

causes patients to die, but also increases the work load of doctors, affects the sickbed-turnover in the hospital, and increases the cost of care and the economic burden on patients.

From January 1997 to October 1998, 452 patients were discharged from the tumor faculty of Wuhan No. 4 Hospital; 75 (17%) had NI, as compared to 5% of nontumor patients. To estimate the effect of these NIs on costs, we compared 22 lung cancer patients with NI to 22 lung cancer patients without NI (Table).

It can be seen that there are remarkable differences between the two groups in costs, particularly for medicine and transfusion.

It should be pointed out that NIs also give rise to a great deal of indirect economic loss; for example, sufferers create less wealth for the country because they are absent or dead, and their relations visit, consuming resources. Therefore the actual loss is larger than this.

Controlling NI calls for prevention and countermeasures. First, we must increase the patients' own resistance. We give them a great deal of sustained treatment using combined Chinese and Western medicines. Second, we must use antibiotics with reason. Third, we must reduce invasive operations and treatment. Most importantly, we must build the perfect system of family sickbed service, so that doctors and nurses can cure them in their family. It not only saves a great number of costs but also avoids cross-infection. It fits our country's situation completely.

When I see the bad patient who emerge their life in their eyes, I really want to say: "We hope the life tree will always be green!"

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Surgical-Site Complications Associated With a Morphine Nerve Paste Used for Postoperative Pain Control After Laminectomy

To the Editor:

It was with interest that I read the

TABLE

COSTS (IN RMB) OF TREATMENT FOR LUNG CANCER PATIENTS WITH AND WITHOUT NOSOCOMIAL INFECTION (NI)

Item Costs	NI	No NI	Difference
Patients	22	22	
Medicine	230,680	208,602	22,078
Transfusion	2,226	580	1,646
Inspection	22,850	18,000	4,850
Radiology	2,558	2,210	348
Surgery	98,214	59,820	38,394
Oxygen therapy	5,028	8,936	-3,908
Bed-stay costs	36,106	26,586	9,518
Hospital-days	2,132	1,494	638

Abbreviations: NI, nosocomial infection; RMB, the unit of currency in China.

article by Kramer and colleagues¹ documenting their disappointment with morphine nerve paste and their suspicion for delayed wound healing with increased postoperative morbidity. We recently published the results of a prospective, double-blind, randomized trial evaluating a similar paste in patients undergoing lumbar decompressive surgery.² Our experience with the paste was much more positive. While three patients in the actively treated group had minor wound complications treated locally, none required debridement or re-exploration. The decrease in both inpatient and outpatient postoperative narcotic analgesic consumption was statistically significant for up to 6 weeks after surgery. In addition, McGill pain scores and the SF-36 General Health Perception questionnaire also were significantly better in the treated group to 6 weeks.

In an ongoing prospective, double-blind, follow-up study at the University of Calgary, over 100 patients have been randomized to active or placebo groups. We have experienced only 1 patient with a wound complication in this entire cohort and remain blinded to that patient's treatment status. These results echo those of the independent study initially reported by Needham.³ Kramer and colleagues report an "epidemic" of wound complications; we certainly agree with their use of this term. However, their experience is not reproduced at any of three independent institutions (RJH, unpublished data, 1999).^{2,3} Hence, the epidemic described by Kramer et al is more likely related to conditions specific to "hospital A" or differences in application technique.

We maintain, based on results of prospective, controlled, randomized trials with follow-up of up to 1 year, that the morphine paste as described by Needham can be used both safely and effectively. Proper watertight closure of the lumbodorsal fascia and irrigation of the subcutaneous compartment to remove residual paste compound are critical to proper application.^{2,3} These steps are felt to be very important in reducing the potential for postoperative third spacing of extracellular fluid, possibly encouraged by the hyperosmolar properties of the paste.

REFERENCES

1. Kramer MH, Mangram AJ, Pearson ML, Jarvis WR. Surgical-site complications with a morphine nerve paste used for postoperative pain control after laminectomy. *Infect Control Hosp Epidemiol* 1999;20:183-186.
2. Hurlbert RJ, Theodore N, Drabier JB, Magwood AM, Sonntag VK. A prospective randomized double-blind controlled trial to evaluate the efficacy of an analgesic epidural paste following lumbar decompressive surgery. *J Neurosurg* 1999;90(4 suppl):191-197.
3. Needham CW. Painless lumbar surgery: morphine nerve paste. *Conn Med* 1996; 60:141-143.

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To the Editor:

Dr. Hurlbert was kind enough to provide me with a copy of his letter to you. I agree with Dr. Hurlbert.^{1,2}

Approximately 1½ to 2 years ago, I received a call from an orthopedic surgeon who was having some wound healing problems after employing morphine nerve paste. I asked him if he was following the instructions set forth