American Institute of Integrative Oncology
RESEARCH & EDUCATION

CASE STUDY SUBMISSION

Important: In observance of HIPAA and the sacred trust between care giver and patient, absolutely no patient names or identifying information is to be disclosed. Patient privacy is to be preserved. If you attach any medical records, pathology, surgical or laboratory reports, all names are to be removed.

Date	9/25/17
Clinician Name & Credentials	Sarah Shahab, MD
Email	sshahab2012@gmail.com

Describe Your Patient (Please SUMMARIZE and use economy of words. You will have 15 minutes to present)

Age, Gender & Ethnicity	39 year old , female
Body Type	
Values *What is most important to this patient? (Quality of Life, Decision Making, Side Effects?)*	Quality of life, being able to be there for her teenagers
Stress Resilience	very strong
Other	
Primary Diagnosis & Date *(ex. Breast Cancer L, T3 N1 M0, BRCA1 positive, grade 3, Ki67 > 45%)*	CLL diagnosed in 3/15 incidental finding while getting blood work for a throat infection.
Secondary Diagnosis *(ex. Diabetes Type 2, Obesity)*	fatigue

Patient Status

☐ New Diagnosis ☐ Recurrence ☐ In Treatment ☐ In Recovery ☐ In Remission ☐ At Risk

Concomitant and/or Complicating Factors *(ex: poorly controlled diabetes, insomnia, poor support system)*	none
Adverse Effects of Cancer or Cancer Treatments *(ex. anxiety-depression, diarrhea, peripheral neuropathy)*	no cancer treatment so far
Relevant Laboratory, Pathology & Medical Reports *(attach a PDF with patient identifying information removed or summarize)*	please see attached - labs since 3/15 WBC at diagnosis 138, negative CD38 and ZAP70, positive 13q deletion. Now, WBC 200

Brief Summary of Recent History

Incidental diagnosis following throat infection. Wait and watch so far. when diagnosed WBC was 138,000, WBC count now 200,000! She is feeling increasingly 'weak'.

Hg stays between 11 -13 mg%. At its highest WBC count was 267,000 in December 2016. I met her via skype in January and she implemented some of the things I asked her to. Her numbers did improve after that, but she stopped following recommendations.

Brief Summary of Additional Relevant Health, Medical, Psycho-Social and/or Family History

very good family support

Other Relevant Information

Such as Chinese or Ayurvedic diagnosis, Naturopathic/Homeopathic Information, etc. *(ex. Liver Qi Stagnation, Dysbiosis)*

no

Brief Summary of Relevant Past Oncology or Medical Treatments

(ex. surgery, radiotherapy, chemotherapy, immunotherapy, hormone therapy, drug therapy)

none

Summary of Recent and Current Treatments

Medical Oncology Care *(surgery, radiotherapy, chemotherapy, immunotherapy, hormone therapy, drug therapy)*

none

Integrative Oncology Care *(nutraceutical, botanical, phytochemical, acupuncture, energy medicine, other)*

In January, I met her via Skype she lives overseas. Talked to her about a clean, low carb plant based diet, meditation and other stress management techniques. put her on VitD, Magnesium, Fish oil, MVIs. She took some things for some time , numbers improved!

Your 2 Core Questions (stated clearly and succinctly)

1. What can we do while we 'wait'?

2. Any specific supplements?

Attached Medical Records for Reference (with patient identifying information removed)

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Foundations of Integrative Oncology
COURSE

CASE STUDY
Treatment Plan Recommendations
From November 15th, 2017 Grand Rounds Call

Treatment Plan Recommendations
39F with Chronic Lymphocytic Leukemia (CLL) - Submitted by Sarah Shehab
Background: Dx 03/2015, No conventional treatment

Chronic Lymphocytic Leukemia (CLL)

- Highly inflammatory
- Characterized by failure of apoptosis (BCL2), VEGF, Pi3K>AKT>MTOR
- Use of botanicals and nutraceuticals that raise WBC and lymphocytes is contraindicated (Vitamin C, Echinacea, Astragalus, Medicinal Mushrooms (except Ganoderma), IP-6 for example)
- VIT E shown to interfere with action of EGCG on CLL

Sample Protocol
EGCG 2 g bid
Curcumin 2 g bid
Omega 3 fatty acids 2 g bid
Zinc 30 mg bid
Vitamin D optimize blood levels to 65-80 start 5000iu
Vitamin A 10,000 iu/day monitor serum
Resveratrol 1 g bid
Feverfew 1 g bid
Honokiol 1-2 g /day
Ganoderma 3 g/day
(Consider NATURA Botanical Treasures_ contains Green Tea, Resveratrol Curcumin)

Sample Chinese Herbal Formula
240 ml (8 oz) 1 tsp 2-3x/day
40 Scutellaria baicalensis Huang Qin
30 Heydotis diffusa (Oldenlandia) Bai hua she she cao
30 Curcuma Longa Yu Jin
30 Camelia sinensis Cha Ye
30 Salvia milthiorrihiza Dan Shen
20 Magnolia off cortex Hou Po
20 Tanacetum parthenium Feverfew
20 Rabdosia pubescens Dong Ling Cao
10 Paeonia lactiflora Whitel Peony Bai Shaoyao
10 Glycyrrhiza glabra (raw) Gan Cao

Promote apoptosis - Inhibit Bcl2
Scutellaria baicalensis (baicalin, baicalein, wogonin)
Curcumin
Oridonin

Quercetin
Resveratrol
Sulforaphanes
Rabdosia (oridonin)

Support Inflammation Control and NFkB
Boswellia
Curcumin
O3FA
Parthenolide (many studies with AML) Feverfew 1 g bid

Steroid like inflammation control
Glycyrrhiza glabra (licorice root) extract 1-2 teaspoons qid
NATURA Inflamaway

Antiviral
Zinc
Vitamin D
Vitamin A

VEGF inhibition
EGCG
Curcumin

Promote DIfferentiation
Vitamin D
Vitamin A

Prevent Thrombosis (caution—some patients >>hemorrhage not thrombosis)
Curcumin
Omega 3 Fatty Acids

Inhibit PI3K>AKT>mTOR pathway (Rapamycin)
Pure Honokiol 1 g tid
Resveratrol
Curcumin
Quercetin

Thymoquinone induces apoptosis
Nigella Sativa (Black Cumin Seed) Oil

Nrf2 Activation
White Peony Paeonia lactiflora
EGCG
Resveratrol
Sulforaphanes
Curcumin
Milk Thistle
Pomegranate
Olive Leaf
Gingko biloba

Marjanovic, G. (2017). The use of inexpensive broad spectrum lower toxicity therapeutics in chronic lymphocytic leukemia. Journal of BU ON.: official journal of the Balkan Union of Oncology, 22(2), 288. (PMID: 28534346)

Abstract

The use of new and highly efficient targeted therapies for chronic lymphocytic leukemia (CLL) is costly and out of reach for many health care systems. On the other hand, in recent years, few inexpensive, broad-spectrum low-toxicity therapeutics have proven to be effective both in the preclinical and clinical settings. **In early-stage CLL, the use of 2000 mg of epigallocatechin-3-gallate (EGCG) from the green tea extract twice a day was able to reduce the absolute leukocyte count. Supplementation of >2000 IU/day of Vitamin D in early low-risk CLL patients is able to delay disease progression and postpone the moment of initiation** of the first treatment. The doses of both vitamin D and EGCG were shown to be safe in older patients. **Vitamin D, EGCG and Curcumin, either as monotherapy or in combination, have additive and synergistic effects with conventional chemotherapy.** Further observations have identified the **improvement of response to rituximab-fludarabine-cyclophosphamide (R-FC) therapy with concomitant administration of statin and aspirin combination in relapsed/refractory CLL.** Finally, **high dose dexamethasone with 40mg/m2/day for 4 days, every 28 days, either alone or with monoclonal antibody, might be used as a salvage therapy or for debulking before transplantation in refractory/resistant cases**. Dexamethasone therapy is followed by transient response and high rate of infections, but fluid retention and other toxicities are lower compared to high dose methylprednisolone schedules. The low cost therapeutics discussed in this review could not be a substitute for the more effective targeted therapies, but their use in everyday practice might postpone the need for early implementation of new and costly medications.

Mainou-Fowler, T., Proctor, S. J., & Dickinson, A. M. (2001). Gamma-linolenic acid induces apoptosis in B-chronic lymphocytic leukaemia cells in vitro. Leukemia & lymphoma, 40(3-4), 393-403. (PMID: 11426562)

Ahmad, N., Gupta, S., & Mukhtar, H. (2000). Green tea polyphenol epigallocatechin-3-gallate differentially modulates nuclear factor κB in cancer cells versus normal cells. Archives of biochemistry and biophysics, 376(2), 338-346. (PMID: 10775421)

Everett, P. C., Meyers, J. A., Makkinje, A., Rabbi, M., & Lerner, A. (2007). Preclinical assessment of curcumin as a potential therapy for B-CLL. American journal of hematology, 82(1), 23-30. (PMID: 16947318)

Hayun, R., Okun, E., Berrebi, A., Shvidel, L., Bassous, L., Sredni, B., & Nir, U. (2009). Rapamycin and curcumin induce apoptosis in primary resting B chronic lymphocytic leukemia cells. Leukemia & lymphoma, 50(4), 625-632. (PMID: 19373661)

Fleischer, T., Chang, T. T., Chiang, J. H., Hsieh, C. Y., Sun, M. F., & Yen, H. R. (2016). Integration of Chinese herbal medicine therapy improves survival of patients with chronic lymphocytic leukemia: a nationwide population-based cohort study. Medicine, 95(21). (PMCID: PMC4902377)

.. **herbs or compounds from within the CHM pharmacopeia, that may be beneficial for CLL patients, for example, Indirubin (Isatis tinctorium=Indigo), Curcumin, *Hedyotis diffusa (ursolic acid),* and *Ganoderma lucidum* (ganoderic acid) *Salvia miltiorrhiza (tanshinones and salvionolic acids),…***