Control of Pain

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Pain is more than a sensation. It is a dual phenomenon. One part is the perception of the sensation and the other the patient’s psychological reaction to it. It follows that a person’s pain threshold will vary according to mood, morale and meaning. For any given noxious stimulus, the pain experienced varies from ache to agony and depends on the psychological reaction of the sufferer to his discomfort (Fig. 1). Attention must be paid, therefore, to factors that modulate the pain threshold, such as anxiety, depression, and fatigue (Table 1). Much can be done to alleviate pain by explaining the mechanism underlying the pain (this reduces anxiety) and by a continuing concern for the patient (this raises morale).

Ignoring mental and social factors may result in otherwise relievable pain remaining intractable. Several studies have assessed the effect of encouragement and education on patients admitted for curative surgery. In one study, 97 special-care patients were told what to expect during the post-operative period[2]. They were taught how to relax, how to take deep breaths, and how to move so that they would be more comfortable after operation. Their post-operative analgesic requirement was half that of a control group, and they were ready for discharge three days earlier.

It is perhaps in cancer pain that the interaction of the physical and the psychological is most apparent. Whatever the patient may know and have accepted about diagnosis and prognosis, the course of the illness—loss of appetite and weight, less energy, more symptoms, more time off work, increasing visits to hospital, and more frequent periods of in-patient treatment—means that any pain will be seen not as a useful (positive) warning but as a (negative) threat both to his way of life and to his very existence. The lack of positive meaning intensifies the patient’s pain. However, many doctors have found that as the doctor-patient relationship improves, it is possible to reduce the amount of drugs given. As the true diagnosis of the patient’s pain becomes clear and the patient is helped to deal with the pain of dying, there is often less need for sedatives, tranquillisers and analgesics.

**Table 1. Factors affecting pain threshold [1].**

| Threshold lowered | Threshold raised |
|-------------------|------------------|
| Discomfort        | Relief of symptoms |
| Insomnia          | Sleep            |
| Fatigue           | Rest             |
| Anxiety           | Sympathy         |
| Fear              | Understanding     |
| Anger             | Companionship    |
| Sadness           | Diversional activity |
| Depression        | Reduction in anxiety |
| Boredom           | Elevation of mood |
| Introversion      |                  |
| Mental isolation  | Analgesics       |
| Social abandonment| Anxiolytics      |
|                   | Antidepressants  |

**Acute and Chronic Pain**

Acute and chronic pain are distinct entities. Severe acute pain is accompanied by a ‘fight or flight’ response, seen also in acute anxiety. In chronic pain, vegetative features tend to predominate, features which are also commonly seen in organic depression. This means that a patient may be in severe pain yet not look distressed. It is all too easy for a doctor with no experience of chronic pain to forget this distinction. Doctors’ understanding of pain is usually taken from their own experience of acute pain—toothache, headache, bruise or sprain—all of which pass relatively quickly. In contrast, chronic pain is a situation rather than an event and (a) it is impossible to predict when it will end; (b) it often gets worse rather than better; (c) it lacks positive meaning, and (d) it frequently expands to occupy the patient’s whole attention and isolates him from the world around him.

Chronic cancer pain is, moreover, as distinct from
chronic pain of non-malignant origin as the latter is from acute pain. Cancer patients in pain exhibit a mixture of both 'fight or flight' and vegetative reactions (Table 2). The former is particularly manifest when pain is associated with symptoms of deterioration, such as anorexia, weight loss, decreasing exercise tolerance, and increasing physical dependence. For the patient, this constellation of signs and symptoms has inescapable significance. The message from his body states clearly: 'Unless a miracle happens, I cannot survive for long'. The patient realises that he is on a 'collision course with death'. Such a realisation, even if partly subconscious, evokes an instinctive autonomic response (Fig. 2).

Assessment of Pain

Traditionally, doctors are taught to assess pain by determining its PQRST characteristics (Table 3). Unfortunately, a blind belief in the efficacy of so simple an approach may hinder rather than help.

Table 2. Acute and chronic pain [1].

| Time course | Acute | Chronic |
|-------------|-------|---------|
| Meaning to patient | Transient | Persistent |
| Accompanying features | Fight or flight: pupillary dilatation, increased sweating, increased respiratory rate, increased heart rate, shunting of blood from viscera to muscles | Vegetative: sleep disturbance, anorexia, decreased libido, constipation, somatic preoccupation, personality change, work inhibition |

Table 3. The PQRST characteristics of pain (after Gray, 1977 [3]).

| P | Palliative factors | ‘Tell me about your pain’ |
|---|-------------------|--------------------------|
| Palliative factors | ‘What makes it less intense?’ |
| Q | Quality | ‘What makes it worse?’ |
| R | Radiation | ‘What is it like?’ |
| S | Severity | ‘Does it spread anywhere else?’ |
| T | Temporal factors | ‘How severe is it?’ |

Determination of the PQRST characteristics is only the beginning, providing a description of the pain, but no more. Complete assessment implies the ability to make a diagnosis. This demands a grasp of both general and neurological anatomy, an understanding of the phenomenon of referred pain, and a knowledge of the range of
pathological processes which are potential causes of pain. From the history and clinical examination, supplemented if necessary by X-ray, scan or other test, it should be possible to develop a fairly clear mental picture of the physical mechanisms underlying the pain. Then, assessment completed and diagnosis made, treatment is initiated. We are familiar with this sequence of events in relation to, for example, acute abdominal pain, but commonly fail to apply the same relentless logic in assessing pain in other circumstances.

In patients with advanced cancer, pain may be felt in any part of the body and be caused by a variety of mechanisms (Table 4), most experiencing more than one

| Table 4. Causes of pain in 100 cancer patients [1]. |
|----------------------------------------------|
| **Caused by Cancer**                      |
| Bone                                        | 58   | 31 |
| Nerve compression                           | 56   | 31 |
| Soft tissue infiltration                     | 35   | 31 |
| Visceral involvement                        | 33   | 31 |
| Muscle spasm                               | 14   | 11 |
| Lymphoedema                                 | 4    | 3  |
| Raised intra-cranial pressure               | 2    | 2  |
| Myopathy                                    | 2    | 2  |
| **Total**                                    | 204  | 91 |
| **Related to Treatment**                    |
| Post-operative scar (chronic)               | 8    | 7  |
| Colostomy                                   | 2    | 2  |
| Nerve block                                 | 2    | 1  |
| Post-operative adhesions                    | 1    | 1  |
| Post-radiation fibrosis                     | 1    | 1  |
| Oesophageal                                  | 1    | 1  |
| **Total**                                    | 15   | 12 |
| **Associated Pains**                        |
| Constipation                                | 11   | 11 |
| Capsulitis of shoulder                      | 4    | 4  |
| Bedsores                                    | 1    | 1  |
| Post-herpetic neuralgia                     | 1    | 1  |
| Pulmonary embolus                           | 1    | 1  |
| Penile spasm (catheter)                     | 1    | 1  |
| **Total**                                    | 19   | 19 |
| **Unrelated Pains**                         |
| Musculoskeletal:                            |
| myofascial                                  | 24   | 12 |
| low back                                    | 8    | 8  |
| spinal osteoporosis                         | 4    | 3  |
| ischial tuberosity                          | 2    | 1  |
| ankle                                       | 2    | 1  |
| traumatic                                   | 1    | 1  |
| sacroiliac                                  | 1    | 1  |
| **Total**                                    | 43   | 27 |
| Other:                                      |
| osteoarthritis                              | 4    | 3  |
| migraine                                    | 2    | 2  |
| miscellaneous                               | 16   | 13 |
| **Total**                                    | 65   | 39 |

**Total**                                     | 303  | 100 |

Moreover, alleviation of one pain may unmask another, or a new pain may develop. To cope with what may well be a complex situation, it is often helpful to record pain data on a body chart (Fig. 4).

Generally, patients put on a brave face for the doctor. Patients in severe pain do not always look distressed. Accordingly, intensity of pain is assessed not only by the patient’s description but also by discovering what drugs have failed to relieve, whether sleep is disturbed, and in
what way activity is limited. (‘How long is it since you went out?’, ‘What are you doing around the house?’ etc.) In addition, the patient’s spouse should be interviewed. Often it is only the latter’s comments that give the true picture—though, when the pain is relieved, the patient frequently concurs spontaneously with the spouse’s earlier opinion.

### Treatment

There is always more to analgesia than analgesics (Table 5). The importance of explaining in simple terms the mechanism(s) underlying the patient’s pain should not be forgotten. Pain that does not make sense or, worse, is seen as a threat, is always more intense than pain which is understandable.

Many drugs affect pain (Table 6). Some affect it indirectly, for example, antibiotics in cystitis or sinusitis and penicillamine or gold in rheumatoid arthritis. These drugs act by modifying the pathological process, and fall outside the definition of analgesic. Spasmolytics are another group of pain-modulating drugs (Table 7).

Surgery is a commonly employed measure for the management of acute severe pain (e.g. appendicectomy), likewise, radiation therapy and cytotoxic chemotherapy in pain associated with cancer. The use of such measures does not preclude the use of analgesics. Best results are often obtained by adopting a ‘broad spectrum’ approach, using two or more treatments in combination. In some conditions, e.g. trigeminal neuralgia, a sequential approach may, however, be appropriate.

The use of analgesics is best seen as one way of elevating a patient’s pain threshold. Analgesics, including narcotics, do not usually relieve pain caused by degenerative nerve damage (dysesthetic and stabbing pains). The site of the neurological lesion and the type of pain determine which pharmacological measures are appropriate, if any (Table 8).

In many forms of intractable chronic pain, psychological approaches may prove beneficial (Table 9). The value of diversional activity should not be forgotten. Pain is worse when it occupies the patient’s whole attention. Diversional activity does much more than just ‘pass the time’; it also diminishes the pain.

### Table 5. Pain control [1].

| Explanation                                                                 | Mode of action           |
|----------------------------------------------------------------------------|--------------------------|
| Modification of pathological process                                      | Modification of pathological process |
| Elevation of pain threshold                                                | Reduction of muscle spasm |
| Interruption of pain pathways                                              | Control of paroxysmal neuralgia |
| Modification of life-style; immobilisation                                 | Reduction of anxiety      |
|                                                                            | Alleviation of depression |
|                                                                            | Elevation of pain threshold |

### Table 6. Drugs that relieve pain [1].

| Drug category | Mode of action            |
|----------------|---------------------------|
| Antibiotics    | Modification of pathological process |
| Anti-rheumatoid drugs | Reduction of muscle spasm     |
| Spasmolytic    | Control of paroxysmal neuralgia |
| Anti-convulsant| Reduction of anxiety        |
| Anxiolytic     | Alleviation of depression   |
| Antidepressant | Elevation of pain threshold |

### Table 7. Spasmolytic drugs [1].

| Muscle Type | Drug                     |
|-------------|--------------------------|
| Somatic     | Baclofen, Diazepam, Dantrolene |
| Smooth      | Probanthine and related drugs, Flavoxate (bladder only) |
| Cardiac     | Verapamil                |

### Table 8. Neurological classification of pain: implications for therapy [1].

| Type of Pain | Treatment                                                                 |
|--------------|---------------------------------------------------------------------------|
| Nociceptive  | Analgesics                                                                |
| Nerve compression | Analgesics, Corticosteroids, Nerve blocks                               |
| Nerve destruction (dysesthetic)— | Psychotrophic drugs (especially antidepressants)            |
| peripheral nerve (occasionally useful) | Narcotics, Corticosteroids, Nerve blocks, Cordotomy         |
| cord lesion (of no benefit) | Treated as mixed 2 and 3 (? stellate ganglion block for upper limb pain |

### Table 9. Psychological and related methods of pain control [1].

| Distraction | Imagery | Relaxation | Biofeedback | Hypnosis |
|-------------|---------|------------|-------------|----------|
| Massage     | Heat    | Pressure   | Transcutaneous electrical nerve stimulation | Acupuncture |

Interruption of pain pathways refers to the use of ‘nerve blocks’ (Table 10) and neurosurgical techniques (Table 11). Neurolytic and neurosurgical measures are largely limited to use in patients with intractable pain associated with far-advanced cancer. The need for such measures has decreased in recent years with the better use of analgesics and other measures. Modification of life-

### Table 10. Nerve blocks [1].

| Local anaesthesia | Neurolysis          |
|-------------------|---------------------|
| (a) lignocaine    | (a) chemical: alcohol |
| (b) bupivacaine   | phenol chlorocresol |
|                   | (b) cold (cryotherapy) |
|                   | (c) heat (thermo-coagulation) |
Table 11. Neurosurgery in chronic pain.

- Open cordotomy
- Percutaneous cordotomy
- Pituitary ablation*
- Thalamotomy (Frontal lobectomy)
- Spinal tractotomy

*Used for patients with painful bone secondaries unresponsive to other measures.

Table 12. Immobilisation.

- Rest
- Modification of life-style
- Cervical collar
- Surgical corset
- Moulded plastic splints
- Slings
- Orthopaedic procedures:
  - pinning pathological fracture
  - arthroplasty
  - arthrodesis

Style and immobilisation are necessary in patients who continue to have severe pain on movement (Table 12).

Analgesics and Cancer Pain

Principles of Use

Analgesics should be given regularly, and prophylactically. The aim is to titrate the dose of the analgesic against the patient’s pain, gradually increasing the dose until the patient is pain-free. The next dose is given before the effect of the previous one has fully worn off—and therefore before the patient may think it necessary (Fig. 5). In this way it is possible to erase the memory and fear of pain. If a drug ceases to be effective, do not transfer to an alternative of comparable efficacy but prescribe a drug that is definitely stronger (Table 13). The top of the ‘analgesic ladder’ is not reached when a strong narcotic is prescribed because such drugs may be given in a wide range of doses. So-called ‘maximum’ or ‘recommended’ doses are derived mainly from post-operative parenteral single-dose studies, and are not applicable to the treatment of cancer pain.

Keeping it Simple

The three basic analgesics are aspirin, codeine and morphine. The rest should be considered alternatives of fashion or convenience. Appreciating this helps to prevent the doctor ‘kangarooing’ from analgesic to analgesic in a desperate search for some drug that will suit the patient better. If a non-narcotic or weak narcotic preparation such as aspirin-codeine, paracetamol-dextropropoxyphene, fails to relieve, it is usually best to move directly to a small dose of oral morphine sulphate than, for example, to prescribe dihydrocodeine.

It is necessary to be familiar with one or two alternatives for use in patients who cannot tolerate the standard preparation. Aspirin has two alternatives: paracetamol, which has no anti-inflammatory effect, is one; non-steroidal anti-inflammatory drugs as a group are the other. Which alternative is appropriate depends on whether there is need for a peripheral anti-inflammatory effect. The individual doctor’s basic analgesic ladder, with alternatives, should comprise no more than nine or 10 drugs in total. It is better to know and understand a few drugs well than to have a passing acquaintance with the whole range.

Recommendations

1. With mild or moderate pain, use a non-narcotic in the first instance.
2. It may be appropriate to prescribe aspirin in addition to a narcotic, especially in patients with bone pain.
3. It is logical to combine analgesics that act via different mechanisms, for example: aspirin and paracetamol; paracetamol and codeine; aspirin and morphine, though it is not always wise from the point of view of patient compliance, nor is it always therapeutically necessary.
4. It is pharmacological nonsense to prescribe either two weak or two strong narcotics simultaneously.
5. There is sometimes a place for a patient on a strong narcotic to have another narcotic (weak or strong) as a second as required analgesic for occasional troublesome pain, though, generally, patients should be advised to take an extra dose of their regular medication if ‘breakthrough’ pain occurs.
6. If one weak narcotic preparation does not control the pain, do not waste time by prescribing an alternative; move to something definitely stronger.
7. Morphine or an alternative strong narcotic should be used when non-narcotics and weak narcotics fail to control the pain (Table 14).
Table 13. Choice of analgesics.

| Category         | Drug                        | Comment                                                                 |
|------------------|-----------------------------|-------------------------------------------------------------------------|
| Non-narcotic     | *Aspirin                    | Aspirin is better for bone pain; an alternative non-steroidal anti-inflammatory drug may be used instead, e.g. *flurbiprofen, naproxen. |
|                  | Paracetamol                 |                                                                         |
| Weak narcotic    | Codeine                     | Give with a non-narcotic; a variety of useful combined preparations are available. |
|                  | Dihydrocodeine              |                                                                         |
|                  | Dextropropoxyphene          | *Distalgesic (dextropropoxyphene 32.5 mg and paracetamol 325 mg) is less constipating than codeine. Pentazocine, an agonist-antagonist, causes hallucinations, etc., in a significant number of patients. |
|                  | *Pentazocine                |                                                                         |
| Strong narcotic  | *Morphine                   |                                                                         |
|                  | Diamorphine                 |                                                                         |
|                  | *Dextromoramide             | Increase dose to give relief for 4 hours rather than decrease interval. Methadone cumulates as long half-life; if used, give every 6 or 8 hours after first 24-48 hours. *Morphine sulphate in solution remains most versatile, and *diamorphine when injections are necessary. |
|                  | Levorphanol                 |                                                                         |
|                  | Dihydrocodeine              |                                                                         |
|                  | Perphenazine                |                                                                         |
|                  | Phenazocine                 |                                                                         |
|                  | Methadone                   |                                                                         |

*Drugs of choice at Sir Michael Sobell House, Oxford.  
†Not recommended.

Table 14. Strong narcotic analgesics: approximate oral equivalents to morphine sulphate [1].

| Analgesic          | Proprietary name | Potency ratio with morphine sulphate | Duration of action (hours) |
|--------------------|------------------|--------------------------------------|---------------------------|
| Pethidine/meperidine | Demerol (USA)    | 1/8 (1/12)                           | 2-3                       |
| *Dipipanone       | in Diconal       | 1/2 (1/3)                             |                           |
| Papaveretum       | Omnopon, Pantopon (USA) | 2/3 (1/2)                           | 3-5                       |
| †Oxycodone†       | in Percodan, Percocet (capsule) (USA) | 1 (2/3)                            | 3-5                       |
| *Nepenthe oral solution† | Palfium         | 1 (2/3)                              | 3-5                       |
| *Dextromoramide   | Physeptone, Dolophine (USA) | [2]+ (1.5)                           | 2-4                       |
| Methadone         | Physeptone, Dolophine (USA) | [3-4]† (2-3)                         | 6-8                       |
| Levorphanol       | Dromoran, Levo-dromoran (USA) | 5 (3)                              | 4-6                       |
| *Phenazocine      | Narphen          | 5 (3)                                | 4-6                       |
| †Hydromorphone    | Diliaudid (USA)   | 6                                    | 3-5                       |

*Not available in USA.  †Not available in Britain.  
1 Multiply dose of stated drug by the potency ratio to determine the equivalent dose of morphine sulphate.  
2 Column of figures in parenthesis refer to approximate potency ratio with diamorphine (heroin).  
3 Dependent to a certain extent on dose, often longer lasting in very elderly and those with considerable liver dysfunction.  
4 Oxycodone is available in Britain only as Oxycodone pectinate suppositories.  
5 Pentazocine is a standard solution of morphine hydrochloride. 1 ml contains the equivalent of about 12 mg of morphine sulphate and is usually prescribed as a 10% (1 ml diluted in 10 ml) solution.  
6 Dextromoramide—single 5 mg dose is equivalent to morphine 15 mg (diamorphine 10 mg) in terms of peak effect but is generally shorter acting; overall potency rate adjusted accordingly.  
7 Methadone—single 5 mg dose is equivalent to morphine 7.5 mg (diamorphine 5 mg). Has a prolonged plasma half-life which leads to cumulation when given repeatedly. This means it is several times more potent when given regularly.

8. ‘Morphine exists to be given, not merely to be withheld.’ The severity of the pain determines the choice of analgesic, not the doctor’s estimate of life expectancy—which is often wrong. A patient should not be made to wait in pain until the last days or hours of life (Table 15).

9. Morphine may be given in a wide range of doses from as little as 2.5 mg to more than 200 mg (Fig. 6).

10. Do not prescribe a narcotic agonist-antagonist, such as pentazocine (Fortral) or buprenorphine (Temgesic), with a narcotic agonist.

11. Preferably do not prescribe pentazocine, pethidine or dextromoramide (Palfium). The first is a weak narcotic by mouth and frequently causes unpleasant mental effects. All three tend to be short-acting (2-3 hours).

12. Many cancer pains respond better to the concurrent use of an analgesic and a ‘co-analgesic’ (Table 16).
Table 15. Twenty points on the use of morphine sulphate solution.

1. Strong narcotic of choice at most hospices.
2. Administered in simple aqueous solution (e.g. 10 mg in 10 ml).
3. No advantage in giving as 'Brompton Cocktail'.
4. Usual starting dose 10 mg every 4 hours.
5. If patient has previously only had a weak narcotic analgesic, 5 mg may be adequate.
6. With frail elderly patients, it may be wise to start on suboptimal dose in order to reduce likelihood of initial drowsiness and unsteadiness.
7. If changing to morphine from alternative strong narcotic, such as dextromoramide, levorphanol, methadone, a considerably higher dose may be needed.
8. Adjust upwards after first dose if not more effective than previous medication.
9. Adjust after 24 hours 'if pain not 90% controlled'.
10. Most patients are satisfactorily controlled on dose of between 5 and 30 mg 4 hourly; however, some patients need higher doses, occasionally up to 500 mg.
11. Giving a larger dose at bedtime (1.5 or 2 x daytime dose) may enable a patient to go through the night without waking in pain.
12. Use co-analgesic medication as appropriate.
13. Either prescribe an anti-emetic concurrently or supply (in anticipation) for regular use should nausea or vomiting develop.
14. Prescribe laxative, e.g. Dorbanex, Peri-Colace (USA). Adjust dose according to response. Suppositories may be necessary. Unless carefully monitored, constipation may be more difficult to control than the pain.
15. Write out regimen in detail with times to be taken, names of drugs and amount to be taken.
16. Warn patient of possibility of initial drowsiness.
17. Arrange for close liaison and follow-up.
18. For the patient who cannot cope with a 4-hourly regimen or liquid medication, controlled release morphine sulphate 10 mg and 30 mg tablets (MST-Continus) b.i.d.-t.i.d. should be considered.
19. It is almost never necessary to resort to parenteral administration for pain control per se. If swallowing becomes very difficult or vomiting persists, give one-third of previously satisfactory dose of morphine as diamorphine hydrochloride (Britain) or one-half of previous dose as morphine sulphate (elsewhere) by subcutaneous/intramuscular injection.
20. Suppositories of morphine sulphate are also available in Britain (10, 15, 20, 30 and 60 mg). Elsewhere these can be made by any helpful pharmacist.

Table 16. Co-analgesics in the relief of cancer pain [1].

| Types of pain                      | Co-analgesic                                      |
|-----------------------------------|--------------------------------------------------|
| Bone pain                         | Aspirin 600 mg 4 hourly or Flurbiprofen 50-100 mg b.i.d. or Naproxen 500 mg b.i.d. |
| Raised intracranial pressure      | Dexamethasone 2-4 mg t.i.d.-q.i.d. or Diuretic (?) |
| Nerve pressure pain               | Dexamethasone 2-4 mg daily-b.i.d. or Predisolone 5-10 mg t.i.d. |
| Superficial dysaesthetic pain     | Amitriptyline 25-100 mg nocte                   |
| Intermittent stabbing pain        | Valproate 200 mg b.i.d.-t.i.d. or Carbamazepine 200 mg t.i.d.-q.i.d. |
| Gastric distension pain           | Asilone 10 ml p.c. and nocte; Metoclopramide 10 mg 4-hourly                  |
| Rectal ‘tenesmoid’ pain           | Chlorpromazine 10-25 mg 8 to 4-hourly, or rectal belladonna alkaloids 0.2 mg/ |
| Muscle spasm pain                 | Diazepam 5 mg b.i.d. or Baclofen 10 mg t.i.d. |
| Lymphoedema                       | Diuretic and corticosteroid (?)                   |
| Infected malignant ulcer          | Metronidazole 400 mg t.i.d. and Alternative antibiotic |

*Can be pre-injected into standard morphine suppositories (Britain) or administered as B&O suprpettes (USA).

Attention to Detail

Analgesic regimens should be simple to understand and easy to administer. It is only necessary to adopt a 4-hourly regimen if morphine or a comparable analgesic is being used. With other patients, ‘with meals and at bedtime’ will cover all other drug requirements. Variations include: ‘on waking, after lunch and tea, and at bedtime’, and ‘after breakfast and at bedtime’.

If some drugs are best given before meals and others
after, it is usually advisable to forsake pharmacological purity and to opt for one or other time so as to avoid an impossibly complex schedule. It is necessary to look at boxes and other containers to check that the pharmacist has not given the patient contrary or complicating advice.

When a 4-hourly regimen is adopted, the first and last doses are linked to the patient’s waking and bedtimes. The best additional times during the day are usually 10 a.m., 2 p.m., and 6 p.m. unless the patient wakes exceptionally late. The list of drugs and doses for the patient (and family) to work from should be written out clearly. It is useful to add what the different preparations are for, even if this seems obvious to the doctor (Fig. 7).

| Tablets/medicines | 2am On waking | 10am | 2pm | 6pm | Bed-time | 25/6/50 Purpose |
|------------------|---------------|------|-----|-----|----------|----------------|
| MORPHINE (20 mg in 1 m) | 10 | 10 | 10 | 10 | 10 | for pain |
| FLUPROFEN (tab. 50 mg) | 1 | 1 | 1 | 1 | 1 | for pain |
| PREDNISOLONE (tab. 5 m) | 1 | 1 | 1 | 1 | 1 | for appetite (due to morphine) |
| DICLOXYL FORTE (tab. 100 mg) | 1 | 1 | 1 | 1 | 1 | for bowel |
| DORANEX (capsules) | 2 | 2 | 2 | 2 | 2 | for bowel |
| CHLORPROMAZINE (tab. 25 mg) | 3 | 3 | 3 | 3 | 3 | for sleep |
| NYSTATIN (liquid) | 2 | 2 | 2 | 2 | 2 | for mouth |

If pain returns, takes extra 10 ml dose of pain medicine

Capsules should be described as capsules and tablets as tablets, not vice versa. Doses should not be described simply as ‘spoonfuls’. Patients have been known to use a tablespoon (15 ml) instead of a teaspoon (3.5-5 ml). A plastic beaker with each 5 ml clearly marked is generally the best way for the patient to self-administer liquid preparations (Fig. 8). Sometimes, if the above recommendations are carried out, the patient can cope immediately with a new regimen. Often, however, the patient is found to be in confusion when visited the next day.

**Fig. 7. Medication chart for out-patients receiving 4-hourly morphine sulphate. Actual size = A4. A different chart is used for patients not receiving morphine or other 4-hourly analgesic. This has four unlabelled columns and the times of administration have to be added. These are linked to the patient’s waking, meals and/or bedtime. The space at the bottom of the chart allows additional instructions to be recorded. (Modified from the chart used at St Luke’s Nursing Home, Sheffield.)**

**Fig. 8. Visible or invisible? A clearly labelled plastic medicine cup (beaker) used at Sir Michael Sobell House, Oxford, in preference to the standard British Health Service variety[1].**

made worse by movement and in the very anxious and depressed, it may take three to four weeks of in-patient treatment to achieve satisfactory control. Even so, it should be possible to achieve some improvement within 24-48 hours in all patients. Although the ultimate aim is complete freedom from pain, there will be less disappointment but, paradoxically, more success if in practice we aim at ‘graded relief’.

As some pains respond more readily than others, improvement should be assessed in relation to each pain. The initial target should be a pain-free, sleep-full night. Many patients have not had a good night’s rest for weeks or months and are exhausted and demoralised. To sleep through the night pain-free and wake refreshed is a boost to both the doctor’s and the patient’s morale. Next, one aims for relief at rest in bed or chair during the day; finally, for freedom from pain on movement. The former is always eventually possible; the latter is not. Even so, the encouragement brought by relief at night, and when resting during the day, gives the patient new hope and incentive and enables him to begin to live again despite limited mobility. Freed from constant pain, his last weeks or months take on a new look.

With cancer one is dealing with a progressive pathological process. This means that new pains may develop or an old pain re-emerge. A fresh complaint of pain does not merely call for an increase in a previously satisfactory analgesic regimen; it demands reassessment, explanation to the patient, and, only then, modification of drug therapy or other intervention.

**Expectations in Cancer Pain**

Relief is obtained within two or three days in some patients, but in others, particularly those whose pain is

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