

Pain Medicine and Palliative Care Division

Introduction

The Pain Medicine and Palliative Care Division started in June 1, 1999. Our goal is to relieve cancer pain and to manage other symptoms in cancer patients such as dyspnea, nausea, itching, and hiccups. Treatments for cancer pain follow the WHO analgesic ladder. Morphine and adjuvant analgesics (anti-convulsants, anti-depressants, NMDA receptor antagonists) are the main pharmacological treatments. We also use nerve blocks with local anesthetics for transient analgesia and those with neurolytic agents for permanent analgesia. As other non-pharmacological means, we use transcutaneous electrical stimulation (TENS), acupuncture, low power laser and superlizer. Our themes are 1) patient care, 2) patient education, and 3) research in palliative medicine. In our educational program, we have one junior resident. We are part of the palliative care team, which started its operation on July 1, 1999. Other members of the palliative care team include one oncologist, two psychiatrists, 2 specialized nurse, 2 pharmacists and two social workers.

Routine Activities

We routinely manage about 40 patients who have pain and other sufferings due to cancer itself or cancer treatment in the hospital. Most of the patients are referred to us by their oncologists. We make rounds everyday to these patients. We also see about 20 out patients with cancer pain and/or other symptoms due to cancer every afternoon. We occasionally give second opinions to patients and families from other hospitals. We also accept questions from other hospitals by e-mail and phone. Our specialty is treating neuropathic pain due to cancer itself, cancer chemotherapy and operation. We are also engaged in basic and clinical researches on neuropathic pain.

Research Activities

(1) Clinical Research

We have developed an analgesic ladder for neuropathic cancer pain using anti-convulsants, anti-depressant, anti-arrhythmic drugs and N-methyl-D-Aspartate (NMDA) receptor antagonist, with which doctors who do not specialize in pain treatment can treat neuropathic cancer pain. Research on the effectiveness of continuous epidural block on motion pain with bone metastasis is started. We have also started researches on analgesic methods for both procedure pain and pain induced by cancer treatments such as surgical operations, chemotherapies and radiation therapies.

(2) Basic research

We collaborate in basic research with the Department of Physiology of Chiba University Medical Graduate School, Department of Pharmacology of Cornell University Medical College in U.S.A., and Laboratory of Chemical Biology and Peptide Research of Clinical Research Institute of Montreal. We have developed a novel mouse model of neuropathic cancer pain by tumor implantation, which mimics human neuropathic cancer pain (Shimoyama M, Pain 2002). We started behavioral studies for analgesic drugs in using this model. We have almost finished the study on NMDA antisense oligonucleotide which attenuates formalin induced neuropathic pain as a result of decreases in the number of NMDA receptors in spinal cord of rats.(submitted)

Clinical Trials

We started a phase II trial of oral transmucosal fentanyl preparations (fentanyl lollypop, sublingual fentanyl) and immediate release oxycodon. We also started a phase II trial of new fentanyl patch and a phase III trial of Tramadol. We have finished a phase II trial on buprenorphine oral patch and Strontium 89

and a phase III trial on the new morphine slow release capsule. We continue the project on the use of virtual reality for cancer symptom management such as dyspnea, weak pain and anxiety before chemotherapy.

This will be carried through the next few years. We also have launched a study of supportive care for both cancer patients and their families.

● N.Shimoyama ●

Total number of inpatients 174 cases (2003.1-6)

Neuropathic pain syndrome

Postthoracotomy pain	18
Post amputation pain	1
Psoas muscle syndrome	6
Pancoast syndrome	10
Postchemotherapy peripheral neuralgia	18
Neuropathic pain due to spinal compression	4

Symptom management

Dyspnea	24
Intractable nausea	2
Intractable hiccups	2
Intractable itching	1

Nerve blocks

Epidural catheterizations	13
TENS	3