

Best Evidence from the Cochrane Library

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Cervical Cancer: Combined Drug and Radiotherapy Improves Survival

Combining drugs and radiotherapy improves the survival rate of women receiving treatment for cervical cancer. These are the conclusions of Cochrane Researchers who carried out the most comprehensive study of the effects of combined drug and radiotherapy in cervical cancer treatment to date.

Cervical cancer is the second most common cancer in women worldwide. Treatments for the disease have changed markedly over the last decade as a result of guidelines issued by the National Cancer Institute (NCI) in 1999, which stated that chemoradiotherapy should be considered as an alternative to radiotherapy. Chemoradiotherapy combines chemotherapy and radiotherapy treatments.

The researchers analyzed data from 15 trials involving a total of 3,452 women. They found that women receiving chemoradiotherapy were more likely to live longer. Five years after receiving treatment, 66 out of every 100 women survived with chemoradiotherapy compared to 60 out of 100 with radiotherapy. In addition, treatment with chemoradiotherapy reduced the chance of cancer recurrence or metastasis. Crucially, their analysis showed that the benefits of chemoradiotherapy were not just restricted to the platinum-based drugs recommended by the NCI.

Chemoradiotherapy for Cervical Cancer Meta-analysis Collaboration (CCCMAC). Reducing Uncertainties about the Effects of Chemoradiotherapy for Cervical Cancer: Individual Patient Data Meta Analysis. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD008285. DOI: 10.1002/14651 858.CD008285.

NSAIDs May be More Effective than Paracetamol for Period Pain

Non-steroidal anti-inflammatory drugs (NSAIDs) like ibuprofen may be more effective for relieving period pain than paracetamol, according to the update of a Cochrane Review.

However, it remains unclear whether NSAID is safer or more effective than others are. Period pain affects a high proportion of women, up to 72% in a recent Australian survey of 16-49

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year olds. It is thought to be caused by an excess or imbalance of certain hormones released by the body during menstrual periods, including prostaglandin. NSAIDs such as ibuprofen, aspirin, and naproxen are commonly used for period pain.

The updated review includes data from 73 trials carried out in 18 different countries and involving a total of 5,156 women. The review shows that NSAIDs are very effective for treating period pain compared with placebo. This applied to all NSAIDs tested except aspirin, for which there was only limited evidence of effectiveness. Due to the large number of different NSAIDs tested in the trials, no one drug emerged as more safe or effective than the rest.

The review also provides some evidence that NSAIDs are significantly more effective than paracetamol, though there were only three relevant studies. Until now there has been no evidence that NSAIDs work any better than paracetamol, and a previous Cochrane Review published in 2003 concluded that there was no evidence of any difference.

Overall, NSAIDs were shown to carry a significantly increased risk of adverse effects compared to placebo. Adverse effects can include indigestion, headaches, and drowsiness.

Marjoribanks J, Proctor M, Farquhar C, et al. Nonsteroidal Anti-inflammatory Drugs for Dysmenorrhea. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD001751. DOI: 10.1002/14651858.CD001751.pub2.

Vitamin D Supplementation Can Reduce Falls in Nursing Care Facilities

Vitamin D given to people living in nursing facilities can reduce the rate of falls, according to a new Cochrane Review. This finding comes from a study of many different interventions used in different situations. In hospitals, multifactorial interventions and supervised exercise programs also showed benefit.

Older people living in nursing facilities or who have been admitted to hospital are much more likely to suffer a fall than those living in the community. In these settings, falls fairly often result in head injuries and fractures; the rate of hip fracture is ten times higher in nursing facilities than in the community.

The current review included 41 trials, involving 25,422 older people, who were mostly women. Five trials tested the effects of giving vitamin D to patients in nursing facilities, where it was found to be an effective measure for preventing falls. The researchers found that multifactorial interventions, which often incorporated exercise, medication, or environmental factors including appropriate equipment, reduced the risk of falls in hospitals. In nursing homes, the effects of multifactorial interventions were not significant overall. However, the researchers concluded that multifactorial interventions provided by multidisciplinary teams in these facilities may reduce the rate and risk of falls.

Cameron ID, Murray GR, Gillespie LD, et al. Interventions for Preventing Falls in Older People in Nursing Care Facilities and Hospitals. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD005465. DOI: 10.1002/14651858.CD005465.pub2.

Combination Therapies of Beta-Blockers Effectiveness in Hypertension

Using beta-blockers as a second-line therapy in combination with certain anti-hypertensive drugs significantly lowers blood pressure in patients with hypertension according to a systematic review by Cochrane Researchers.

Beta-blockers are commonly used in the treatment of hypertension to help reduce the risk of stroke and cardiovascular disease. They can be used alone or as a second-line therapy in combination with a wide range of anti-hypertensive drugs. The idea behind combining two different drugs to treat hypertension is that each has a different mechanism of action and thus may help tackle different mechanisms involved in causing the condition.

The review included 20 trials involving a total of 3,744 patients. Overall, the researchers found that adding beta-blockers as the second-line drug, in combination with thiazide diuretics or calcium channel blockers, caused an additional blood pressure reduction. The reduction was around 30% greater when the dose was doubled.

The data was compared with a Cochrane Review published in Issue 4, 2009 that examined the blood pressure lowering effect of second-line thiazide diuretics. They concluded that the two drugs produced different patterns of blood pressure lowering.

Second-line beta-blockers were found to be more effective at reducing diastolic blood pressure but had little or no effect on pulse pressure, while second-line thiazides significantly decreased pulse pressure in a dose-related manner.

Chen JMH, Heran BS, Perez MI, et al. Blood Pressure Lowering Efficacy of Beta Blockers as Second-Line Therapy for Primary Hypertension. *Cochrane Database of Systematic Reviews* 2010, Issue 1. Art. No.: CD007185. DOI: 10.1002/1 4651 858.CD0071 85.pub2.

Parkinson's: Treadmill Training Improves Movement

Treadmill training can be used to help people with Parkinson's disease achieve better walking movements. In a systematic review of the evidence, Cochrane Researchers concluded that treadmill training could be used to improve specific gait parameters in Parkinson's patients.

Gait hypokinesia, characterized by slowness of movement, is one of the main movement disorders that affects Parkinson's patients and could have a major impact on quality of life. More recently, health professionals have started incorporating exercise into treatment regimes as a useful complement to traditional drug therapies. Training on treadmills is one option that may help to improve movement.

The researchers analyzed data from eight trials including 203 patients. They compared treadmill training versus no treadmill training, using effects on walking speed, stride length, number of steps per minute (cadence) and walking distance to measure improvement in gait. Treadmill training had a positive impact on each of these measurements, apart from cadence.

Mehrholz J, Friis R, Kugler J, et al. Treadmill Training for Patients with Parkinson's Disease. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD007830. DOI: 10.1002/14651 858.CD007830.pub2.

HIV: Positive Lessons from Home-Based Care

Intensive home-based nursing in HIV/AIDS patients significantly improves self-reported knowledge of HIV, awareness of medications, and self-reported adherence to medication programs, according to a new Cochrane Systematic Review. One home-based care trial included in the review also significantly impacted on HIV stigma, worry, and physical functioning. It did not, however, help improve depressive symptoms, mood, general health, and overall functioning.

These conclusions are interesting, but more research is needed to understand the impact of home-based care in developing countries and on important disease outcomes. The study represents the first systematic review of the impact of home care in HIV/AIDS.

As a disease that affects 33 million people, HIV/AIDS puts a huge strain on health systems, particularly in developing countries. Therefore, in countries where health services are overstretched, home-based care is offered to HIV patients as an alternative to hospital care. Home-based care can include counseling, medical management, exercise, and spiritual support to try to improve patients' quality of life in familiar surroundings, while reducing costs and pressure on hospital beds.

Researchers examined data from 13 studies, two of which were ongoing. The researchers report that home-based care has positive impacts on some aspects of patient wellbeing but little effect on others. Patients said that home care improved their knowledge of the disease, and of HIV medications, and helped them adhere to medication programs. It also reduced worry and improved physical functions of patients, but had little effect on depression, general health, or indicators of disease progression such as CD4 counts.

Young T, Busgeeth K. Home-based Care for Reducing Morbidity and Mortality in People Infected with HIV/AIDS. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD005417. DOI: 10.1002/14651 858.CD00541 7.pub2.