

## Rationale to integrate comprehensive geriatric assessment for older olds presenting gastro-intestinal disorders

Th. Peppersack

Clinique de Gériatrie, Département de Médecine Interne, Hôpital Académique Erasme, Université Libre de Bruxelles, Brussels, Belgium.

### Abstract

The prevalence of chronic gastrointestinal symptoms is underestimated. However, complaints consistent with functional gastrointestinal disorders are common in the elderly, but symptoms are a poor predictor of presentation for medical care. Moreover, chronic colonic symptoms appear to interfere with daily living and quality of life in the elderly. Clinicians are questioning about the diagnostic management of frail older adults presenting these common and non specific symptoms. This paper proposes a definition of the "geriatric patient" and gives an overview of recently published literature concerning the concept of comprehensive geriatric assessment. The rationale to integrate comprehensive geriatric assessment for older adults presenting gastro-intestinal disorders is pointed out. (*Acta gastroenterol. belg.*, 2006, 69, 283-286).

**Key words :** geriatric assessment, gastro-intestinal disorders, nutrition.

The prevalence of chronic gastrointestinal symptoms is under-estimated (1). Complaints consistent with functional gastrointestinal disorders are common in the elderly, but symptoms are a poor predictor of presentation for medical care. For example, in independently living, elderly persons, constipation is a common complaint (2).

Moreover, chronic colonic symptoms appear to interfere with daily living and quality of life in the elderly (3).

Clinicians are questioning about the diagnostic management of frail old adults presenting these common and non specific symptoms. A rationale to integrate comprehensive geriatric assessment for older olds presenting gastro-intestinal disorders is proposed.

### The «geriatric patient» : a proposition of definition

The increase of life-time together with the improvement of the social, sanitary and medical cares lead to the apparition of a cohort of «very old» subjects (INS, Mayence *et al.* 2000). The majority of them follows an aging process without serious problems. Others present more frailty with a so called «geriatric» profile (Table 1). But, what is a "geriatric" patient ?

*Altered homeostasis* represents the low security margins of the somatic functions. The example of the altered mechanism of thirst is well-known and is associated with an increased mortality during heatwaves.

Table 1. — Characteristics of the «geriatric» patient

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| <ol style="list-style-type: none"> <li>1. Altered homeostasis</li> <li>2. Atypical presentations of the diseases</li> <li>3. Multiple pathologies and functional dependences</li> <li>4. Tangle of somatic, psychological and social factors</li> <li>5. Altered pharmacokinetics</li> </ol> |
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The *atypical presentation* of the diseases confers a risk of delayed recognition of the disease leading to increased risk of complication and mortality. Beside the age-related altered physiological mechanisms, the attitudes of the caregivers may also be dangerous : symptoms are often attributed to age itself. This complex phenomenon is probably due to a different perception of old adults or to their fear to be hospitalized (the symptoms may be minimized or concealed).

The «*polypathology*» is another characteristic of the geriatric patient. Many of these diseases may be chronic. Colopathies are common but also cardiovascular diseases degenerative osteo-articular (osteoporosis and arthrosis) and cerebral diseases (dementia, Parkinson, etc.) occur. Comorbidity is probably the most important risk factor for complications in non cardiac surgery rather than age itself (6). Nevertheless, Elderly patients had a higher rate of major perioperative complications and mortality after noncardiac surgery and a longer length of stay, but even in patients 80 years of age or older, mortality was low (7,8). For noncardiac surgery, previous research has focused on cardiac risk. In other study, pulmonary complications were more frequent, were associated with longer hospital stay, and occurred in combination with cardiac complications in a substantial proportion of cases. These results suggest that further research is needed to fully characterize the clinical epidemiology of postoperative cardiac and pulmonary complications and better guide preoperative risk assessment. In view of these data age should not be the major factor of the interventional decision process (9).

Corresponding author : Thierry Peppersack, 808 route de Lennik, 1070 Brussels, Belgium. E-mail : tpepersa@alb.ac.be.

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Cognitive disorders are common among geriatric patients, in particular delirium (acute confusional state) during hospitalisation and/or after surgery. Recently developed models allow for the estimation of the risk of developing delirium during a hospitalisation, based on predisposing factors and acute additional stressors. Although it has been shown to be efficacious, the prevention of delirium is underutilised. Prevention consists of aggressive management of known risk factors and early detection. The intervention had not always significant effect on the severity of delirium or on recurrence rates; this finding suggests that primary prevention of delirium is probably the most effective treatment strategy (10).

Polypharmacy leads to another characteristic of the geriatric patient which is his *functional dependence* for the instrumental and/or basic activities of daily living (11-15). All patients should be asked and assessed about their exercise capacity as part of the preoperative evaluation. Exercise capacity is an important determinant of overall perioperative risk; patients with virtually unlimited exercise tolerance generally have a very low risk (16-18). The incidence of cancer increases with age. Given the increasing older population, one may expect that by the year 2030 about 70% of all malignancies will occur in individuals aged 65 and older (19). Comprehensive geriatric assessment may be of value to better assess the frail patient with cancer (19-21).

The *psychosocial* evaluation should be a cornerstone of the geriatric patient's assessment. Indeed, the geriatric patient is often confronted to major events of his life (bereavement, moving house, institutionalization, etc.). Depression and anxiety disorders are common and may be a cause of failure to thrive (22).

*Polypharmacy* is the rule. However few data are available for the geriatric patient: all the geriatric characteristics are often included among the exclusion criteria to be enrolled into a randomized controlled trial. No data are available to guide a geriatrician about the best way to manage an 85 years old patient presenting colopathy, diabetes, osteoporosis, hypertension, renal failure, visual disorders, urinary incontinence, and depression associated with social retirement... Though, this situation is common in the geriatric units. Moreover, any prescription of medication should take in account: polymedication, age-related altered body composition, low serum albumin level, decreased renal and/or liver metabolism and/or excretion, and drugs interactions. The problem of polypharmacy (iatrogenous and self-medication) is complex and results from multiples actors (relatives, family, pharmacist, practitioners, etc...). Interventional programmes in order to reduce polypharmacy (23) stress on the usefulness of a systematic monthly review of therapeutics of old institutionalized subjects. Polypharmacy is also a risk factor for malnutrition.

*Pain* is also a "common geriatric problem" which needs specific assessment and management for the geriatric patient (24).

Finally, the geriatric patient is at high *risk of malnutrition* or presents severe malnutrition (25-27). The notion that malnutrition affects outcomes in surgical patients was first reported in 1936 in a study showing that malnourished patients undergoing ulcer surgery had a 33 percent mortality compared with 3.5 percent in well nourished individuals (28).

The recognition and the correction of malnutrition is an important step to help the patient to recover health (29-31).

### **The concept of «comprehensive geriatric assessment»**

In view of these multiples dimensions of the geriatric patient, a holistic approach seems to be useful: it is the concept of the «comprehensive geriatric assessment».

For vulnerable elderly patients, hospitalization can be hazardous (32-34). Too often their treatment is complicated by delirium (10), depression, adverse drug reactions, poor nutrition (22,30,31), and loss of physical strength. Often their pneumonia is cured or their hip fractures repaired, but they never regain the independence they once had. Over the past 15 years, programs in geriatrics have been developed at most American medical centres with the prime clinical mission to achieve better results for hospitalized, high-risk elderly patients. There are two main strategies. One is to admit older patients at risk to a specialized unit for acute or post-acute care (35,36). The other is to provide a consultation assessment, usually by an interdisciplinary team. Geriatric assessments have been evaluated in many controlled trials. Landefeld *et al.* (37) showed that there are benefits from having a specially designed acute care unit, but Reuben *et al.* (38) found little benefit from comprehensive geriatric consultation. The interpretation of these two studies is complicated and sometimes contradictory.

More than ten years ago, Rubenstein reported on the astonishing effectiveness of a geriatric evaluation and management unit (35). In that randomized trial, conducted in the Sepulveda Veterans Administration Medical Centre, the men assigned to the geriatrics unit had improved functional status, fewer discharges to nursing homes, and much lower mortality at one year (24 percent, as compared with 48 percent for the controls). These results raised lofty expectations and have affected the interpretation of all subsequent trials of clinical geriatrics programs in this country (USA). It must be remembered however that screening selected only 1 patient out of 12 for that study, the intervention group stayed an average of 36 days longer in the hospital, and the geriatrics team later directed much of the outpatient management. Most of the differences in mortality emerged after the initial hospital stay. As the authors of this often-cited study said of the marked reduction in mortality, "There seems to be no simple explanation for this outcome" (35). It remains possible that the large

differences were partly due to chance or even to management errors in the relatively small control group (only 60 patients). Nonetheless, there is reason to believe that any geriatric intervention that improves strength and functional independence may reduce mortality (36,39).

Like other geriatric interventions, use of the specialized acute care unit in the study by Landefeld *et al.* emphasized rehabilitation, independence in self-care, detailed planning for home discharge, and avoidance of iatrogenic illness. Few patients were excluded from this study, so the results should apply widely. Even though care in the separate, specialized unit began from the day of admission, there was no difference in mortality either while the patients were in the hospital or three months later. The extra efforts did produce some improvements in function. At discharge, 34 percent of the intervention group had improved, and only 16 percent were worse in performing the basic activities of daily living; in the usual-care group, 24 percent improved and 21 percent were worse. In the intervention group, 14 percent were discharged to nursing homes or other institutions, as compared with 22 percent in the usual-care group. In demonstration studies there is great pressure to avoid discharges to nursing homes, and clinicians may take extra risks in sending home some patients who are quite impaired. Hence, it is reassuring that the subsequent rates of nursing home admission were comparable for the two groups during the three-month follow-up. In the intervention group the greatest improvements were in the patients' ability to bathe and dress themselves, and the scores for global health status were significantly higher. At three months, however, there were no differences between the two groups. If the geriatrics team had directed the patients' care longitudinally, greater differences might have emerged over time.

Although none of the outcomes from the special care unit are dramatic, the gains are admirable and clinically valuable, particularly the reduction in discharges to nursing homes. Some would argue that patients should be screened so that this intervention could be directed to those who are most vulnerable, which might make the outcomes more impressive. However, screening and selection are tricky tasks. The most impaired are easy to identify, but they also generally have less potential for improvement. Since the costs were no greater for the special unit, it would be wise to apply this model widely. Moreover, there should be some benefits to all patients that do not show up in the outcome measures: improved safety, greater motivation, better compliance, and the reassurance that comes from close attention to the details of how to return home after an acute illness. Clearly, the patients themselves felt they were in better health after this short, one-week program. Improvement in the well-being of patients and their satisfaction is of value in itself.

Many geriatric programs offer a consultation assessment service, although the details of this intervention vary from one program to the other. Such services follow

in the tradition of medical consultation and are relatively easy to set up, since there are no struggles over the control of hospital beds. The hope has been that a geriatric consultation team could deliver some of the benefits seen with the inpatient evaluation units. Some even expressed the hope that such assessments might have the impact and power of a new technological advance (40). The study by Reuben *et al.* (38) involved four hospitals and 2353 at-risk patients in a health maintenance organization, of whom 1337 were assigned randomly to undergo a comprehensive assessment by a social worker, nurse practitioner, and geriatrician. These consultants often recommended rehabilitation programs, adjustments in medications, and additional diagnostic tests, and most of the recommendations were implemented. Nonetheless, over the follow-up period of one year there were no differences in survival between the groups and no consistent or convincing improvement in the functional status of those who received the geriatric consultation. This was a large, careful study by some of our most experienced geriatrics investigators. Several earlier studies also could not demonstrate any major difference in outcomes after geriatric consultations (41-44).

Do these negative results mean that geriatric consultations are ineffective and should be discouraged and not paid for? In the study by Reuben *et al.*, with so many consultations being conducted, physicians may have become quite familiar with the geriatricians' advice and applied it to the benefit of all their patients, including those in the control group. In research design this problem is known as contamination. (In training programs we call it education.) In addition, some benefits of consultation are difficult to measure, particularly in a large, heterogeneous population. More important, it is unrealistic to expect major differences in outcomes from a single consultation, especially when the geriatric team does not control the care (45).

Geriatric assessment is a diagnostic, not a therapeutic, intervention, and by itself cannot cure chronic disease or reverse disability (46). The data do show that geriatric consultations should not be mandatory or expected to produce remarkable improvements. These bedside consultations are not a form of technology, and we should not be as severe in judging them as we are in evaluating a surgical procedure or a monoclonal antibody. The appropriate measure of the value of a consultation is the opinion of those who request it and those who receive it. The physicians, nurses, family, and patient may well see value in the way an experienced geriatrics team helps with complicated problems such as incontinence, confusion, immobility, and complex drug interactions.

These studies concern geriatric interventions that are safe, cheap, and sensible and that can help vulnerable elderly patients (47). Moreover, both approaches have additional value for education and quality assurance, and as prerequisites to future discoveries that will protect functional independence better. A further value of both

studies is that they encourage physicians to look beyond the laboratory results to see how people live and cope with the hazards of disease.

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