

Mentally Handicapped Persons

P. E. PENDEVILLE, C. DEMARS and A. FORTPIED

All mentally handicapped persons and particularly children require special consideration because of their various disabilities.

It must not be forgotten that they have feelings and emotions, which are sensitive to the way they are handled, and their understanding may be greater than rums apparent.

Patients with speech disability may use different communications aids such as sign cards or computer aids. Some patients have only difficulty with communication and it is important to provide these patients with enough time for them to be able to communicate their needs and to speak about their anxiety.

A previous contact with parents and/or carers detailing how they communicate and how they react to hunger, pain, stress and other unusual situations can be interesting to understand the behavioural manifestations. Parents and carers are best suited to allaying their fear and anxiety in addition to being their strongest advocate. Consideration and respect should be paid to the parents and carers and to their opinions.

In some cases, parents may appear aggressive and very protective towards their child. Medical Team Members must understand that these are manifestations of previous experience, stress, frustration, anger and perhaps guilt !

All these considerations speak for a strong pre-operative assessment to exclude any factor of comorbidity.

The understanding of the aetiology, clinical problems and their management, including a knowledge of the drugs used will help the anaesthetist to manage these patients better during anaesthesia.

It is evident that cognitive, communication and behavioural problems will influence the management plan as much as associated medical conditions !

It is also easy to understand that these patients are candidates for a short-stay hospital !

The unfamiliar environment generates irritability. The presence of parents or carers is highly advisable during the pre- and postoperative period.

These patients must be ideally hospitalised in a single room.

The mentally disabled patient can be linked to different clinical entities :

CEREBRAL PALSY

Cerebral Palsy (CP) is a non-progressive disorder of motion and posture affecting children and young adults. The frequency is around 2 per 1000 live births in our developed countries.

Despite improved antenatal and perinatal care, the incidence does not change partly due to increased survival in premature neonates and partly because neonatal asphyxia is not as common a cause as previously thought.

Almost all children have at least on additional disability : cognitive impairment, sensory loss, seizures, behavioural disturbances as well as the chronic systemic problems resulting from their disease.

The clinical picture evolves over time. The Swedish classification is currently the most generally used. Spastic CP is the commonest type (70%). Spastic diplegia (lower limbs) is usually associated with prematurity. In the spastic quadriplegia group, intellectual disability and epilepsy are common and a risk of aspiration pneumonia is present.

Dyskinetic CP (dystonia, athetosis or chorea) (10%) is associated with deafness, dysarthria, drooling and seizures. Intelligence quotient is low or normal. In ataxic CP, balance is impaired and speech disorders are common. Intellectual disability and epilepsy are often associated.

The following systems may be involved and should be considered pre-operatively :

- gastrointestinal : gastro-oesophageal reflux is common and can be difficult to detect. Salivary drooling is also a debilitating problem and may be related to pseudobulbar palsy with impaired swallowing or tongue thrusting. Electrolyte imbalance and anaemia can be associated
- respiratory : problems include pulmonary aspiration from reflux, infections and chronic lung

disease, which may be aggravated by reduced ability to cough. Scoliosis with a resulting restrictive defect may lead to cardiopulmonary compromise. The airway should be also carefully assessed for potential difficult laryngoscopy

- epilepsy : 30 % of patients with CP. Tonic-clonic and complex-partial seizures are particularly common.

CHROMOSOMAL DISORDERS

A lot of chromosomal disorders are associated with mental deficiency. Down's syndrome or Trisomy 21 is the commonest cause of retardation of mental development (6,3 per 10.000 births). Concerning anaesthesia management, some clinical aspects can produce difficulties :

- **Head and neck** : mild microcephaly, short neck, abnormal odontoid process (6%) and atlantoaxial instability can jeopardise the endotracheal intubation and/or the airway management
- **ENT** : large tongue, small glottis, subglottic stenosis are also associated with Down's syndrome. Moreover, sleep apnea syndrome is common (50%). About 10% have epilepsy and there is probably a link between trisomy 21 and Alzheimer's disease. They interact better socially than other people who have similar intellectual impairment.
- **Heart** : cardiac abnormalities are present in about 40-50 % of these patients (atrioventricularis communis, ventricular septal defect or aberrant subclavian artery) and may be the cause of early death. Preoperative cardiac assessment must be very strong and cardiac echography is advisable.

Gastro-oesophageal reflux is frequent and hypothyroidism can be associated (20 %). Therefore, recent laboratory analysis must be available.

Mental deficiency is also present in other less frequent chromosomal disorders :

- Cat-eye syndrome (Tri 22)
- Edward's syndrome (Tri 18)
- Marten-Bell syndrome (Fragile X syndrome)
- Patau syndrome (Tri 13)
- Trisomy 8 syndrome
- Trisomy 9 mosaic syndrome
- Partial Trisomy 10 syndrome.

A majority of these syndrome are also associated with cardiac, renal and respiratory defects. The preoperative assessment is very crucial. There-

fore, these patients are not necessary ideal candidates for shorter stay hospital.

AUTISM

Autistic children look physically normal and may have normal or even superior intelligence but are frequently mistaken as being mentally handicapped. There is a profound inability to relate to people, with extreme aloneness and withdrawal and apparent disconnection from the world around.

There are severe defects in speech development.

Autistic children are unable to form emotional relationships and there is sometimes an affectionate relationship with an inanimate object.

Changes in routine may result in intense disturbance and temper. They are also hyperactive.

No particular comorbidity is associated with this behavioural disease.

DEMENTIA

Dementia is a general term which include mental disorders that involve deterioration in cognitive, behavioural and emotional functioning.

Dementia may be ischaemic or vascular in origin. Repetitive exposure to ecstasy may also induce cerebral damage.

However, specific diseases including Alzheimer's disease, Parkinson's disease, Creutzfeldt-Jakob's disease are responsible for most cases of dementia.

Alzheimer's disease makes up two-thirds of cases. Decline in ability to communicate and memory function is characteristic and cause significant impairment in social and occupational functioning. Preoperative assessment should be guided by the informations provided by family members or caretakers ! Previous medical records can be extremely helpful and should be checked.

Informed consent, like for children and other mentally handicapped patients must be obtained from the person legally acting as a representative for the patient.

A strong physical examination should clarify the status of other diseases. The most frequent comorbid pathologies are respiratory problems such as chronic obstructive pulmonary disease and cardiovascular problems such as hypertension, arrhythmia or myocardial ischemia.

Anxiety, agitation, aggression or simple inappropriate behaviour may become more clear after

this initial contact which allows also to choose the most appropriate perioperative strategies.

Protection of gastric mucosa may be advised. Last but not least, rating postoperative pain and installing adequate treatment in patients with dementia are an another challenge for the anaesthe-

siologist. Most of the signs remain difficult to interpret such as movement, restlessness and vocalisation.

This problem is also present in all mentally handicapped persons.