Simple Safe Integrative Tools For Common Mental Health Problems

scott shannon md
university of colorado
ARS: mental health issues

1. Uncommon in my practice, have all the tools I need
2. Some issues, but feel comfortable with my options
3. Common and sometimes my tools feel inappropriate
4. Very common, wish I had more options
Agenda

* Inositol
* L-Theanine
* SAMe
* Saffron
* St. John’s wort
* CBD oil
* Summary
Inositol

- Part of cell membranes
- Found in our food
- Isomer of glucose: sugar alcohol
- Needed for proper functioning of serotonin
- CSF of depressed patients = low inositol
- Key second messenger - relays info to nucleus
**Inositol**

- Effective for depression [Evidence level A-RCT]
- Effective for panic [Evidence level A-RCT]
- Effective for bulimia [Evidence level B]
- Effective for OCD [Evidence level A-RCT]
- Not effective for schizophrenia, Alzheimer’s or ADHD [Evidence level A-RCT]
Inositol in Panic

* RCT-cross over/ random order of 20 pts
* Fluvoxamine 150 mg vs. inositol 18 grams
* Inositol superior at 4 wks; equal at 9 wks
* Inositol had fewer side effects

Inositol-neuroimaging

* 14 subjects with OCD
* SPECT scans pre and post
* Responders deactivate in: L superior temporal gyrus, middle frontal gyrus and precuneus
* Significant reductions in YBOCS and CGI
* Dosing 4 to 6 gm tid-use the powder

Inositol: Use

* Sweet tasting powder-mix in any liquid
* Well tolerated
* Dosing: 1 to 6 grams BID or TID
* Excellent sleep aid or stress moderator
* Children love it
“Since you have a complete record of my life, could you tell me if I remembered to turn the stove off?”
L-theanine
L-Theanine

* Natural component of green tea
* Analog of glutamine and glutamate
* Increases GABA and dopamine
* Promotes alpha waves/ non-sedating
* Neuroprotective and non-toxic
* Dose: 200-400mg BID
* Evidence level: +

Haskell, R *Biol Psychiatry* 2008 77(2): 113-22
Clinical Actions of L-Theanine

Promotes relaxation- described as a calm alert without sedation (Ito 1998).

Reduces stress-induced reactions in humans (Kimura 2007).

Heart rate variability: reduced activation of the sympathetic nervous system (Kimura 2007).


Enhances attentional functioning in humans (Gomez-Ramirez 2007).

Improves memory and learning in humans and animal models.
Sample Protocol-Anxiety

* Inositol- 4 to 6 grams bid or tid
* 5 HTP 50 to 200 mg tid
* Relaxation, meditation, walking, yoga, journaling
* Psychotherapy, EMDR if trauma
* L-theanine 200 to 400mg bid
* No caffeine
* If obsessive: NAC 600-1200mg bid
SAMe

- Naturally occurring compound
- Synthesized from methionine
- Central in methylation reactions
- Suggested efficacy in: depression, osteoarthritis, fibromyalgia, liver function and migraine headaches
- 80 clinical trials; 24,000 people
S-adenosyl-l-methionine (SAM-e)

\[ B_{12} \]
Folate $\rightarrow$ 5MTHF + Homocysteine $\rightarrow$ Methionine $\rightarrow$ SAM-e

Methyl Donations

SAM-e

DA
5HT
NE
SAMe in Depression

- 28 acceptable studies vs either antidepressants or placebos
- Superior to placebo
- Comparable or more effective than antidepressants
- Faster (1-2 weeks)
- Better tolerated, fewer side effects

AHRQ Reviews:
(www.ahrq.gov/clinic/epcsums/samesum.pdf)
SAMe

* 144 subjects with MDD (1 of 2 sites)
* SAMe (1600-3200 mg) vs escitalopram (10-20 mg) vs placebo. 12 weeks
* Effect size placebo vs SAMe: 0.74
* Response rate: 45% vs 31% vs 26%
* Remission: 34% vs 23% vs 6%

RCT of 73 SSRI non-responders

Adjunctive SAM-e: 800mg BID

Patients continued SSRIs

Remission rates 25.8 vs 11.7%

Minimal side effects

Papakostas, G Am J Psychiatry 2010
167:942-948
SJW, SAMe, Saffron or SSRI based on patient
B Complex 50mg (B-6 and 1 mg folate)
EPA: 1 gram or more
Exercise and higher protein, high quality diet
Psychotherapy or education
Light therapy if indicated
Check thyroid, vitamin D (target 40 ng/dl), ferritin/CBC, CRP
Saffron
Saffron (crocus sativus)

- Greek frescos depict Saffron as medicine 3600 years ago
- Herbalists: antispasmodic, thymoleptic, carminative, cognition enhancer, aphrodisiac, and emmenagogue.
- Stigma and petals both studied
- 15 mg twice daily used in all studies
Many studies

- At least 6 RCT/DB
- Compared to placebo or TCA
- All studies positive
- Issues: most in mild to moderate depression (87% of clinical populations), one in MDD
- Expensive spice ($4 to $5,000/lb): concern over adulteration.

Saffron and SSRI sexual dysfunction

* 36 male pts with MDD and sexual dysfunction stabilized on fluoxetine
* Randomized to saffron (30 mg) or placebo
* Significant difference at 4 weeks
* Change in erectile dysfunction, sexual satisfaction but not orgasmic function

ARS: Medical Marijuana?

1. Just a ploy for more folks to get high
2. Useful in a few uncommon illnesses
3. Helpful for a range of medical conditions
4. Broadly useful and would like to have access to it in Wyoming
V. CBD Oil
• Natural component of cannabis. One of 85 or more active cannabinoids
• Not responsible for “high”
• May be botanic counterbalance to THC
• Not specific to Indica strains
• Can be sourced from hemp/legal in 50 states
• Explosion of interest following successful case story of Charlotte with Dravet’s syndrome by Sanjay Gupta, MD on CNN
CBD Oil

Preclinical trails show benefit in:

Chronic pain
Anxiety
Rheumatoid arthritis
Schizophrenia
Diabetes
PTSD
Alcoholism and more
Pediatric Epilepsy: Stanford University survey

* 19 severely epileptic children: 84% experienced substantial reduction in seizure activity with high CBD strain

* Epidolex: CBD drug given FDA orphan status for Dravet syndrome/pediatric epilepsy
CBD Oil

* Neuroprotective
* Anti-oxidant
* Anti-inflammatory

Clinical Trials:
Effective for social anxiety.
As effective as atypical anti-psychotic in schizophrenia trial

Bergamaschi M. M. et al.  *Neuropsychopharmacology* 2011; 36, 1219–1226
Leweke F. et al  *Transl. Psychiatry* 2012; 2, e94.
CBD

- Works via multiple mechanisms
- Bell shaped dose response curve
- In neuroimaging studies in rats and humans, CBD produces the opposite effect of THC in a range of sites—striatum, anterior cingulate, prefrontal cortex, amygdala and cerebellum.

CBD: opinion and speculation

* Social anxiety
* Schizoaffective d/o
* Public speaking
* Trauma/PTSD

* 10-20 mg BID or TID
St. John’s wort

- Common roadside plant
- Traditional use for centuries
- Few side effects (headache, nausea, rash)
- Non-fatal in overdose
- Three to four week onset of action
29 studies from a variety of countries with 5,489 patients, randomized and double blind.

- Major Depression only
- Placebo or antidepressants
- **Superior** to placebo in treating patients with major depression and are "similarly effective" as standard antidepressants

Linde K, Berner MM, Kristen L. St John's wort for major depression. *Cochrane Database of Systematic Reviews* 2008, 4. October
Cytochrome P450 effects -
**Decreases** potency of:
- BCP
- cyclosporine
- digoxin
- warfarin
- protease inhibitors
- Theophyline

**Increases** potency of:
- MAOi, SSRI, Alcohol, triptans, narcotics
St. John’s wort

* Adhyperforin is a novel compound found in SJW
* Displayed anti-depressant effects in animals
* Inhibited uptake of serotonin, NE and dopamine
* Robust binding affinities for serotonin and NE transporters

St. John’s wort

- Safe, effective treatment for depression (mild to major)
- No Black Box warning
- Use quality product; 0.3% hypericins is a general marker
- Cost $8–20 per month
- BID dosing best: 900mg/day total, age 8 up
A variety of studies document benefit to concentration, inhibitory control and academics from a single 20 min bout of physical activity in healthy kids

- Control: seated reading
- Single 20 m bout of mod intensity exercise
- Significant improvements in attention, processing speed and academic perf

Pontifex, M et al  *J Pediatrics* 2013 162 (3): 543-551
* Inositol and L-theanine may reduce anxiety
* Same, Saffron and SJW looks to be helpful in depression
* CBD oil could become a useful tool in psychiatry
* Exercise benefits most kids with ADHD
Scott Shannon, MD
Wholeness Center
2620 E Prospect Rd. #190
Fort Collins, Colorado 80525
970.221.1106
scott@wholeness.com
www.wholeness.com