"Pain management in nursing homes as a marker of quality of care"

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In long-term care facilities the prevalence of chronic pain ranges as high as 83% and 40% of residents with cancer and 25% without cancer are not treated with analgesics, even though they may be experiencing pain on a daily basis. Another important phenomenon in nursing home is that both acute and chronic pain is more underrecognized and undertreated in patients with cognitive impairment.

Nevertheless specific analgesic strategies in geriatric setting, as reported in American Geriatrics Society (1998, 2002, 2009) and American Medical Directors Association (1999) Clinical Practice Guidelines, today pain management is rarely approached in the real world of nursing home with a formalized pain assessment and appropriate use of pharmacologic agents and non pharmacologic interventions.

In front of this data, today, the care of pain (relief or analgesia and not complete pain ablation or anesthesia) can represent one of the most important domain to improve the quality of life in nursing home, because it may reduce behavioural disturbances (emotional stress, frustration, increased irritability, anger, anxiety, agitation, depression, social withdrawal, disturbed sleep patterns, diminished appetite and/or weight loss) and enhance functional.

Literature on pain management in long-term care settings show that pain is poorly assessed, without adopting a specific standardized tool. The problem is not the lack of scales for evaluation pain, but the "use of scores". It is necessary a strong agreement among nursing staff and physicians to translate the information of assessment in an analgesic therapy. Scores do not automatically indicate a level of pain while respecting the report of communicative patient, the pain intensity need a careful interpretation according to behavioural, mood, functional status and level of comorbidity.
Assessment of the cognitive status is crucial to learn the most appropriate pain assessment tools. In non-communicative demented patients the measure of pain severity through observational scales is more difficult and the use of an "analgesic trial" helps to validate if potential behavioural indicators of pain respond to analgesic treatment.

When patient with pain is identified is necessary to adopt a treatment plan based not on ''standard'' and at low dosages analgesics at-needed dosing, but on polymodal and polypharmacy, at time-specific dosing to prevent drug-seeking behaviour.

The adverse event profile varies greatly between opioids. Agents may be used if have a good tolerability profile (especially regarding CNS and gastrointestinal effects) and are as safe as possible in overdose. Slow dose titration helps to reduce the incidence of typical initial adverse events (such as delirium, falls, nausea and vomiting). The widespread use of psychotropic drugs in nursing home patient is a significant limitation to analgesic care with opioids. In the general weakness of scientific data about care of pain in advanced age, some evidence show a low prevalence of side effects with low or medium dose long-term opioid therapy associated with benzodiazepines and/or antidepressants.

In this respect, we examined the results of short analgesic training of nurses on care of pain in 4 nursing homes, located in Trento city and hinterland (northern Italy). The education consisted in 4 hours dedicated to the etiology, clinical aspects, signs and specific tool (Non-Communicative Patients' Pain Assessment Instrument - NOPPAIN) to detect pain in non-communicative patients. The study was conducted in 102 institutionalized patients (86% F) with Mini-Mental State Examination – MMSE - score <19/30 (MMSE 4±6.2). In the previous year these patients have been examined without standardized pain instrument and differently treated with analgesic drugs according to cognitive deterioration (prevalence of analgesic drug for year: MMSE 0-6= 49% vs MMSE 7-12= 67% vs MMSE 13-19= 86%). The principal analgesic drugs were NSAID (44%), acetaminophen (23%) and opioids (codeine and tramadolo 21%). After training, at the start of the study the prevalence of pain resulted lower in patients with severe dementia (MMSE 0-6= 53%; MMSE 7-12= 67%; MMSE 13-19= 77%), while after 1 month of controlled daily application of the NOPPAIN scale the percentage of patients with pain was the same in the different group of patients. In the 3 subsequent months the nursing homes adopted methods to assess pain, but at an unexpected daily follow-up, the attitude (90% uses NOPPAIN every days) and ability to detect the pain in patients with severe dementia resulted preserved (MMSE 0-6= 32% vs MMSE 7-12= 33% vs MMSE 13-19= 36%). The global reduction of prevalence of pain (20%) was due to improvement and quality of analgesic therapy. The physician stimulated and supported by daily NOPPAIN reports used more analgesic drugs, particularly opioids, although the "fear" of their side effects is more current for patients with severe dementia (prevalence of analgesic drug for one day: MMSE 0-6= 16%, MMSE 7-12= 33%, MMSE 13-19= 36%). The patients with pain had more behavioural and psychological symptoms (BPSD) than subjects without pain (registered at the first week of month-study through the Neuropsychiatric Inventory - NPI: 13.4±16.4 vs 7±8.5) and particularly in severe dementia (MMSE 0-6, NPI: 14.9±17.9 vs 7.4±8.4). At the last week of study BPSD resulted in all patients lower than at the first one (NPI: 9.3±16.6 vs 6±10.7).
These results are positive if we take into account the low costs (personal and personnel and money) of nurses' training. Some suggestion can be proposed to improve the care the pain in nursing home.

First, it is always necessary an etiological diagnosis of pain; in nursing home the focus on pain treatment is not mere palliation, but it is directed at the prevention based on pain aetiology (pressure sores, contractures, iatrogenic). Neuropathic pain such as allodynia, hyperalgesia and hyperpathia is difficult to assess in patient with cognitive impairment and cause an underreported incidence of neuropathic pain.

Second, the training of nurses could be improved using videotapes that show the different behavioural disorders and help to measure the level of pain intensity. Moreover, in long-term care facilities to develop the communication and agreement among the staff it would be useful the adoption of a weekly schedule with day by day data about intensity of pain, dosage and type of analgesic drugs, side effects and psychotropic drugs. With this schedule nurses and physicians may early detect the effect of analgesic therapy.

At the last, it is necessary an involvement of the nursing home establishment and family caregiver-
The directors of nursing home have a crucial role to reduce pain in institutionalized patients, not only for supporting economic aspects of team educational process, but for defining pain like a relevant and feasible aim to improve quality of life. As much as the limitation of pressure sores, falls and use of restraints, the reduction of pain could be an indicator of the quality of long-term facilities. At the same time the role of family caregivers on care of pain may be very important to meet this aim and might be included in the management program of any nursing home.

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