Confusion in the aged

Confusion in the aged is a frequently presenting symptom to the G.P. Its very nature lends itself to the problem - solving approach.

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Problem-solving is a process of making intelligent gueses or hypotheses about the nature of an illness on the basis of partial information. These hypotheses are put to the test by treatment or observation, which will either confirm (validate) or negate (invalidate) the hypothesis.

The usual example quoted, and taught to students, is the case of a patient presenting with a sore throat. An initial hypothesis of a catarrhal or coryza-like illness is made. When, after a few days of symptomatic treatment, there is no improvement, the initial hypothesis is negated, and a second hypothesis of a bacterial infection is made: penicillin is prescribed. After 48 hours there is still no improvement and a third hypothesis is made of infectious mononucleosis, which is ultimately confirmed by a blood count and serology.

The process of problem-solving is in contradistinction to the diagnostic process used in the wards, where a comprehensive history, an examination system by system, and a number of laboratory investigations will ultimately provide a diagnosis.

The problem-solving process is well suited to General Practice; it is rapid (decisions are made and action is taken) and it is cost effective. What gives total validity and scientific respectability to this method is the rigour, and the checking and counter checking which the doctor brings to bear on every hypothesis that he makes.

Confusion in the aged is discussed both in the context of dementia which is characterised by slowly-progressive impairment of intellectual functioning, and delirium – the acute confusional state. The two may coincide, providing a variable picture.

What is important is that *neither of these nor their combination are due to normal ageing processes, but are usually due to organic or psychiatric causes, many of which are reversible and curable.*

Normal ageing does not include gross intellectual impairment, confusion, hallucinations or delusions. Symptoms of dementia include failing attention and memory, errors of judgement, poor orientation, irritability, while symptoms of delirium, or the acute confusional state, include abrupt onset of restlessness; confusion for place and time; day night reversal, hallucinations and delusions.

The most important causes -those significant to bedside diagnosis in General Practice - are drug intoxication, infections, certain metabolic diseases, and depression. The most important causes of irreversible dementia are cerebral atrophy or neuronal degeneration associated with cerebral hypoxaemia and Alzheimer's disease, or arteriosclerotic (multi-infarct) degeneration.

Significant common causes

The acronym DIMTOP provides a useful mnemonic for the following causes: (i) Drug intoxication; (ii) Infections; (iii) Metabolic; (iv) trauma; (v) Oxygen deprivation; (vi) Psychiatric and perceptual.

(i) Drug intoxication

Most drugs can cause confusion in the aged: these include tranquillizers, antidepressants, belladonna extracts, codein analgesics, and so forth.

Two drugs deserve special comment - Digoxin, and drugs used in Parkinsons disease -because they are used commonly, and because some new attitudes prevail regarding their use in the aged.

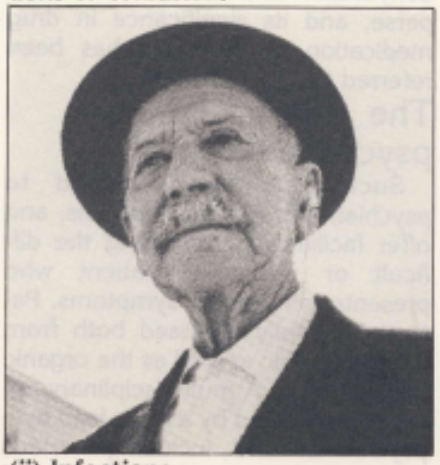
An editorial in the British Medical Journal of 28 April 1979 states "studies have reported that digoxin can be withdrawn from the therapeutic regimen of up to 94% of patients in whom the initial indication for digitalisation was CCF.

Serum digoxin levels provide a useful monitor. The therapeutic range is very narrow (1,000 to 2,6 mmol/L), and there is a narrow gap between it and the toxic level (3,3 mmol/L).

Should the digoxin level be below the therapeutic range it can be withdrawn at any rate, and, should it reveal a toxic level it must also be withdrawn, and may be reintroduced, if necessary, at a lower dose. Should a patient receiving digoxin present with confusion, this drug should be withheld as an initial problem-solving procedure even in the absence of known digoxin levels. Digoxin toxicity is all the more significant in the presence of diminished renal function and where there is concurrent use of diuretics with possible attendant hypokalaemia. Therefore, when requesting a digoxin level, it is useful to have the level of urea, and electrolytes assessed. (Long-term use of diuretics can also elevate the serum urate and glucose in the aged).

The serum urea should be viewed with circumspection in the aged, because it can also be elevated, for instance, in dehydration. Even the serum creatinine is not an accurate reflection of renal function in the aged, because the production of creatinine diminishes as age advances.

Drugs used in Parkinsonism can cause confusion. Late onset Parkinsonism is often associated with degenerative arteriosclerotic disease,and drugs such as Laevadopa and those with anticholinergic action, eg Orphenadrine, may cause hallucinations or confusion.



(ii) Infections

Urinary tract and respiratory infections are the most common encountered which cause confusion. However, a minor infection, particularly in the presence of inadequate fluid intake, can do the same.

(iii)Metabolic

The significance of metabolic changes associated with diminished renal function has been referred to. The next most common metabolic problem which is encountered is diabetes, and the sudden onset of delirium in a diabetic should alert the doctor to hypoglycaemia. Extreme emotional lability, manic behaviour, or even a sudden catatonic state could be symptomatic of hypoglycaemia. Thyroid disease should also be borne in mind, but onset of confusion is more insiduous.

(iv)Trauma

A recent head injury must always be borne in mind; a subdural haematoma could present with fluctuating confusion or levels of consciousness.

(v) Oxygen deprivation

The ageing brain is already compromised by arterio sclerosis, and thus any condition which further diminishes cerebral perfusion may cause confusion, eg cardiac arrhythmias, myocardial infarction (a "silent" infarct in the elderly must be borne in mind), cardiac failure, cerebrovascular accidents, respiratory distress, (both micro- as well as macro-cytic anaemias must be considered).

Slow-onset, irreversible dementia is usually associated with either (a) Alzheimer's disease, or (b) arteriosclerotic (multi-infarct) disease. Alzheimer's disease is thought by some gerontologists to be due to neuronal degeneration associated with repeated episodes of cerebral hypoxia caused by various conditions, previously listed, which diminish cerebral perfusion. It is not purely of academic interest to differentiate the two.

The dementia which results from cerebral arterioslerosis or small CVA's is usually step-like in onset: the confusion may, therefore, improve over a short period, only to recur at a later date. In a situation like this, relatives of the patient should be cautioned about too early institutionalisation, or even hospitalisation.

It is useful under this heading to also include space-occupying lesions. The question arises:- is it feasible to scan all confusional states for suspected space-occupying lesions, where other causes have been excluded? This should be viewed with the utmost circumspection.

It is questionable whether a brain scan should be requested in an 80-year old patient who presents with confusion but who is a poor operative risk and has no history of head injury.

(vi)Psychiatric, psychological causes

The commonest treatable disease under this heading is depression. Depression in the aged can present with intellectual impairment and delusional states, and thus mimic dementia - the so-called "pseudo-dementia".

Having excluded other causes, it is at this stage of a problem-solving approach that depression, as a cause for confusion, should be considered. Depression can of course be present over and above other organic illnesses such as CVA or Parkinsons disease. An open mind should be kept about the possibility of depression, particularly in the recently bereaved, or the the recently-discharged from hospital after illness or surgery, in those living alone, or in

those receiving rauwolfia, methyl dopa and beta blocker medication.

Sudden onset of "nervousness" or "agitation" in a elderly (or even for that matter in a middle-aged person) should alert the doctor to the possibility of depression, and should not be interpreted as a need for tranquillizers: the introduction of an anti-depressant may be a more appropriate problem-solving procedure at this stage. (It is often noted that anti-depressants do not have the desired effect in the aged: psychiatrists and psychiatric social workers are currently exploring the concept of dysphoria.

To all intents and purposes the patient appears depressed, and manifests apathy, withdrawal, psychosomatic symptoms, poor appetite, feelings of self-reproach, even suicidal ideation -all the traditional symptoms of depression. They, however, do not respond to the normal management of depression, and it is thought that these patients may have personality problems and poor adaptive mechanisms. It is suggested that psychotherapy or counselling suited to the patient's needs could be more appropriate management).

Old patients who are depressed often appear anxious and hypchondriacal and make frequent demands on the doctor. Doctors tend to react to this behaviour -possibly unaware that the patient is depressed or ill - by becoming irritated and rejecting. This must be guarded against, as it is doctors who tend to reject the elderly.

Old people who remain ill are a threat to our defined role of caring. When, in addition, the patient becomes anxious, irritable and demanding, we tend to react defensively by rejecting him: he may have curable depressive illness.

Perceptual causes - Diminished hearing or vision, eg when the eyes are covered after a cataract extraction may cause confusion.

Miscellaneous causes - A few additional causes which are important and relevant to the bed-side diagnosis are impacted faeces, and retention of urine. The significance of dehydration as a cause for confusion perse, and its significance in drug medication in the aged has been referred to.

The role of the psychogeriatic unit

Such units are attached to psychiatric or general hospitals, and offer facilities for assessing the difficult or refractory patient who presents with mental symptoms. Patients are fully assessed both from the psychiatric as well as the organic point of view. A multidisciplinary approach is offered by a team lead by a psychiatrist and including various team members, eg physicians, social workers, occupational therapists.

Problem-solving case histories

Case No 1

A white 82-year old female suffering from osteo--arthritis, renal failure, duodenal ulcer, and is on Paracetomol, Soloxene, Ulsanic, Lasix, Slow K and Mogadon develops an acute confusion.

She is found to have a temperature of 38°C; a urinary infection is detected; Septran is prescribed. The initial hypothesis is therefore UTI. The confusion persists, and this hypothesis is negated. She is re-examined and there is a suggestion that she has homonymous hemianopia.

A second hypothesis is made of intracerebral mischief. Her urea, although elevated, is stable. She becomes difficult to manage and is admitted to hospital. Here she is scanned. The question arises whether this investigation was appropriate.

Would a confirmatory finding have led to any active surgical intervention in this particular individual? A wait-and-see approach would have been more realistic, and certainly more cost effective, as a problem-solving procedure. The patient did in fact improve over the next few days. A final diagnosis of a small CVA was made.

Case No 2

A white female of 74 sustains a fracture of the femur. She becomes mildly confused. A Moore's prosthesis is inserted. The patient's confusion increases. Relatives are distressed and initiate arrangements for institutionalisation.

The confusion is thought to be due to the initial trauma, and possible cerebral hypoxia during surgery. This is the first hypothesis: a wait-and-see approach is adopted. She is given Etomine for sedation. Confusion persists and the patient becomes progressively more restless. A second hypothesis of postoperative drug medication is made as a possible cause of confusion. Drugs are discontinued.

The patient is re-examined and found to be fibrillating, and this is offered as a third hypotheses. A physician is consulted. She is given medication, with reversion to sinus rhythm, and a complete reversal of her confusion.

Case No 3

A white male of 76 who is on Rhythmodan has a prostatectomy and develops confusion postoperatively. He settles with sedation. No detectable organic cause is found and the confusion is attributed to cerebral hypoxia. He recovers, but some months later develops a slowly progessive withdrawal, sleep reversal and confusion for time and place.

In view of a past thyroidectomy, thyroid function is assessed. Serum chemistry and electrolytes are also assessed. No abnormality is detected and a hypothesis of dementia is

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made. He refuses to eat and sleep becomes disturbed.
Another hypothesis of depression over and above the dementia is made. Antidepressants are introduced. His behaviour deteriorates, and one night he becomes frankly manic. He is given Etomine iv and hospitalised.

He is ultimately admitted to a psycho-geriatric assessment unit, and diagnosed as a case of irreversible dementia with poor prognosis. He was permanently institutionalised.

Case No 4

A white female of 82 who is diabetic and on Digoxin and Moduretic, and has a significant hearing loss, presents with attacks of syncope. An initial hypothesis of hypoglycaemia is made, but she does not respond to intravenous dextrose. The hypothesis is negated. A physician is consulted but no cause can be established. After three such episodes, a second hypothesis of hysterical acting-out is made, and time is spent counselling the patient. She reveals auditory hallucinations (she hears songs from her childhood) and also reveals certain paranoid delusions, and admits to suicidal ideation.

On this basis another hypothesis is made of depression. Antidepressants are introduced, but there is no response. Another two interviews are held, during which the patient expresses anger at her isolation from her family, and the apparent lack of concern of the family for her.

Her son is alerted to these dynamics and a family counselling session is held where she is encouraged to express her feelings openly. Her son now visits her more regularly, and the family relationship is restructured. Her symptoms have not recurred, and a final diagnosis of dysphoria is made.

Conclusion

There is a tendency amongst health professionals to discard the confused, the demented, or the "difficult" aged person. Many of these people have treatable and reversible illnesses. A problem-solving approach to managing these problems is not only appropriate to general practice but is also cost-effective. □

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sterilization is requested at a particular time.

The survey revealed that 79,3% of patients were pleased with the operation of women over the age of 30 years at the time of sterilization 14% expressed regrets, while of those who were under 30 years of age at the time of sterilization, 39% expressed regrets.

The main reasons for regret were

- Patient didn't choose operation because either (i) 'clinical' problems or (ii) severe social problems
- Wanted another child (same consort or met another man)
- Strong maternal feelings jealous of pregnancy in others.

Other significantly statistical facts emerging from the survey

- there was an improvement in the sex life of 36,2% of the patients
- 37,2% of patients reported as improvement in family life
- 42,2% of patients reported a worsening in menstruation.

Dr Wright found that patients who vehemently and perhaps impulsively demand sterilization may bitterly regret their decisions and join the group of unhappy and unstable women who just as vehemently wish for a reversal a few years later.

In the article he presents a scheme for assessment which lists the following contra-indications:

- irrational elements in reasons for sterilization
- fridgidity or impotence; unrealistic expectations of operation
- poor judgement and impulsiveness
- previous refusal to face consequences of decisions or acts.

He feels that the General Practitioner and not hospitals or clinics will be aware of these contraindications, especially the last two. □

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all just as essential as feeling the spleen.

Again, as first contact for illness, no one is better placed to determine new areas of educational need, and to assess the efficacy of current methods.

The basic information upon which that change is to be made comes best, from the current body of practising medicine.

There are two sides to education — what the subject needs to be taught and, just as importantly, what he wants to know. Persuade any Family Physician to put a 'need to know' box on any topic in his office and your perceptions of Health Education need will probably alter. This underlines a further fact, commonly ignored by Health Educators — patients need health education after their illnesses for secondary as well as for primary prevention.

In Australia today, Family Physicians are increasingly involved in Preventive Medicine, and Health Education at all levels and through the Family Medicine Programme all trainees for General Practice have comprehensive training in all aspects of Preventive Medicine, including Health Education.

Increasingly, the cost effectiveness of Health Education is being realised by physicians and with it comes the perception that it can be done expertly and to good effect by them, if they are prepared to expand their interests. New initiatives abound and information, motivation and facility for change, exist alongside continuing care.

Neither of our disciplines can do less than benefit from ongoing and expanding areas of contact between Family Physicians and Health Educators. There is so much that we can gain from a closer liaison in future, and more importantly, for those for whom we care. I have not yet heard Health Education referred to as a caring profession, but hope that it is so, and look forward to co-operation in doing just that — linking 'caring about' to 'caring for' people.

Finally, in any society, especially in those where medical services are private enterprise in an open market, a healthy 'Bottom Line for Health Education' means close involvement with, not separation from, the Practitioners of Primary Care — Family Physicians. □