Optimizing Your Quality of Life During Cancer Treatment: Pain & Side Effect Management

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GI Oncology
Palliative Medicine

Pancreatic Cancer Patient Tool Belt

- Chemotherapy
- Surgery
- Radiation
- Pain & Symptom Management
- Psychosocial Support
- Financial Counselors
- Spiritual support
- Loved Ones
Paul

- 59 year old male
- New diagnosis locally advanced pancreatic cancer
- Recently started FOLFIRINOX
- Has pain medications, but uses them rarely
- Opioid fear due to son with opioid addiction history
- Not sleeping x 1 week
- Over weekend presents to ED with abdominal pain radiating to back

Pain: What Does the Doc Want to Know?

- Location
- Quality
- Radiation
- Severity
- Duration
- Temporal profile
- Modifying factors
  - What makes it better?
  - What makes it worse?
- Associated Signs & Symptoms
Measuring Pain

Paul

- Location – mid abdomen
- Quality – “boring,” “gnawing,” dull pain
- Radiation – into back
- Severity – current 9/10, baseline 4/10, goal 2/10
- Duration – ~2 weeks
- Temporal profile – constant, worse at night
- Modifying factors –
  - Oxycodone 5mg improves pain level from 9 to 7
- Associated Signs & Symptoms – constipated, loss of appetite, insomnia, anxious
Step 1:
Consider an Abdominal Nerve Block

Neurolytic Blocks
- General Indications
  - Ineffective analgesia
  - Intolerable side effects
- Pain relief for months
- Less opioid = less side effects = better QoL
- Earlier the better in some cases
- Possible survival benefit
Celiac Plexus Neurolysis (Block)

- Celiac plexus innervates pancreas
- Intentional injury to a nerve/plexus
  - Chemical* (alcohol or phenol)
  - Surgical
  - Cryo/Radiofrequency
- Effect usually lasts 3-6 months
  - Progression of tumor
  - Nerve regeneration

Celiac Plexus Neurolysis: Approaches

**Posterior**
- Back approach
- Two needles
- Fluoro or CT
- Pain anesthesiologist

**Endoscopic**
- Through stomach
- US
- Gastroenterologist

**Anterior**
- Front approach
- One needle
- US or CT
- Interventional Radiologist
Celiac Plexus Neurolysis: Technique

**Percutaneous: Fluoro/CT**
- Contrast dye used to confirm placement of needle
- Diagnostic block with local anesthetic
- Injection of neurolytic agent

**Rare Risks**
- Transient low BP
- Transient diarrhea
- Transient local pain

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Celiac Plexus Neurolysis: Results

- Go to experienced centers
- Rule of thirds:
  - 1/3 minimal pain relief
  - 1/3 partial pain relief
  - 1/3 marked pain relief
- 70-90% with complete to partial relief up to 3 months after block

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Step 2:
Optimize Pain Medication Management

Why Opioids? The WHO “Elevator”

1, Pain 1-3
Aspirin
Acetaminophen
NSAIDs
±Adjuvants

2, Pain 4-7
Codeine
Tramadol
APAP/Codeine
APAP/Hydrocodone
APAP/Oxycodone
±Adjuvants

3, Pain 7-10
Morphine
Hydromorphone
Oxycodone
Fentanyl
Methadone
±Adjuvants

WHO. Geneva, 1996
### Opioid Equianalgesic Dosing Guidelines

<table>
<thead>
<tr>
<th>PO / PR Dose (mg)</th>
<th>Analgesic</th>
<th>IV / SC / IM Dose (mg)</th>
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<tbody>
<tr>
<td>150 mg</td>
<td>Meperidine</td>
<td>50 mg</td>
</tr>
<tr>
<td>150 mg</td>
<td>Tramadol</td>
<td>-</td>
</tr>
<tr>
<td>150 mg</td>
<td>Codeine</td>
<td>50 mg</td>
</tr>
<tr>
<td>15 mg</td>
<td>Hydrocodone</td>
<td>-</td>
</tr>
<tr>
<td>15 mg</td>
<td>Morphine</td>
<td>5 mg</td>
</tr>
<tr>
<td>10 mg</td>
<td>Oxycodone</td>
<td>-</td>
</tr>
<tr>
<td>3 mg</td>
<td>Hydromorphone</td>
<td>1 mg</td>
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<tr>
<td></td>
<td>Fentanyl</td>
<td>0.05 mg</td>
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</tbody>
</table>

(Pirrello, Ferris, Institute for Palliative Medicine 2008)

### Long & Short-Acting Opioids

- **Short acting opioid**
- **Long acting opioid**

0  | Time

Pain
Same Drug, But Different Delivery Mechanisms: Long vs. Short-Acting Opioids

<table>
<thead>
<tr>
<th></th>
<th>Long-Acting Morphine</th>
<th>Short-Acting Morphine</th>
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<tbody>
<tr>
<td>Concentration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cmax</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Half-life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Route</td>
<td>PO/PR</td>
<td>IV</td>
</tr>
<tr>
<td>Time to Cmax</td>
<td>1 hour</td>
<td>10 min</td>
</tr>
<tr>
<td>Half-life</td>
<td>4 hours</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

(Methadone exception to rule)

Short Acting Opioids

![Concentration vs. Time Graph](image)

Route | Time to Cmax | Half-life
--- | ------------ | ---
PO/PR | 1 hour      | 4 hours
IV    | 10 min      | 4 hours

(Methadone exception to rule)
Cmax & Route of Administration

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>~10 min</td>
</tr>
<tr>
<td>SC, IM</td>
<td>~30 min</td>
</tr>
<tr>
<td>PO, PR</td>
<td>~1 hr</td>
</tr>
</tbody>
</table>

How Are Opioids Excreted?

- Morphine
- Oxycodone
- Hydrocodone
- Hydromorphone

Opioids In

Methadone
Fentanyl

Opioids Out
Opioid Adverse Effects

**Common**
- Constipation
- Nausea
- Dry mouth
- Sedation
- Sweating

**Uncommon**
- Bad dreams
- Hallucinations
- Pruritus
- Urinary retention
- Myoclonus
- Respiratory depression

Anticipate Opioid Side Effects

- Nausea
  - Compazine (prochlorperazine)
  - Reglan (metoclopramide)
- Pruritus
  - Zyrtec (cetirizine)
  - Not Benadryl (diphenhydramine)
- Constipation
  - Stimulants not softeners
  - Senna, bisacodyl
Step 3:
Seek Out Pain & Symptom Management Experts

Do Not Be Afraid of the “P” Word

Palliative Care

Hospice
Old Thinking: Wait Until It's Late

Cancer Care: Transplant, chemotherapy, radiation, surgery

Time

New Thinking: Early Simultaneous Integration

Cancer Care: Transplant, chemotherapy, radiation, surgery

Palliative Care

Time

151 patients with stage IV lung cancer

With palliative care patients had:
• Better quality of life
• Less depression
Stage IV lung cancer patients with **palliative care** lived ~3 months longer

Median survival 11.6 vs. 8.9 months; \( P = 0.02 \)

Temel, New England J Med 2010
Summary

• Maximizing pain and symptom management matters
• Consider interventional pain procedures such as celiac plexus block to avoid pain medication-related side effects
• If pain medications are needed, understand how they work, anticipate and prevent side effects
• Seek out palliative care specialists early, waiting until late is an antiquated model

Finding Palliative Care Services

• National Palliative Care provider directory
  • http://getpalliativecare.org
• UCSD Moores Cancer Center
  • http://cancer.ucsd.edu/care-centers/palliative/Pages/default.aspx
  • 858-534-7079
  • Symptom Intervention Clinical Trials also available call Carolyn Revta at 858-822-3614
• Scripps
  • http://www.scripps.org/services/palliative-care
  • 800-727-4777
  • La Jolla, Encinitas, Mercy
Questions/Comments
eroeland@ucsd.edu