Palliative Interventions in Hospice

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Objectives

- Define hospice philosophy regarding palliation of terminal patients
- Describe factors regarding interventions in hospice
- Compare the factors as they relate to common requests for palliative procedures in hospice

Why are we here?

Origin of hospice:
- Less technology
- Fewer treatments available
- Trajectory toward death more acute/steep
- Philosophy of hospice
  - the “Anti-Medicine”
  - “Go home”,
  - “Go fishing”,
  - “Get with your family and friends”
  - “No machines, just comfort meds”
Current healthcare environment

- Cancers: detected earlier, less toxic chemotherapy, better radiation, micro/robotic surgery, immunotherapies, nutrition, other modalities
- Cardiac disease: earlier detection, stents and thrombolytic therapies, inotropic infusions, LVADs as destination therapy, medications, AICDs + pacemakers, microsurgery
- Pulmonary disease: newer bronchodilators, steroids, non-invasive ventilation, some surgical procedures
- Degenerative neurologic diseases: medications, implants, stem cells
- ESRD: Hemodialysis, peritoneal dialysis
- HIV: HAART

All patients might access: CPAP, BiPAP, Artificial Nutrition and Hydration: TPN, PEGs, IVs

Patients and Family Sophistication

- Information on Internet
- Disease management societies
- Awareness of “patient focused care” and team approach—collaboration
- Better educated and more outspoken
Growth of Palliative Care

- Emerged from Hospice origins
- Holds the elements of Hospice: interdisciplinary care focused on symptoms, psychological, spiritual, social issues
- Not dependent on 6 month prognosis
- Delivered alongside definitive, life prolonging treatments—the earlier, the better
- No longer considered “pre-Hospice” or simply a “bridge"
- Death averse

The Vision of Palliative Care

Disease Modifying Therapy
Curative, or restorative intent
Life Closure

Diagnosis  Palliative Care  Hospice

Pressures on Health care System

- Discharge from hospitals sooner—DRG/Bundled payments
- BUT: Quality Indicators of care (e.g. beta blockers and aspirin, pneumonia vaccine…)
- Avoiding patient deaths in acute care settings
- Avoiding return to hospital within 30 days
- Internet based score cards
- Patients are handed quickly to the next level of care and are expected to flow smoothly along the continuum.
Part of the Continuum of Care….
Every day of life is precious….
We focus on comfort and support…..
We support the patient as well as family …
We want patients referred earlier…..
Median length of stay 2014: 17.4 days
Average 2014 LOS: 71.3 days
Death within one week: 35.5%
NHPCO’s Facts and Figures: 2015 Edition

Here comes Hospice

Federal Register Vol. 78 No. 152 pp. 48233-48281 Wednesday August 7, 2013
Shift to focus on terminal “prognosis” rather than “diagnosis”
Multiple medical conditions can contribute to the terminal prognosis
CMS expects “Virtually all” the care needed by terminally ill patients covered by hospice
Hospice Care per CMS

“It is the responsibility of the hospice physician to document why a patient’s medical needs would be unrelated to the terminal prognosis.”

BTW: The Federal Register does not say “medications only”.....with respect to palliation in a terminal illness. It does refer to reducing unnecessary diagnostics or ineffective therapy.

What’s the Problem?

Hospice under the Medicare Hospice Benefit lives “on a budget”.....
Per diem and not acuity based.
January 2016: first 60 days at ~$186 per day, then days 61+++ at ~$146 per day. 
Federal Register Vol 80, No. 151, August 6, 2015 p. 47167
Is there any wiggle room for a procedure or intervention?

Considerations Regarding Interventions in Hospice

What are the patient’s/family’s Expectations and Hopes?
What is the patient’s prognosis?
What are the benefits of the intervention requested? Is it “palliative” or “curative”?
Is the intervention “related” to terminal prognosis?
What are the burdens/risks of the intervention?
What is the likelihood of a positive impact?
Is the patient already receiving maximum “medical” treatment?
What is the resource impact? Cost and human
Boiling the Questions Down
1. What are the patient’s expectations and hopes?
2. What is the patient’s prognosis?
3. Is this intervention even going to work?
4. What alternatives are available/tried?
5. What is the cost? What is the burden to your hospice?

Let’s talk about cost
- Population basis:
  - How many patient days to pay for this intervention?
- Length of service basis:
  - How many patient days length of service do we gain from this intervention?
- Human resources:
  - What impact will this intervention have on nursing services, i.e. visit frequency, length of visit, etc.
- Quality: does this impact quality indicators, patient and family satisfaction, reimbursement?

What Interventions are Requested?
- Paracentesis
- Thoracentesis
- Fluid and hydration
- Total parenteral nutrition
- Antibiotics
- Transfusions/erythropoietin
- BiPap
- CPAP
- Ventilator
- Hemodialysis
- Chemotherapy
- Radiation therapy
- Kyphoplasty
- Pumps (pain)
- LVAD
- Inotropic agents
- Meds: HAART, Riluzole
- Wound vac
Three Commonly Requested Interventions

- Paracentesis
- Thoracentesis
- Transfusions

Paracentesis
Treatment for ascites

Ascites has multiple etiologies:
- Malignant ascites related to peritoneal carcinomatosis or obstruction of lymphatic system (cancer diagnosis) 10% all ascites cases
- Cirrhotic ascites related to liver failure (ESLD—EtOH, Hep C, nonalcoholic steatohepatitis)
- Mixed ascites related to carcinomatosis plus hepatic metastases—portal hypertension type picture

Risks of Paracentesis:
- Infection
- Protein depletion
- Postural hypotension
- Bowel perforation
- Bleeding

Malignant ascites (cancer): 10 to 20 weeks
End Stage Liver Disease:
- Advent of ascites: 50% survival 2 years
- With refractory ascites, prognosis is 6 months
- ESLD with infections: 30% die within 30 days
- HepatoRenal Syndrome:
  - Type I—30 days prognosis
  - Type II—6 months prognosis
Why does Prognosis matter?
How is ascites treated?

- **End Stage Liver Disease** (2.4% hospice admissions)
  - Dietary sodium restriction, Diuretics
  - Transjugular Intrahepatic Portosystemic Shunting (TIPS—a surgical procedure) for recurrent ascites but increased encephalopathy & +/- survival rates
  - Paracentesis—consideration of indwelling peritoneal catheters if frequent large volume paracentesis, but possible infection (16% one study), theoretically no limit on frequency (q1w)
  - Potosek, Curry, Bus, Chittenden. JPM 2014;17 (11):1271-1277

How is Ascites Treated?

- **Malignant ascites** (cancer 36% hospice admissions—up to 50% pts, esp GI & gyn cancers)
  - Mechanism:
    - malignant cells in peritoneum obstruct lymphatics
    - cytokines increase peritoneal capillary permeability
  - Diuretics not as effective.
  - Repeated paracentesis or peritoneovenous shunt (but shunt: cardiac congestion and DIC)
  - Most patients require re-treatment within 2 weeks for paracentesis

Malignant Ascites

- **Indwelling catheter**
  - Permits patient/family removal of fluid without travel, disruption, pain, paracentesis procedure.
  - Permits smaller, more frequent withdrawal of fluid
  - Better symptom management
  - Low infection rate
  - Series of 38 patients: leakage-2, catheter pulled out-1, pain-3, infection-2, sleep disturbance-1, WBC abnormalities-3
  - Narayanan, Peleshk mez, Venkat. JPM 2014; 17(8):906-912
Malignant Ascites

- Peritoneovenous shunt: best response ~50% in gyn malignancies with prognosis 1-3 months
- TIPS—not helpful unless liver metastases and portal hypertension
- Tunneled catheter—prognosis must be more than 1 month—very expensive—cost study of large volume paracentesis vs catheter: crossed lines at 9th Large Volume Paracentesis
- Pig-tail catheter—good for short-term—slightly higher infection, pull-out, leakage, occlusion
- LeBlond, Arnold. FAST FACT #177

Any other choices?

- Home paracentesis
- Ultrasonography is preferred to locate fluid.
- In UK, ultrasonographically guided paracentesis by palliative medicine physicians.
- Two patients:
  - 84 year old woman with pancreatic cancer, demonstrable fluid, tapped 2 L, died 27 days later
  - 26 year old woman colon ca, metastatic, protuberant abdomen, no fluid/no tap, died 2 months later
- Mariani, Setla. Acad Emergency Medicine 2010; 17: 293-296

Mr. Jones

- Mr. Jones is a 50 year old man with ESLD related to ethanol abuse also with Hepatitis C. He is not a candidate for liver transplant. He says he stopped drinking 4 months ago. He has been receiving paracentesis every two weeks for several months but the frequency is now tending toward every 10 days. Each time 4-6 liters are removed. He is cachectic with abdominal girth 92 cm post tap. His PPS is 40%. He has early jaundice, anorexia, abdominal pain. He has encephalopathy, and his renal functions are poor. The Liver Service has referred him to hospice. His daughter asks if he will continue to receive paracentesis. He lives with her and she is due with his first grandchild in 6 weeks.
What next?

Time to whip out the “questions”……..

Mr. Jones’ paracentesis

- What are the patient's/family's Expectations and Hopes?
- What is the patient's prognosis?
- What are the benefits of the intervention requested? Is it “palliative” or “curative”?
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- What is the resource impact? Cost and human

Questions for Mr. Jones

1. What are this patient’s Expectations and Hopes?
2. What is his prognosis?
3. Is this intervention even going to work?
4. What alternatives are available/tried?
5. What is the cost? What is the burden to your hospice?
Prognosis in ESLD

- Child-Turcotte-Pugh score (CTP)
  - Encephalopathy, Ascites, Bilirubin, Albumin, INR
  - Risk of 3 month mortality based on score (40% at score of 13-15)
- MELD (Model for End-Stage Liver Disease) based on survival data from patients who had TIPS.
  - Bilirubin, creatinine, INR
  - Risk of 3 month mortality is 52% >30, 71% >40
- Hepatic Encephalopathy, Spontaneous Bacterial Peritonitis, Hepatorenal syndrome

Thoracentesis
Treatment for pleural effusions
- Normally 20-50 ml or less in pleural space
- Two kinds:
  - Exudative: higher in protein and Lactate DeHydrogenase than usual (compared to serum levels)
  - Causes: cancer (malignant pleural effusions), infection, inflammation, perforation, uremia, radiation

Transudative:
- Fluid relatively clear, low protein levels
- Causes: congestive heart failure, nephrotic syndrome, hypoalbuminemia, peritoneal dialysis, constrictive pericarditis, pulmonary embolism, cirrhosis with ascites
- Mechanism: hydrostatic pressure, or wedge pressure

Pleural effusions: non-malignant
- Transudative effusions: most common cause of pleural effusions: CHF primary reason (500 K per year).
- Generally treating the underlying cause reduces the effusion (diuretics resolve 75%), but if persists and patient has fever, severe dyspnea, significant pleuritic chest pain or very large effusion, a thoracentesis can be helpful.
- Recurrent thoracenteses are not common
Pleural effusions: non-malignant

- Transudative effusions:
  - Cirrhosis is also a possibility—thought due to a defect in diaphragm (50K per year)
  - Treat ascites with low salt diet and diuretics.
  - If not liver transplant candidate then Transjugular Intrahepatic Portosystemic Shunt
  - Treating ascites should eliminate need for recurrent thoracenteses

Malignant pleural effusion

- Malignant pleural effusion (200 K per year): lung, breast, lymphoma
- Mechanism: damaged & more permeable pleural membranes, obstructed lymphatic/venous drainage, atelectasis, parapneumonic effusion, chylothorax
- Prognosis is poor: 4-5 months most Ca's (breast Ca px up to one year)
- Most distressing symptom: dyspnea

Treatment of Malignant Pleural Effusion

- Thoracentesis
  - To determine if lung will re-inflate
    - If re-inflates: might opt for pleurodesis with talc or doxycycline
    - If does not re-inflate, Tunneled Pleural Catheter or recurrent thoracentesis depending on patient preference or prognosis
  - Recurrent thoracentesis: symptoms return in days and 98% need for repeat procedure within 30 days
  - No more than 1500 ml per tap
  - Risk: pneumothorax, infection, loculation, bleeding

Light R. Med Clin N AM 2011; 95: 1055-1070
Treatment of Malignant Pleural Effusion

- Tunneled Pleural Catheter
  - Permits patient/family removal of fluid—small frequent amounts without travel, disruption, pain, thoracentesis procedure
  - Essentially same cost as talc, and some patients are not candidates for talc.
  - Complete resolution of symptoms 39% and partial improvement 50%.
  - Prognosis of months ideal
  - Concerns with leukocytosis, hypoalbuminemia, hypoxemia

Recurrent malignant effusions

- Pigtail catheters
- Smaller
- Less painful
- When patient is poor surgical risk for thoracotomy or “stiff” chest drain
- Can be left in for months
- No absolute contraindication (platelets)
- Placed with ultrasonography (Interventional Radiology)

Thoracentesis/repeat thoracentesis

- Ultrasound is recommended to reduce complications, save time, spot loculations, locate smaller fluid volumes, first-puncture success.
- Patient can be sitting or decubitus position

Yu. Semin Intervent Radiol 2011;28: 75-86
Mrs. Beechnut

- Mrs. Beechnut is a 70 year old woman with NSCLC metastatic to liver. She has PPS of 50%. She has chosen to stop antineoplastic treatment due to related fatigue and nausea. She has recurrent pleural effusions, and missed the appointment to have a tunneled catheter prior to her referral to hospice. She does not have ascites. She did have thoracentesis 8 days ago, and usually has a standing monthly appointment for her procedure. Her comorbidities are COPD, NIDDM and glaucoma. You are doing the information visit. She wants to know what your hospice offers……

Mrs. Beechnut's Pleural effusions

- What are the patient's/family's Expectations and Hopes?
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Mrs. Beechnut’s Pleural Effusions

1. What are the patient’s Expectations and Hopes?
2. What is her prognosis?
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Blood Transfusions

Anemia

- Anemia is common in patients with life-limiting disease, up to 70% hospice inpatients in one study.
- Thought to be one element of fatigue in palliative care patients, but intensity of fatigue is unrelated to level of Hgb.  
- Other factors in fatigue: use of pain meds, depression, dyspnea, anorexia
- So, does transfusion work?  
Effect of RBC transfusion

- 61 Solid tumor patients with Hgb 8 g/dL
- Target: increase Hgb by 2 g/dL (~2 units)
- Fatigue, well-being, dyspnea measured:
  - Admission, Day 1 post, Day 15 post
- Patients reported improvement at Day 1, but effects faded by day 15.
- Survival: 10 pts <1 month, 23 pts 1-3 months, 28 pts >3 months
- Patients dying within 4 weeks, little effect


What about Hematologic malignancies?

- 2% of Hematologic malignancy patients use hospice. (70,000 die each year)
- Referred very late in process if at all
- Patients given chemox within 14 days of death, died in hospital, or died within 3 days hospice
- “Mismatch”: aggressive vs usual care?
- Once they are refractory, most HM patients are automatically eligible for hospice based upon survival:
  - Myeloma median survival: 9 months
  - Acute leukemia median survival: 3 months
  - Chronic lymphoid leukemia: 10 months
  - Myelodysplastic syndrome: 4.3 months
  - Lymphoma: 8.4 months for aggressive types

Sexauer, Cheng et al. JPM 2014;17(2):195-199

What about Hematologic malignancies?

- 209 Hematologic malignancy patients who died
- 59 referred to hospice, 53 accepted (35 home hospice, 18 IPU)
- 25% rate of hospice services
- Median LOS 9 days home based and LOS 6 days IPU
- 9 patients accessed “expanded hospice services” (transfusions)
- Not discussed: ?difference in survival for transfused patients?

Sexauer, Cheng et al. JPM 2014;17(2):195-199
Coalition of Hospices Organized to Investigate Comparative Effectiveness

48,147 cancer patients: 3918 (7.3%) heme malignancy (HM)

- Shorter LOS 11 days vs 19 days solid Ca
- Death within one day: 10.9% HM vs 6.8%
- Death within one week: 36% vs 25.1%
- Leukemia even shorter LOS

LeBlanc, Abernathy, Casarett. JPSM. 2015; 49(3):505-512

1. HM patients receive definitive therapy until late in illness
2. Many HM patients are transfusion dependent, excluded from hospices
3. HM Specialists hold different views about Palliative Care/Hospice
4. Need for different model: nonHospice Palliative Care in community
5. HM pts less likely to die at home (IPU)
6. Leukemia referred even later.

LeBlanc, Abernathy, Casarett. JPSM. 2015; 49(3):505-512
Blood transfusions

- HM malignancies referrals so late that transfusions might not be an option
- Poor prognosis (<30 days) less likely to benefit
- Perceived benefit happens quickly, but effect declines by 10-15 days
- Fatigue is multifactorial, so transfusions might not effect this symptom
- Other symptoms: dyspnea, depression, somnolence may respond to medications

Mrs. Berry

- 78 year old woman with Myelodysplastic Syndrome, not responding to tx. PPS 50% (nearly 40%), eating poorly, has lost 12 pounds in 4 months. She had been receiving transfusions every 3 weeks prior to hospice. She wants to go on a 5 day cruise with her grand-daughter and asks if she can have a transfusion prior to embarking.

Mrs. Berry’s transfusions

- What are the patient’s/family’s Expectations and Hopes?
- What is the patient’s prognosis?
- What are the benefits of the intervention requested? Is it “palliative” or “curative”?
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Mrs. Berry’s transfusion

1. What are the patient’s Expectations and Hopes?
2. What is the patient’s prognosis?
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Part of the Continuum of Care…
Every day of life is precious…
We focus on comfort and support…..
We support the patient as well as family….
We want patients referred earlier….  
We need to be good stewards of our limited resources, but  
We want to do the right thing!

Here We Are…
Thank you!!!
Bibliography: Paracentesis


Bibliography: Thoracentesis


Bibliography: Thoracentesis

Bibliography: Transfusion

Bibliography: Transfusion
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