. The Brief Pain Inventory (BPI) from MD Anderson Cancer Centre has incorporated many elements like body chart,relieving or exacerbating factors pain medications, mood of the patient etc [5] and the Edmonton Symptom assessment system had used various other psychological parameters alongwith the physical distress. However in India we can use the rupee scale. After doing the pain score please note down the value on the medical history/case record sheet for future reference.

These first 3 steps are the very basic points and one should never forget them. The next step starts with starting the medication for the physical distress of pain. In order to achieve analgesia to somatic pain one has to follow the WHO step ladder for analgesia.[6] Fig 3.

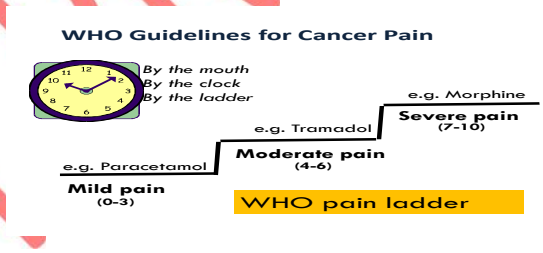

Fig 3: WHO Guidelines for cancer pain

To start with ---for mild pain one may use non opoids like ibufrofen/ paracetamol. In moderate pain (as per pain score)one should use tramadol .However if a person comes with sever chronic pain oral morphine has to be started undoubtedly. The vital points for pain prescription are – all medications should be given by the mouth and no injections . the drugs has to be given round the clock for maintaining a proper plasma level of the drug and thus there will be no pain peaks. No s.o.s. IM/oral medication should be given .

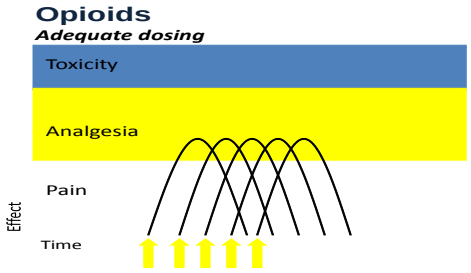

Fig 4: Peak label of dose

For combating neuropathic pain one should however assess and give medications as per WHO analgesic ladder for neuropathic pain as per fig 5.

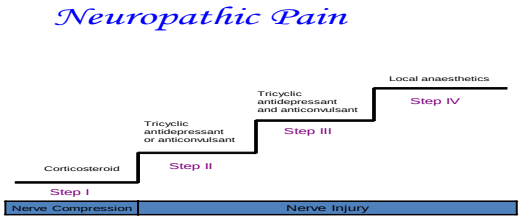

Fig 5: WHO analgesic ladder for neuropathic pain

The next vital point is to justify whether one can use combinations like tramadol plus paracteamol/Aceclofenac. This is a matter of debate and the main issue is that pain management hovers around periodic assessment and dose titrations and modifications of every drug used. Hence the lesser the use of combination drugs- the better control of dose modifications and also less toxicities of combinations.

The use of opioids is very important in severe pain .[7] Morphine in the form of oral 10 mg tablets is very useful. However certain myths regarding its use limits its use amongst practioners and oncologists. The myths are like- morphine causes addiction, respiratory depression , has abuse potential and not effective in long term use. On the contrary morphine is safe and should be used in respiratory problems, has constipation and miosis as side effects and no physical dependence or abuse potential is there with morphine. The excellent pain relief morpine achieves makes the patient very comfortable and hence he looks forward to sustains this happiness. Hence the supply of morphine is very important. This issue has not yet been solved uniformly across the country and hence its wide availability is limited . The main constraints are the issues of import license, export license,procrurement license , their expiry dates, the strict rules of the narcotics and vigilance department nad hence the use of morphine has gone down over the years.

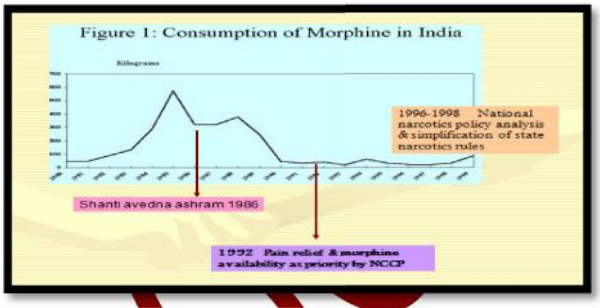

Fig 6: Morphine usage in india

The limited supply or nonavailabilty of morphine has compelled us to think of morphine alternatives. The main drugs among them are fentanyl and buprenorphine. A variety of formulations are available like injections, mucosal lozenges, nasal spray etc but the transdermal patch is most widely used. However one should always use it in proper dose and time duration [8] .The following equation is a simple way of dose conversion and dose calculation-

Morphine (MR =mod release)60 mg/24 hr=

1. Fentanyl patch 25µg/hr…. Change every 72 hr

2. Buprenorphine 20 µg/hr…. Change 7 day / 96 hr as available

While using patch one should remember---

1.Apply Patch and continue oral medication for next 12 hr

2.Ensure coverage of breakthrough pain

3.Patients may experience severe breakthrough pain for first 1-3 days

4. Do not change the dose of patch within first 2 days

The issue of breakthrough pain is complex. It has got many varieties-However the simple ways to

tackle it are-to prescribe morphine at 1/6th the total dose at least along with the usual dose and assess for at least 30 minutes thereafter.

The use of co analgesics like corticosteroids, laxatives, antiemetics and prton pump inhibitors should never be forgotten.

The prime importance in bony metastatic pain is the use of palliative radiotherapy. There are various fractionation schedules- like 30 Gy in 10 fractions/ 8 Gy in a single fraction etc. Palliative radiotherapy has achieved a sustainable and adequate pain relief in advanced cases of cancer and may be a useful adjunct /alternative to morphine in daily clinical practice.

2. CONCLUSION

To conclude the proper management of cancer pain is a unique entity and quite different from other pain like rheumatological,post operative or orthopaedic pain . Hence proper knowledge is the key factor to achieve a targeted and objective relief. The important key pointas are-

1. Please stop s.o.s pain medication
2. Respect your patient's pain
3. Assess first
4. Use the WHO analgesic ladder
5. Use morphine confidently if needed
6. Do not forget the adjuncts and co analgesics and ensure the compliance
7. Please consider palliative radiotherapy if needed

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Conflict of Interest: None
Source of Funding: Nil