All treatments are palliative!

No patients are cured of LM!

All will die! Some of progressive systemic disease but

Most with progressive neurologic dysfunction with many if not most of the symptoms noted earlier!

Patients appropriate for aggressive treatment also need aggressive Sx Rx and comprehensive, holistic PC

All others should get intensive H & PC

What does that mean?

- There is no literature to tell us what to expect and what to do RE SxRx and best supportive care
- H/O and PC texts
- H/O or PC journals

Let’s write that article!
## Symptoms in Patients Dying of (Breast) Meningeal Carcinomatosis

*Services MS et al. J Impt Stuff 2010*

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Frequency</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>34%</td>
<td>100%</td>
</tr>
<tr>
<td>Cranial nerve symptoms</td>
<td>25</td>
<td>100%</td>
</tr>
<tr>
<td>Cerebellar signs</td>
<td>24</td>
<td>100%</td>
</tr>
<tr>
<td>Nausea and vomiting</td>
<td>23</td>
<td>100%</td>
</tr>
<tr>
<td>Visual disturbance</td>
<td>22</td>
<td>100%</td>
</tr>
<tr>
<td>Radicular pain</td>
<td>21</td>
<td>100%</td>
</tr>
<tr>
<td>Glasgow coma scale &lt; 15</td>
<td>21</td>
<td>100%</td>
</tr>
<tr>
<td>Paresthesia</td>
<td>19</td>
<td>100%</td>
</tr>
<tr>
<td>Meningismis</td>
<td>12</td>
<td>100%</td>
</tr>
<tr>
<td>Motor deficit</td>
<td>11</td>
<td>100%</td>
</tr>
<tr>
<td>Dysarthria</td>
<td>2</td>
<td>100%</td>
</tr>
</tbody>
</table>

(from Gauthier et al)
Challenges in Intensive Symptom Management of Leptomeningeal Metastases

Services MS et al. *J Impt Stuff* 2010

- Reporting on our recent series of patients (n=2)
  - We can find more patients (PHO/FMC record review?)

- Severe Headache
  - Steroids, opioids, and complementary therapies

- Radicular pain
  - Steroids, opioids (methadone), gabapentin (or other anticonvulsants (keppra?), ketamine, muscle relaxants (benzos and baclofen))
  - Complementary therapies (PT, massage, guided imagery)

- Nausea & Vomiting
  - Steroids, anticholinergics (cochlear involvement), target every receptor if refractory (haloperidol, ondansetron, antihistamines, anticholinergics, cannabinoids)
Refractory Pain

- Opioid dosing
- Opioid rotation
  - Fentanyl and methadone
- Maximal adjuvant therapy (neuropathic)
  - Anticonvulsants, antidepressants
  - Ketorolac (Toradol)
  - Ketamine
- Psychosocial and spiritual therapies
- Total sedation
Use That Ommaya?

- Intraventricular Administration of Morphine for Control of Intractable Cancer Pain in 90 Patients. Karavelis et al
- No recent literature
- “We haven’t done that in years.” R Rauck
Once Daily Administration of Morphine

Theoretically – does it make sense to consider intraventricular administration of other medications using Ommaya reservoir already in place? Need a consultant!

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yr)</td>
<td>57</td>
<td>58</td>
<td>23</td>
<td>80</td>
</tr>
<tr>
<td>Pain duration (mo)</td>
<td>10</td>
<td>6</td>
<td>0.5</td>
<td>120</td>
</tr>
<tr>
<td>Duration of reservoir use (d)</td>
<td>95</td>
<td>46</td>
<td>1</td>
<td>1362</td>
</tr>
<tr>
<td>Morphine dose (mg)</td>
<td>1</td>
<td>1</td>
<td>0.25</td>
<td>4</td>
</tr>
<tr>
<td>Quality of analgesia (%)</td>
<td>78</td>
<td>90</td>
<td>0(^a)</td>
<td>100</td>
</tr>
<tr>
<td>Duration of analgesia (h)</td>
<td>22</td>
<td>24</td>
<td>0(^a)</td>
<td>72</td>
</tr>
</tbody>
</table>

\(^a\) Complications.
Seizures –
  - Keppra, phenytoin, steroids, benzos, midazolam

Constipation – paresis + opioids
  - Broad spectrum oral agents, MNTX, disimpaction

Psychosis – hallucinations, delusions, paranoia
  - Haldol, Thorazine, minimize steroids

Paresis, paresthesia, paralysis – I
  - Intensive personal care
  - Bed, mattress

Senses - visual (to blind), auditory (to deaf)
  - CH could no longer read; JJ could no longer see

Anxiety
  - Long-acting benzos, companionship

Physical space
  - Bed, Mattress
  - Quiet, dark/light, room for PCG(s)
Depression
- Ritalin, Remeron, Effexor
- Complementary, counseling, pastoral care

Social
- Institutionalized for Sx Rx and personal care needs
- Loss of roles
- Counseling, pastoral care, social support

Spiritual
- Fatal + suffering
- Losses
- Profound existential suffering

JJ - “Why am I still here?!!”
“I thought I’d wake up dead and in heaven!”
“Let me go! Don’t be selfish, let me go!”
Incremental, palliative sedation
Great Teachers

CH and JJ
Medical students
WE ALL learned so much
Paybacks…
A devastating complication with an ominous prognosis and high likelihood of intensive symptom management
We can do a better job