Complementary and Alternative Medicine

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Contents of the lecture
- CAM definition and history
- CAM categories
- Special considerations
- Useful links

NCCAM USA

"CAM is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine"

WHO; 2004: xiii

"CAM refers to a broad set of health care practices that are not part of a country’s own tradition and not integrated into the dominant health care system. Other terms sometimes used to describe these health care practices include „natural medicine”, „non-conventional medicine” and „holistic medicine”.


"Complementary medicine refers to a group of therapeutic and diagnostic disciplines that exist largely outside the institutions where conventional health care is taught and provided”

Cochrane Collaboration

"CAM is a broad domain of healing resources that encompasses all health systems, modalities and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health systems of a particular society or culture in a given historical period”

"Complementary medicine is diagnosis, treatment and/or prevention which complements mainstream medicine by contributing to a common whole, satisfying a demand not met by orthodoxy, or diversifying the conceptual framework of medicine."

Integrated medicine

Comprise the best of both systems by combining conventional with CAM treatment.

Definition – Oxford Handbook of Complementary Medicine 2008

- NOT (provided in routine health care, taught to medical students, scientifically proven)
- Umbrella term – a group of therapeutical approaches with certain similar characteristics.

History

>2000 years experience: Traditional Chinese Medicine, Ayurvedic Medicine

- Health is harmony between mind, body and spirit
- Disharmony causes disease
- Doctors facilitate the healing process

History

< XIX. Century
- Lifestyle changes, self-care and preventive strategies
- Laxatives, bleeding and leeches
Around the 1950s
- Penicillin, cortison, streptomycin, inzulin, chlorpromazine
- Pharmaceutical industry
- Transplantation, intensive care, vaccination

1982

150th anniversary of the BMA

"By concentrating on smaller and smaller fragments of the body, modern medicine perhaps loses sight of the patient as a whole human being, and by reducing health to mechanical functioning it is no longer able to deal with the phenomenon of healing"
Reductionalism versus Holism

- Isolable disease categories
- Symptom-underlying mechanism
- Analytic logic
- Either-or model
- Holistic approach
- Focuses on the relationship between variables
- Coexisting ideas and methods

One year prevalence of CAM use in general population samples

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Reasons

- Dissatisfaction with the ability of conventional medicine to treat chronic illness
- Dissatisfaction with the medical encounter (brief and disempowering)
- Dissatisfaction with the reductionist, mechanical model of medicine

Users

- More educated, poorer health status, holistic philosophical orientation to health and life (mind, body, spirit in health)
- Internal belief in health control (self empowerment, ability to take responsibility for personal health and modify lifestyle)
- Holistic, integrative model of health

CAM categories

- Alternative medical systems
- Mind-body interventions
- Biologically based therapies
- Manipulative and body-based methods
- Energy therapies

Alternative medical systems

Homeopathic medicine, naturopathic medicine, Traditional Chinese Medicine, Ayurveda

Complete systems of theory and practice
Homeopathy

„Like cures like“ – certain syndroms caused by a remedy can be used to treat such symptoms in patients

Serial dilution and succussion (potentiation) makes a remedy more effective

Homeopathy - Treatment

• Elaborate and extensive history taking
• To find the remedy best fits the overall picture presented by the patient
• Readjust prescription as the condition changes
• Little emphasis on physical examination
• Usually weekly consultations – may last for months in chronic conditions

Homeopathy EBM

Evidence: effectiveness is encouraging for chronic fatigue syndrome

Risks:
• Contraindications: none known
• Precautions/warnings: none known
• Interactions: none known
• Adverse effects: cannot cause pharmacological adverse effects (diluted beyond Avogadro’s number) – „Homeopathic aggravation“ – 20% of patients

Naturopathy

Living organisms has inherent self-organizing and healing process (establishes, maintains and restores health) with the healing power of nature.

Naturopathic physician supports, facilitates and augments this process by identifying and removing obstacles to health and by supporting the creation of a healthy internal and external environment.

Traditional Chinese Medicine

Diagnostic and therapeutic system based on complex theories

• Acupuncture
• Herbal medicines
• Massage (tui-na)
• Physical exercise (tai-chi)
• diet

Acupuncture

• Insertion of needles into the skin and underlying tissues at acupuncture points
• Special diagnostic methods
• Prevention and therapy
Acupuncture EBM

Evidence: several indications (nausea, vomiting, neck pain, osteoarthritis of the knee, back pain, dental pain) are supported by good evidence

Risks:
Contraindications: severe bleeding disorders (needle acupuncture), first trimester of pregnancy, epilepsy

Acupuncture EBM

Precautions/warnings: asepsis is mandatory, electro-acupuncture for patients with pacemakers, children

Adverse effects: drowsiness, bleeding, bruising, pain during needle insertion, aggravation of presenting symptom, pneumothorax, infections

Interaction: cardiac pacemaker

Ayurveda

- Knowledge of a long life
- Promote the person inherent self-healing abilities
- Herbal remedies, psychological approaches, detoxification procedures, relaxation techniques, physical exercises

Mind-body interventions

- Meditation, prayer, mental healing, art, music, dance
- Enhance the mind’s capacity to affect bodily function and symptoms.

Yoga

- Postural exercises, breathing control, meditation
- Believed to increase the body’s vital energy, reduction of sympathetic drive, may increase lung capacity, wellbeing

Yoga EBM

Likely effective as an adjuvant treatment for normalizing several cardiovascular risk factors including hypertension and for depression

Risks:
Contraindication: pregnancy (extreme posture), mental illness (meditation)

Precautions/warnings: musculoskeletal injuries through overstretching joints.
Yoga EBM
Adverse effects: drowsiness
Interactions: possibility of additive effects, e.g. with antihypertensives.

Tai chi
A system of movements and postures used to enhance mental and physical health

Tai chi EBM
Seems helpful in rheumatoid arthritis, hypertension, physical performance of the elderly
Risks:
Contraindications: based on common sense (e.g. severe osteoporosis, severe heart conditions, acute back pain, knee problems, sprains and fractures)
Usually it can be safely practiced during pregnancy and lactation

Music therapy
The use of music by an accredited professional to achieve therapeutic goals
Receptive music: listening to music played by the therapist or recorded music (e.g. pain management)
Active music: patients are involved in the music-making (e.g. mental illness)

Concept
- Reward and motivation circuitry may be activated
- Secondary physiological changes
- Relaxation effects on vital functions: breath, respiratory rate, blood pressure, cardiac output
- Analgesic and anxiolytic effects – lowering of stress hormone production
Conclusions
As an adjunct therapy:
Positive effects on anxiety and stress, psychopathological disorders (behaviour and developmental),
Might improve: pain symptoms, schizophrenia, mood in a range of conditions
No risks have been reported
Risk-benefit balance is positive or likely to be positive on the above mentioned

Relaxation
Techniques for eliciting the „relaxation response“ of the autonomic nervous system
• Progressive muscle relaxation — decreased oxygen consumption, heart rate, respiration, skeletal muscle activity, normalized blood support to the muscles
• Others — passive muscle relaxation, refocusing, breathing control
• Imagery-based relaxation

Relaxation EBM
Beneficial:
- Anxiety (panic disorder, agoraphobia, cancer),
- Insomnia,
- Nausea/vomiting (chemotherapy-induced)

Likely to be beneficial:
- Cancer, palliation
- Depression
- Headache (positive effect on pain)
- Hypertension
- Ischaemic heart disease
- Low back pain
- Menopause
- Migraine
- Rheumatoid arthritis

Relaxation EBM
Risks
Contraindications: schizophrenic or actively psychotic patients
Precautions/warnings: techniques requiring inward focusing may intensify depressed mood
Adverse effects: none known

Biologically-based therapies
• Use substances found in nature — herbs, foods, vitamins
• Herbal products, dietary supplements

Herbal medicine
The medicinal use of preparation that contain exclusively plant material
• Phytomedicine (Western herbalism)
• Chinese herbal medicine
• Ayurveda
• Kampo
Risks

- Plant extracts may have powerful pharmacological effects – risk of adverse effects is greater than most other complementary therapies.
- Interactions: different herbal preparations, conventional drugs
- Patients should be asked about self-prescription drug use

Links

- http://www.mskcc.org/mskcc/html/11570.cfm Memorial Sloan-Kettering Cancer Center – About herbs, botanical and other products

Manipulated and body-based methods

- Based on manipulation and/or movement of one or more parts of the body.
- Chiropractic manipulation, osteopathic manipulation, massage

Chiropractic

- Subluxation of the vertebrae affects human health
- Chiropractors frequently use vertebral manipulation
- Treat mainly musculoskeletal problems

Chiropractic EBM

- Back pain – probably effective, not superior to exercise therapy
- Serious risks exist especially with cervical manipulation
- Risk-benefit balance marginally positive for back pain, for all other condition it is not

Risks

Contraindications: osteoporosis, bleeding disorders, inflammatory or malignant diseases of the spine.
Precautions/warnings: patients with arteriosclerotic diseases of vertebral arteries
Adverse effects: 50% - mild adverse effects.
Cervical manipulation – stroke, arterial dissection
Interactions: none known
Osteopathy

- Manual therapy
  - soft tissue manipulation
  - joint manipulation/mobilization
- Restore malalignment to optimize blood and lymph flow and organ functions
- Less forceful than chiropractic

Osteopathy EBM

Effectiveness: Likely to be effective in acute/subacute back pain and shoulder pain
Risks:
- Contraindications: osteoporosis, neoplasms and infections of the bones, bleeding disorders
- Adverse effects: vertebral artery dissection
- Precautions and interactions are not known

Massage

- Soft tissue manipulation of whole body areas
- Manual techniques: pressure, traction

Effects:
- Blood and lymph circulation is enhanced – increased oxygen supply
- Increased muscular tension can be affected beneficially

Massage EBM

Beneficial in anxiety.
- Likely to be beneficial: AIDS/HIV (quality of life), constipation, depression, labour pain, back pain, musculoskeletal pain

Massage EBM

Risks:
- Contraindications: phlebitis, deep vein thrombosis, burns, skin infections, eczema, open wounds, bone fractures, advanced osteoporosis

Precautions/warnings:
- cancer, myocardial infarction, osteoporosis, pregnancy

Adverse effects: rare: bone fractures, liver rupture

Interactions: possible with oil used for massage

Energy therapies

- Use energy fields.
- Biofield therapies affect energy fields that purportedly surround and penetrate the human body
- Qi Gong Reiki, Therapeutic Touch
- Bioelectromagnetic-based therapies use electromagnetic fields such as pulsed fields, magnetic fields
Placebo
Inactive substance designed to satisfy (please) the patient
It has no intrinsic therapeutic value – it does not contain the active ingredient – equivalent in all respects to the intrinsic therapeutic action but inert
Efficacy: the evaluation of how successful a therapy is comparing to the placebo

Meaning response/context effect

Intervention associated expectations, intentions, understandings, or values of the patient and provider


Epidemiological research: expectations on a positive outcome, optimism and support have long-term impact on hard clinical end points independently of other predictors. Price et al 2006 Practitioner empathy, patient enablement and health outcomes: a prospective study of acupuncture patients. Patient education and counseling 63:239-245

Information resources

Useful links
- Complementary and Natural Healthcare Council
  http://www.fih.org.uk/what_we_do/regulation/index.html
- CAM on PubMed
  http://nccam.nih.gov/research/camonpubmed/
- BBC Open University
  http://www.open2.net/alternativemedicine/index.html

Thank you for your attention