Palliative Sedation

“That sweet, deep sleep, so close to tranquil death.”

_The Aeneid_, Virgil [70 - 19 B.C.E]

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J.D.: A Child Dying in Severe Pain

- JD, 5 year old with terminal abdominal neuroblastoma
- Tx’d for the past 3 years with chemo, surgery
- Continued local invasion (spine) and metastasis (liver)
- Tumor-related neuropathic and visceral pain for 18 mos
  - Treated with escalating doses of opioids
  - Gabapentin, ketamine used without much relief
  - Failed epidural opioid/L.A. due to catheter infection
The Current Situation

- Pain still poorly controlled with high dose hydromorphone infusion and methadone
- Gaba, lorezapam, low dose ketamine by mouth
- Opioid-induced delirium and myoclonic jerks
- Child screaming, confused, writhing in bed
- Rapid, labored breathing
- Abdomen distended, diffusely tender
“Can you help JD?”

- Parents distraught over child’s suffering
- Problems
  - Intractable Pain
  - Delirium/Myoclonus
  - Dyspnea
- Primary service confirms he has only days to live
- Palliative Care consultation
Objectives

- Define Palliative Sedation
- Ethical Concerns
- The Conduct of Palliative Sedation
Palliative Sedation (PS)

“Dear spell of sleep, assuager of disease.”

Orestes, Euripides [484 – 406 B.C.E.]
Hypnos and Thanatos

John William Waterhouse, 1874  *Sleep and his half brother Death*
Palliative Sedation: The progressive use of sedatives to relieve otherwise intractable symptoms in terminally ill patients

- Only in the context of palliative care team consultation
- End of Life
- Level of consciousness is important
  - Conscious vs Unconscious Sedation
- Titration of agent(s) to lowest effective dose
- Physician Intent is Critical!
  - Symptom relief, not death, is intended
The Principle of Double Effect

- Thomas Aquinas (1225–1274)

“Sometimes it is permissible to bring about as a merely foreseen side effect a harmful event that it would be impermissible to bring about intentionally.”

Thus, the intent is to relieve suffering at the end of life with the understanding that one’s efforts might shorten that life.
Physician Assisted Death (PAD)

- The use of physician prescribed medication to facilitate death
- Drug administration not physician administered or supervised
- Legal in Oregon, Washington and Montana
Euthanasia

- Physician administered/supervised lethal dose of medication(s)
- With patient’s consent (Netherlands and Belgium)
- Without patient’s consent (Nazi Doctors)
- Illegal in US
“Treatments of last resort”

Euthanasia/PAD
- “Palliation through death”
- Ethically questionable for some
- “Silent” PAD illegal outside OR, WA, MT
- Abrogates palliative care and symptom relief regimen

Palliative Sedation
- “Palliation alongside death”
- Ethically Acceptable
- Legal in US
- Logical extension of symptom relief regimen

Arguments for PS

- **Individual autonomy** justifies PS
  - Each individual has the right to pursue their own view of what kind of life is best
- **Beneficence** supports PS
  - Ending a painful life will actually relieve more suffering and thereby produce more good
- PS is no different than withdrawing life-sustaining treatments
- PS shown NOT to hasten death
Multicenter, observational, nonrandomized study

518 hospice patients:
- 267 PS vs 215 routine hospice care
- Median duration of sedation - 2 days (0-42)

Double effect need NOT be invoked to justify Palliative Sedation
Arguments Against PS

- Autonomy does not justify PS
  - By ending life, the individual can no longer exercise autonomy
- Beneficence can be achieved with quality care
- The distinction between terminating life-sustaining treatments and PS is clear
  - Some patients who have these treatments discontinued may continue to live
Other Issues in Pediatric PS

- Is End of Life Near?
- Patient’s Consent vs Parental Wishes?
- Is conscious PS possible in children?
- Home Death?
- Paucity of Published Data in Children
How do we conduct PS?

ALWAYS in the context of the best palliative care
Palliative Sedation Planning

- What Symptoms are we trying to relieve?
- What Agents is the child currently receiving?
- What is our Endpoint of symptom management?
- Family’s Expectations?
Palliative Sedation: The Basics

- NO Physiologic Monitoring
- Individualized Spiritual Support
- Quiet, Easily Accessible Location
- Physician Immediately Available
  - Frequent visits to assess effectiveness
  - Consultation with nursing
  - Rapid intervention for inadequate symptom control
Indications for Palliative Sedation: Intractable Terminal Suffering

- **Pain** that is unrelieved with opioids and adjuvants
- **Dyspnea**
- **Nausea/Vomiting**
- **Agitated Delirium**
- **Seizures**
- **Existential Suffering?**

“When sleep puts an end to delirium, it is a good symptom.”

_Aphorisms_, Hippocrates [460 – 377 B.C.E.]
Concomitant Polypharmacy

- High Dose Opioids – tolerance, delirium
  - Analgesic Adjuvants: Ketamine, Gabapentin, Amitriptyline
- Benzodiazepines – tolerance, delirium
- Antidepressants/Antipsychotics
  - SSRIs, Haloperidol
Agents Commonly Used for PS

Opioids
Sedatives/Hypnotics/Antipsychotics
Anesthetic Agents
Opioid Analgesics for PS

- Morphine, hydromorphone as continuous infusion
- Methadone mu agonist-NMDA antagonist
- Sedative effects, euphoria
- Dysphoria/delirium with very large doses
- Respiratory depression
- Tolerance
Sedative Agents used for PS

- **Midazolam**
  - Rapid onset of action + short half-life = continuous infusion
  - Sedative, anxiolytic, and anticonvulsive effects
  - Paradoxical agitation and delirium possible

- **Ketamine** – analgesic + sedative, dysphoria/salivation

- **Barbiturates** – phenobarbital, pentobarbital as infusion

- **Haldol** – for delirium, little experience in children
Anesthetic Agents used for PS

- Propofol
  - Anesthesia or ICU provider
  - Easy titratability – “moderate sedation” possible?
  - Anti-emetic, anti-convulsant
  - Provides sedation, amnesia, and anxiolysis
Propofol

- No inherent analgesic properties
- Cardiorespiratory depression
- Requires ICU setting and properly trained staff
- Frequent dose adjustments

Dexmedetomidine

- Central α2 agonist, simulates normal sleep
- Analgesic properties compliment opioids
- Currently used to treat/prevent:
  - Postoperative delirium in children and adults
  - ICU therapeutic sedation

PS Management Plan for JD

- JD transferred to PICU
- Dexmedetomidine infusion titrated to unconsciousness
- Hydromorphone infusion decreased
- Lorazepam dose decreased
- Oral meds held
Denouement

- Occasional arousal without agitation or evidence of pain
- Work of breathing and myoclonus reduced
- JD dies 96 hours after PS begun
- Parents express gratitude for the relief of his suffering
Suggested Reading

Questions, Discussion

TRUE, I'M NEARING THE END, BUT AT LEAST, THERE'S RARELY A DULL MOMENT.