Diet and Arthritis (in older people)

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Outline of Presentation

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2. Types of dietary manipulation in use
3. Dietary supplements and the ‘context effects’
4. Obesity and exercise
5. Gout, alcohol and diet
6. Dietary fats, inflammation and Rh arthritis
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Pain and arthritis in older people

- 50.4% of all adults in the UK report chronic pain. In those aged 75yrs or older this rises to 62% (Elliott et al, 1999)

- Most of that pain is musculoskeletal

- About 20% of older adults have arthritis
Society expects older people to be in pain and disabled
That’s true – most have MSK pain and loco-motor disability
BUT: only about half of those with MSK pain and disability have arthritis
Types of dietary manipulation in use

Three types of diet

1. Elimination – leave out a foodstuff that might cause trouble
2. Supplement – add something that might help
3. Tolerance – create tolerance to an agent

Three uses

1. Prevention – of pain or arthritis
2. Treatment of a disease
3. Treatment of symptoms such as pain

These issues get muddled
Scientific Evidence – the Hierarchy

- Randomised controlled trial
- Controlled trial
- Cohort study
- Case-control study
- Ecological study
- Expert opinion
Scientific Evidence

• There is very little scientific evidence to support either elimination diets or attempts to induce tolerance for the prevention or treatment of arthritis

• That does not mean that the occasional patient might benefit from removal of a specific foodstuff
Dietary supplements and ‘context effects’

Dietary supplements are widely used by older people for their pain or arthritis:

- 20-50% of people with rheumatoid arthritis try dietary supplements (Salminen et al 2002)
- About 50% of people in the UK with osteoarthritis are taking dietary supplements (Jordan et al 2005)
These supplements help many of the people who take them.

Two of the most widely used agents:

- Cod liver oil
- Glucosamine

BUT – the efficacy of these supplements is due to ‘context effects’ (placebo) rather than any specific effect of the supplement.
Context effects

The term ‘context effect’ describes the effect of the circumstances in which an intervention is offered and received. It can have a powerful effect on pain. It is not about deception or ‘fooling yourself’ – although not fully understood it is mediated by physiological mechanisms in the body.
Other dietary supplements in use to treat arthritis

- Ginger
- Avacado-soybean
- Tumeric
- Green-lipped mussel
- Selenium
- LitoZin (rosehip)

- Vitamins (see later)
- Iron
- Chondroitin
- Arnica
- Rhubarb
- S-adenosylmethionine

And MANY others
Obesity and Exercise

1. Obesity is bad for your joints (especially your knees)
2. Exercise is good for joints and for pain (even if you have arthritis)

“What is good for the heart is good for the joints”
Gout, alcohol and diet
Gout causes TERRIBLE pain
Diet is important in gout

1. Obesity predisposes to gout

2. Alcohol intake predisposes to gout (beer in the 21st century, Port and Madeira in Georgian times)

3. Diets rich in purines predispose to gout
Fats and inflammation

• Products of fatty acids are important mediators of inflammation

• The severity of inflammation can be reduced by dietary alteration of fat intake

• This can result in modest benefits for conditions like rheumatoid arthritis
BUT: this is DIFFICULT

The evidence suggests that, to have a benefit in rheumatoid arthritis, you need to take fish oil containing 3-4 g of omega-3 fatty acids, while avoiding omega-6 fatty acid rich foods (vegetable oils). Such doses can be expensive, unpalatable, and cause stomach upsets.
Vitamins and Osteoarthritis

- There is a lot of current interest in the role of vitamins in osteoarthritis
- Deficiencies in vitamins C, D and K might all be important in the pathogenesis of osteoarthritis
- Vitamin D deficiency has the most evidence behind it, and trials are underway to see if supplements help
Vitamin D Deficiency

• Is common in older people, and it may be that supplementation is helpful for arthritis (trial results awaited)

• Could it be that what is good for your bones is also good for your joints?
CONCLUSIONS

1. Musculoskeletal pain and arthritis are very common in older people
2. Many of those affected use food supplements in an attempt to treat the problem
3. Most of these supplements have no specific effect, and only work through ‘context effects’
4. Omega-3 fatty acids may help in RA, and vitamin deficiencies may be important in OA