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## Older Women's Health: Contemporary and Emerging Health Issues

### Appropriate Health Care for Older Women

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#### **Synopsis** .....

*Attaining the goal of appropriate medical care for older women requires knowledge of the changes of aging, skills in recognition and treatment of disease, and an effort to provide help and avoid harm. Iatrogenic disorders are particularly problematic in all*

*elderly, due to decreased stress tolerance, increased prevalence of illness, and atypical presentations of disease. Iatrogenic disorders are most commonly due to drugs; elderly women are particularly at risk due to altered pharmacokinetics, multiple medical problems, difficulties with compliance, and inappropriate prescribing practices by physicians. In addition, research and development of drugs has often excluded both women and the elderly.*

*Other types of treatment may also result in complications, including significant morbidity and mortality. Additionally, since invasive diagnostic procedures are a common cause of iatrogenic disorders, careful consideration of the usefulness of tests and the appropriateness of treatment is particularly important when caring for elderly women. Attention to the maintenance of function is also critical; the ability of the older woman to live independently may depend upon adequate nutrition, ambulation, continence, and cognition. Health care providers must be responsible for functional assessment and all possible support of these essential capabilities.*

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**A**TTAINING THE GOAL of appropriate medical care for older women requires that the health care provider be familiar with the physiology, pharmacology, and pathology of aging; be able to recognize, evaluate, and treat common disorders; and be interested in providing the most appropriate and least harmful interventions. Elderly women (and men) are particularly susceptible to iatrogenic disorders for several reasons. Diminished reserves secondary to disease and physiologic decline, or both, result in a decreased ability to tolerate stress. Increased prevalence of illness often necessitates more diagnostic and therapeutic interventions. Finally, atypical presentations of disease, common in the elderly, may require more extensive evaluations to achieve a diagnosis.

In studies reported to date, the most common cause of iatrogenic disorders is medications. In the study by Steel and co-workers (1), drugs noted to cause problems included nitrates, digoxin, lidocaine, aminophylline, antiarrhythmics, anticoagulants, penicillins, benzodiazepines, antihypertensives, and propranolol. Elderly persons are particularly susceptible to drug reactions due to altered pharmacokinetics and multiple diseases necessitating multiple medications. They have problems with schedules and dosages due to memory, sensory, and functional

deficits. In addition, the prescribing practices of some physicians are inappropriate.

Physiologic changes of aging which occur in most elderly women result in alterations in pharmacokinetics, the body's ability to handle medications. Although absorption is not apparently affected in a major way, both distribution and clearance of drugs are often significantly affected. Elderly women have an increase in the proportion of body fat to muscle and water, compared to elderly men. Thus drugs that are fat-soluble will have an increased volume of distribution and a longer half-life, resulting in slowed clearance. Greenblatt and his co-workers (2) have shown that some benzodiazepines (minor tranquilizers) have an increased half-life in elderly women. Some studies have also suggested that protein-binding is decreased in women, affecting the distribution and clearance of such drugs as imipramine (3). In most elderly of both sexes, changes affecting the liver result in slowing of the metabolism of drugs; thus the active form is available for a longer period. Aging also results in a decrease in kidney function, resulting in slowed elimination of most drugs by that organ system.

Older women have more diseases requiring treatment, and are often afflicted with multiple illnesses.

Heart disease, chronic lung disease, arthritis, diabetes, hypertension, and depression are common conditions for which medications are prescribed. Functional impairment due to such illnesses as Alzheimer's disease, stroke, incontinence, osteoporosis, and sensory deficits may limit the ability of the elderly woman to attend to her personal needs, including the appropriate use of medications.

A review of studies of compliance by Vestal (4) found serious difficulties in the use of medications by the elderly. Frequency of errors ranged from 25 to 50 percent and were often due to lack of understanding of drug regimens. Numerous classes of drugs have been noted to cause problems, and toxicity may be manifested by many symptoms and signs, including anorexia, confusion, sedation, hypotension, fluid or electrolyte disturbances, or both, and other serious problems.

Physician errors in prescribing for elderly women are common. Dosages may be too high, and interacting medications may be prescribed. Drugs which affect the central nervous system are poorly tolerated by the elderly, but are frequently used. Compliance is made difficult by prescribing multiple medications on complex schedules. Little thought may be given to the cost of medications, or their side effects, which may make them intolerable for the patient. Indications for a drug may not be reviewed, or its efficacy verified.

In addition to these factors involving the individual patient and physician, other problems have been noted. Few studies have been directed to specific consideration of medications in elderly women, despite the age and gender differences which have been discussed. Most drug studies comparing women with men have considered only younger women and have emphasized such factors as pregnancy, menstruation, and oral contraceptive use, despite the fact that women today live one-third of their lives after menopause. Pharmaceutical companies rarely include the elderly in their drug trials, and often exclude women as well. Thus important differences may well be undetectable until the drug is marketed, when it will undoubtedly be prescribed for all ages and both sexes.

Invasive therapy of other types may also result in complications. Such common treatment as intravenous catheters, indwelling bladder catheters, and nasogastric tubes may result in infection, immobility, and trauma. Additionally, surgical procedures in the elderly have increased morbidity and mortality when compared with younger patients (5). Many factors have been shown to influence outcome, including associated diseases, nutritional status, site of surgery, and emergent circumstances.

Decisions regarding the appropriateness of *any* treatment should consider its necessity, safety, effectiveness, acceptability, and risk compared to benefit, and they should include input from patient or family members.

Invasive diagnostic procedures were noted in two studies to be the second most common cause of iatrogenic disorders (1, 6). Cardiac catheterization, bronchoscopy, and thoracentesis are frequently cited, as is angiography (7). Even such relatively benign tests as barium studies and intravenous pyelograms may have notable complications such as dehydration during preparation. Again, careful consideration of necessity, safety, and effectiveness should provide appropriate guidelines. Proper interpretation of the results of tests is sometimes difficult. The physician should know how the results of a test will affect treatment before the test is performed.

Attention to functional status is often neglected, but it is of critical importance when caring for elderly women, many of whom live alone. Adequate mobilization following illness is essential and may require special therapy. Complications of immobility can include pneumonia, pressure sores, weakness, and even institutionalization.

Adequate nutrition is often difficult to maintain in the elderly woman, due to financial considerations, problems with shopping and preparation, side effects of medications, illness, and limited food preferences. Dietary restrictions are often of little value and should not be imposed unless absolutely necessary; low fat, very low sodium, or diabetic diets may be unpalatable. Meals-on-wheels, homemakers, nutritious milkshakes and liberalized diets may help to maintain adequate intake. Attention should also be directed to the elderly woman's dentition and the texture of her diet.

Incontinence has been noted to be a significant problem in some elderly women. Urinary retention may also develop, especially in the hospital setting, as a complication of indwelling bladder catheterization or anticholinergic medication. Mobilization, adjustment of medications, and intermittent catheterization may be valuable in the restoration of urinary function. Maintenance of adequate bowel function is also important to prevent anxiety, constipation, or even fecal impaction. This often requires mobilization, adequate fluids and fiber in the diet, attention to medications and avoidance of laxatives if possible.

States of confusion in the older woman may be a result of acute medical illness, sensory deficits, drug toxicity, or a progressive dementia. Careful evaluation is required to treat reversible causes (8). Frequent orientation and stimulation may be of help.

Providers must perform functional assessments of elderly women to help them maintain their independence despite the presence of disease. Attention to the performance of activities of daily living will identify deficiencies which must be addressed. Physicians and nurses can then treat medical problems, physical and occupational therapists can assist the older woman in optimal use of her faculties, and family and community support systems can provide services she cannot perform herself.

As has been noted, elderly women are likely to be widowed, live alone, or be institutionalized. They often have reduced income compared to men of the same age. Society must provide appropriate resources for needed medical and social services to enable them to live with as much comfort, dignity, and independence as possible.

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