Integrative Medicine in MPN

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Objectives

• Define Integrative Medicine
• Consider Integrative Medicine modalities for common MPN symptoms
  • Fatigue, Itching, Weight loss, Pain
• Use of Integrative Medicine for MPN
• Mind-Body Practices
  • Resilience and stress management
Definition

Integrative Medicine is the practice of medicine that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, healthcare professionals and disciplines to achieve optimal health and healing.

Consortium of Academic Health Centers for Integrative Medicine
whole person

mind

body

spirit

Resilience Training
Stress Management
Massage/Acupuncture
Mind Body Connection
Nutrition
Healing Touch/Reiki
Herbs & Supplements
Pest & Relaxation
Animal Assisted Therapy
Movement & Exercise
Music Therapy
Integrative Health Coaching
Vegan/Raw
Bioelectric
Spirituality, Meaning & Purpose
Yoga Tai Chi
How should we define health?

The WHO definition of health as complete wellbeing is no longer fit for purpose given the rise of chronic disease. Machteld Huber and colleagues propose changing the emphasis towards the ability to adapt and self manage in the face of social, physical, and emotional challenges.
Health

• “The ability to adapt and to self manage in the face of social, physical, and emotional challenges”

Is it possible to be healthy with cancer?
How would you rate your health?

A. Excellent
B. Very good
C. Good
D. Fair
E. Poor
Prevalence of use

• Use of “CAM” in patients with cancer: 11-95%
• Only 20-77% disclosed use to their physicians
  • Doctor didn’t ask
  • Anticipated disapproval or disinterest
  • Anticipated inability to help
  • Patient perceived irrelevant

• For those who did discuss reported improved overall communication and satisfaction
Living with Cancer Survey Results

Modalities Patients Used

- Nutrition
- Meditation
- Exercise Instruction
- Natural Products (Supp/Botanicals)
- Support Groups
- Yoga
- Breathing Exercises
- Massage
- Walking meditation
- MBSR

Living with Cancer Symposium, January 2014 & 2015
Integrative Medicine in MPN Symptoms
Symptoms in MPN

- Fatigue 81%
- Itching 52%
  - PV 68% with 15% unbearable
- Night sweats 49%
- Bone pain 44%
- Fever 14%
- Weight loss 13%

Mechanism for symptom development is not well understood

- Inflammation
- Treatment side effects

In Maintenance Mode, Living in the Moment

Living With Cancer
By SUSAN GUBAR  FEB. 16, 2017

For most people with cancer, life has conventional stages that I can sum up with acronyms: B.C. (before cancer), A.D. (at diagnosis), S.S.N. (some surgical nightmare), RATS (radiation therapies), ICH (in chemotherapy), followed by IRS (in a remission of some number).

Like a growing number of patients today, I inhabit a less familiar state: maintenance. This new phase presents a viable alternative to remission which, I sometimes feel, is not everything it is cracked up to

Titian’s “Sisyphus,” from the collection of Museo del Prado, Madrid.
Fatigue
Exercise for fatigue

Physical Activity in MPN

• Paradox – symptoms make people with MPN less active

• Increased activity shows survival benefit & improved QOL in many cancer types
  • Cycling, resistance training, weight training, yoga, qı gong
  • Dosing? 12 week program

• Hematologic malignancies?
Exercise in Hematologic Malignancies

- Lymphoma
  - Fatigue, fitness, mood
  - QOL
  - 1-3x/week
  - Aerobic
  - Yoga - sleep

- Leukemia
  - Fitness, anxiety
  - Poor adherence

- Myeloma
  - No studies
  - Interest present

Integr Cancer Ther. 2016 Jul 24
Table 4. Summary of Future Research Suggestions.

- Explore the feasibility of physical activity (ie, aerobic, resistance, mindfulness-based) for the MPN patient population
- Examine the effects of physical activity (ie, aerobic, resistance, mindfulness-based) on MPN patient symptom burden and QoL
- Identify barriers to physical activity participation within the MPN patient population, with specific emphasis on strategies to overcome fatigue as a major barrier
- Explore MPN patient perceptions regarding the use of physical activity as a symptom management tool

Abbreviations: MPN, myeloproliferative neoplasms; QoL, quality of life.
Regular physical activity can have a positive role in cancer (Level 1B)
Exercise and Survival in Cancer

- Male/Female n~2800
- All cancer types
- 1 day per week
- 33% lower all cause mortality

**FIGURE 1.** Kaplan-Meier survival curves for all-cause mortality according to resistance exercise performed at least 1 day/week in cancer survivors enrolled in the Aerobics Center Longitudinal Study, Dallas, Texas, 1987 to 2003.
Acupuncture for Fatigue

Movement of Qi (Vital energy)
  • Via meridians
  • Depletion, excess, stagnation

Systematic review
  • Inconsistently shown to be effective compared to sham acupuncture
  • Effective for pain, low energy, hot flashes, sleep

Support Care Cancer. 2013 Jul;21(7):2067-73
Itching

- Acupuncture
  - Healthy volunteers benefit from traditional acupuncture & electric ear acupuncture
- Healing Touch
- Hypnosis/hypnotherapy
- Aromatherapy
  - Small study – topical (hand) lavender, mint, tea tree
Itching – Topical Botanicals

• Capsaicin
  • 0.25-0.1% cream
• Burns
• Requires consistent use
• Sangre de drago – Amazonian dragon tree similar

• Limited evidence
  • Borage & primrose oil
  • Tea tree, cinnamon, lemongrass – can cause sensitivities
  • Soaked black tea bags, chamomile
  • Yams – natural cortisone?

Dermatol Ther. 2013 Mar-Apr;26(2):149-56
Pain

- Acupuncture
  - Not more effective than pharmacology
  - Less discomfort with combined approach
  - May reduce use of opioids (post-surgical)

- Massage

- Psychosocial interventions
  - Guided imagery
  - Music
  - Art

Support Cancer Care 2012; 20:1147-58
Ev Based Comp Alt Med 2014, 1-9
Pain

- Reflexology – short relief

- Supplements
  - Magnesium
  - Chinese herbal medicine

  AVOID

- Strontium – increased risk of blood clots
Nausea/Vomiting

- Acupuncture/pressure
  - Acupressure:
  - Electroacupuncture – reduced emesis from 15 episodes to 5 with once daily treatment for 5 days (1)

- Ginger

- Hypnosis (2)

(1) JAMA. 2000 Dec 6;284(21):2755-61
(2) Eur J Cancer Care (Engl). 2007 Sep;16(5):402-12
Weight loss/malnutrition

- 30-87% cancer patients have malnutrition
  - Disease or treatment related
  - Affects QOL and ability to treat
Integrative Medicine in MPN
Consider Integrative Medicine

• Watch & wait
• Active treatment with symptoms
• Following treatment
• Secondary cancer prevention
Natural Products
Navigating Natural Products

Figure 1. Clinical decision making based on risk versus efficacy. Adapted from Cohen MH and Eisenberg DM.38
Prevalence of Supplement Use

- 64-81% cancer survivors use supplements
- 26-77% use multivitamins

J Clin Oncol 2008; 26:665-73
Assessing a Multivitamin

- Review dosing:
  - Vitamin A – mostly beta-carotene (except smokers), <2500 IU preformed
  - Folic acid – minimum 400mcg
  - Vitamin E – 30-200IU, mixed tocopherols
  - Zinc: Copper 15:1 ratio
  - Iron?

- Check serving size
- Additives and preservatives
- Botanical additives?
Anti-oxidants supplements

- Safe and beneficial in food, especially carotenoids
- Avoid in supplement form - controversial
  - Narrow therapeutic window
  - Increased mortality
  - Vitamins A, C, E, selenium
- Decrease treatment efficacy?
- Affect treatment toxicity?

*JAMA.* 2007 Feb 28;297(8):842-57
*Int J Cancer* 2008; 123: 1227-33
Vitamin C

• Actions
  • Anti-oxidant
  • Enzyme cofactor
    • Synthesis of collagen, carnitine, neurotransmitters, neuropeptides
  • Wound healing, metabolism, nervous system

• IV therapy lacks safety and efficacy data
  • Oral dosing levels is tightly controlled
  • Supra-physiologic levels only achieved with parenteral therapy

Omega 3

- Anti-tumor effects (cell data)
- May improve QOL
- Anti-muscle wasting – theoretic benefit in muscle recovery
  - Independent of nutritional intake
- May interact with chemotherapy
Botanicals
Turmeric (curcuminoids)

• Actions (cell and animal data)
  • Signal transduction – cell growth/ apoptosis, NF-κB and angiogenesis inhibition
  • Increased intracellular glutathione

• Low bioavailability
  • Enhanced systemic absorption (154%) paired with pepper (piperine, bioperine)

*J Biol Regul Homeost Agents.* 2013 Jan-Mar;27(1):105-19
Medicinal Mushrooms

- Anti-inflammatory and immune enhancing
- Maitake, shiitake, reishi
  - High doses shiitake associated with eosinophilia
- Turkey tail = Coriolus versicolor
  - Cell data that targets cancer stem cells

Garlic

• Anti-platelet effects
  • Associated with bleeding
  • Avoid in conjunction with other medications that may cause bleeding
Omega 3

• Anti-tumor effects (cell data)
• Anti-muscle wasting – theoretic benefit in muscle recovery
  • Independent of nutritional intake
• Associated improved QOL
  • 1500mg/day
Natural Products - Avoid

- Aortic acid
- Boron
- Grape seed
- Pycnogenol (pine)
- Rutin
- Seaweed
- Shea butter
- Vitamin E
- Yohimbe

NaturalStandard.com accessed 2/17/15
Exercise

- Improves
  - QOL
  - Physical functioning
  - Emotional well-being
  - Fatigue
  - Muscle strength
  - Body composition
Exercise - Timing

- Post-diagnosis physical activity levels related to disease endpoints in some cancers
  - Survival advantage at 9-15 MET hours per week = 3-5 hours walking

- Exercise during adjuvant therapy to tolerance
- Consider resistance training

- 30 minutes moderate exercise most days
Body Based Therapies

Massage can reduce anxiety and pain – use oncology-massage trained provider (1C)
Massage

• In patients with advanced cancer
  • Six 30 minute massages over 2 weeks reduced pain and improved mood

• In patients with metastatic bone pain
  • Improved pain
  • Enhanced relaxation
  • Qualitatively assisted sleep
Energy based therapies

• Work with “bio-fields” or “bio-energy”
  • Reiki, Healing Touch, Therapeutic Touch, qi gong
    • Safe, ?effective
    • May improve QOL, sense of control and hope
    • May improve pain
  • Yoga and Tai Chi

Nutrition
Nutrition

1. Be lean – but not underweight
2. Avoid sugary drinks
3. Limit consumption energy-dense foods
4. Variety of vegetables, fruits, whole grains, legumes
5. Limit consumption of red meat, especially processed
6. Limit salty, processed foods

Diet - elements
body

mind

spirit

whole person
Mind-Body Therapies

- Reduce anxiety
- Improve mood
- Decrease pain
  - Low back, headache
- Increase quality of life
- Meditation
- Guided Imagery
- Relaxation techniques
- Breathing exercises
- Hypnosis
- Cognitive behavioral therapy (CBT)
• Mind Body modalities can improve mood, pain, and QOL (1B)
  • Meditation
  • Yoga
  • Tai Chi
  • Hypnosis
  • Relaxation
  • Music therapy
  • Art therapy

SIO Guidelines 2009
Music & Art Therapy

• Music
  • Anxiety reduction while undergoing chemotherapy

• Art
  • Used at all stages of cancer journey
    • More often by women
  • Key outcome: empowerment
  • Improved quality of life and coping
Relaxation therapies

- Reduced tension, depression, anger, and fatigue
- Improved sleep induction and sleep quality

- Regular relaxation training: decrease stress, improved immune function, decreases pain and side effects of treatment

Hypnosis

- Bone Marrow transplant patients randomized to hypnosis, CBT, therapy, and usual care reduced oral pain with mucositis

- Reduced cancer related pain and anticipatory nausea

- Avoid if history of psychosis and personality disorder

Pain 1992; 48: 137 – 46
Stress and Telomeres

Stress Health. 2014 Nov 13
Mayo Clinic Stress-Free Living

- Gratitude
- Compassion
- Acceptance
- Higher meaning
  - Love
  - Service
- Forgiveness
Acupuncture

Debbie Lamadrid  Anita Pietrofitta  Jade Whitney

Massage Therapy

Rocco Petitti  Trish Romano

Yoga

Maria Caselli  Rachelle Godfrey
Integrative Medicine at Mayo Clinic in Arizona

• Consults with Physicians
• Massage
• Acupuncture
• Classes
  • Mindfulness, meditation
  • Stress management
  • Writing (new – March 2017)
• Yoga
  • Chair, Relaxation, Yin, Flow, Nidra
Conclusion

• Possible to be healthy with cancer
• More information needed on Integrative Medicine in MPN
• Encourage exercise & healthy diet
• Acupuncture throughout for symptom management & therapy tolerance
• Massage by oncology trained providers
• Stress management, relaxation, and/or mind-body therapies for patients & caregivers