

Paralysis: misconceptions and realities

Health
Down
15.5.02

By Prof Hasan Aziz

THE stench was unbearable as I entered the hospital room of an admitted patient awaiting neurological consultation. A very worried looking middle-aged man, with an odd reddish discolouration of right hand and foot, laid in there. Whilst examining the patient, the cooing of pigeons was most distinctive in an otherwise silent room.

Initially I thought the sound to be coming from outside but soon realized their presence in the room, stashed in a wired-cage under the bed. Although I could vaguely guess what must have been happening, I needed to ascertain this unusual situation. "What are these pigeons here for?" I inquired. "Oh, we had to smuggle them (wild pigeons) into the hospital so that we could apply their warm blood to the paralysed part," replied one of the attendants rather sheepishly. This explained the stench and skin discolouration.

This is one example of the many misconceptions regarding the cause and treatment of paralysis and facial palsy, termed '*falej*' and '*luqva*' respectively in the local vernacular language. Other 'advised' modes of treatment include local application of lion's fat (*sher ki churbee*), blackened machine oil (machine *ka kala tail*), local heat fomentations (sometimes to the point of producing skin burns) and covering of the affected parts with heavy woollens, even in summer. Numerous other such advocated methods of 'treatment' exist.

Local applications to the skin over the affected area, as described above, are recommended not simply as an everyday 'granny's recipe', but very emphatically and authoritatively just

The proponents of the old Greek theory of 'humours' by Galen would certainly like to believe in this hypothesis. Unfortunately, this hypothesis has not been validated by the proponents of Greek sciences to convince the present day (allopathic) medical science. To the modern day scientific mind, an attempt to treat a brain malady with local skin applications and fomentations would appear like applying insulation tapes on domestic electric wires, when the real cause of electricity failure is a blown up generator at Tarbela Dam.

There is a wide spread confusion in the lay-public's mind regarding the exact meanings of the terms 'paralysis', 'stroke', 'cerebral attack', 'facial palsy', '*falej*' and '*luqva*'. They regard these terms synonymous and tend to use them interchangeably which, in fact, are not. It is important to understand the meaning of these terms so that unnecessary misconceptions may be clarified and fears allayed. The description is divided into two parts; the first deals with paralysis (*falej*) and the second with facial palsy (*luqva*). Paralysis is a term used for a sudden weakness of one side of the body while facial palsy refers to a sudden weakness restricted to only one side of the face.

A number of factors are known, which mainly weaken or disturb the structure of the blood vessels. As a result, either the vessels become very 'brittle' and burst to cause a haemorrhage or their inner surface becomes roughened to produce blocks or clots, which disrupt the circulation. The area supplied by such vessels is susceptible to damage. It needs to be remembered that brain cells get damaged within minutes without blood supply; the process may be irreversible in some. Such effect on the brain's blood vessels and circulation results in paralysis/ stroke/ *falej*.

What makes a person prone to these attacks of paralysis are called 'risk fac-

usually by simple means.

High blood pressure heads the list of risk factors and is very appropriately called 'the silent killer'. Nearly two-thirds of all the strokes result from uncontrolled or ill-treated high blood pressure. In many, high blood pressure is discovered, for the first time, at the time of the stroke. Even those who are known to have high blood pressure do not take the medicines regularly. There are some who would take the medicine only on days when they 'feel' that they have a high blood pressure; not realising that the only way to check blood pressure is with a BP-instrument. Quite a few of them drift

the hand muscles are strong enough, causes many problems, especially in bank transactions. Disorientation in space and time may make a person very confused, who may wander off aimlessly in streets.

Strokes/ paralysis can be prevented by early detection and adequate management of the risk factors. It needs to be emphasized that most of the risk factors appear 'silently' and may continue to cause damage without much symptoms. Thus, the only way of detecting these risk factors is by a regular 6-12 monthly medical check-up of all healthy people ensuring prevention of complications in the future. An

There is wide spread confusion in the public's mind regarding the exact meanings of the terms 'paralysis', 'stroke', 'cerebral attack', 'facial palsy', '*falej*' and '*luqva*'. They regard these terms as synonymous and tend to use them interchangeably which, in fact, they are not

towards alternate systems of medicine, which per se may not be wrong, as long as they keep a regular record with a BP-instrument.

Apart from the above-mentioned risk factors, a minority may get an attack of paralysis from other brain diseases such as a tumour, inflammation, infection or a head injury (especially in the elderly).

Paralysis may not be only limited to loss of muscle power. It can also affect other brain functions such as 'awareness' or sensorium, speech, compre-

hension, etc. An acute attack of paralysis requires immediate medical attention, preferably in a hospital. It is suggested to visit one's trusted physician at the earliest for proper diagnosis, investigations and treatment.

Facial paralysis or facial palsy, on the other hand, is a term restricted to weakness of the muscles of only one side of the face (without involvement of arms and legs). Most people are familiar with facial palsy, as it is a common neurological disorder. In the local vernacular called '*luqva*', it is

lie in the brain but results from a 'block' in a segment of the nerve (outside the brain) responsible for the control of facial movements. As compared to paralysis, which results from diseases of the brain, facial weakness is potentially not a serious condition. The fears that facial weakness may spread to involve one side of the body is also not correct.

The facial nerve is part of the peripheral nervous system. It originates from the brain and after following a long tortuous course appears under the skin, just beneath the ear lobe, where it branches off to supply muscles of the face. Most of its course is within the skull where in its course it runs through the internal ear, after which it traverses a tight 'bony tunnel', behind the ear, before it surfaces under the skin.

The facial nerve controls the movements of the face muscles meant for facial expressions or gestures, closing of eyes and controlling movements of the mouth. Apart from the muscles, it also supplies a tear-producing gland in the eye. A branch of another nerve carrying taste sensations from the tongue, runs in very close proximity of the facial nerve, and is likely to get affected in facial palsy causing disturbed sensations of one half of the tongue.

An attack of facial palsy usually comes on suddenly. Most people wake up in the morning to find one side of the face feel twisted, along with is some difficulty in drinking, as liquids tend to dribble from the angle of the mouth. The eye on the affected side does not close properly and there is 'watering' from it. Initially, the watering is because the lower eyelid cannot contain the normally produced tears, but later there may be excessive tear production caused by irritation and infection, which can also make the eye red and painful. A few patients may also complain about reduced taste-perception on one half of the tongue.

this count are young girls, with permanent disfigurement.

What causes this common ring facial palsy, has so far, remained a mystery to medical science. Opinions have varied from infection causing inflammation, ruptured blood supply as can be seen among diabetics, to a pressure by a tumour or middle ear infection. Whatever the cause, the net result is a 'block' in a segment of the nerve which interrupts the signal transmission along the nerve trunk. The common place where the nerve gets trapped in this kind of defect lies behind the ear, inside the 'bony tunnel', which it normally traverses. The tunnel is very narrow and any swelling of the nerve can cause further compression, which may add to the damage.

The commonly occurring facial palsy recovers almost completely in most people within four to six weeks. The problem should be managed by a physician who needs to ascertain its cause. Treatment means to hasten the speed of recovery in the way of drugs and physiotherapy.

Covering of face with a woollen muffler or any other thing does not help this condition in any manner. What is more important is protection of the eye. Since the eye does not close properly, its outer covering (cornea) is prone to dryness and injury by deposition of dust. Frequent use of artificial tears and eye ointments (as advised by a doctor) provides a protective layer to the cornea which prevents ulcers and other complications. Among those where recovery is incomplete, a residual asymmetry of the face stays as a permanent deformity, which may not be obvious on a close countenance, but becomes obvious on smiling or speaking, when the facial features become awkwardly distorted. In the elderly (especially those with diabetes mellitus), the lower

in the local vernacular language. Other 'advised' modes of treatment include local application of fat (*sher ki churbee*), blackened line oil (*machine ka kala tail*), heat fomentations (sometimes to point of producing skin burns) and wrapping of the affected parts with woollens, even in summer. Numerous other such advocated modes of 'treatment' exist. Local applications to the skin over affected area, as described above, are recommended not simply as an 'old day 'granny's recipe', but very rationally and authoritatively justified to be the most logical form of treatment. The explanation extended for paralysis results from exposure to cold weather or cold 'humours' (*taseer*) and local skin application of 'hot' substances (*garam-taseer*) to counter the effect of 'cold'. The tant covering of the paralysed part with a woollen cloth is also done on the same belief.

structure of the blood vessels. As a result, either the vessels become very 'brittle' and burst to cause a haemorrhage or their inner surface becomes roughened to produce blocks or clots, which disrupt the circulation. The area supplied by such vessels is susceptible to damage. It needs to be remembered that brain cells get damaged within minutes without blood supply; the process may be irreversible in some. Such effect on the brain's blood vessels and circulation results in paralysis/ stroke/ *falej*.

What makes a person prone to these attacks of paralysis are called 'risk factors'. These include high blood pressure, diabetes mellitus, high fat content of the blood, ischaemic heart disease, conditions of high blood coagulability, freely circulating blood clots from damaged heart valves, weak segments in blood-vessel wall as part of a birth defect, drug abuse, alcoholism and many others. Fortunately, most of these risk factors are preventable,

towards alternate systems of medicine, which per se may not be wrong, as long as they keep a regular record with a BP-instrument.

Apart from the above-mentioned risk factors, a minority may get an attack of paralysis from other brain diseases such as a tumour, inflammation, infection or a head injury (especially in the elderly).

Paralysis may not be only limited to loss of muscle power. It can also affect other brain functions such as 'awareness' or sensorium, speech, comprehension, calculation and awareness of time and space. The associated speech defect may vary from a total loss of spoken speech to minor defects of articulation. Difficulty in finding the 'right word' or 'recollecting names' of objects are quite common complaints. Comprehension of spoken words or written text may become blurred or lost. Difficulty in writing, even when

acute attack of paralysis requires immediate medical attention, preferably in a hospital. It is suggested to visit one's trusted physician at the earliest for proper diagnosis, investigations and treatment.

Facial paralysis or facial palsy, on the other hand, is a term restricted to weakness of the muscles of only one side of the face (without involvement of arms and legs). Most people are familiar with facial palsy, as it is a common neurological disorder. In the local vernacular called '*luqva*', it is often confused with the much commonly occurring but a potentially much more serious condition called 'paralysis' or '*falej*' (described above). The 'paralysis' component of this term usually frightens the lay-public into believing that '*luqva*' is a potentially serious condition, which may spread to the rest of the body. The cause of this type of facial weakness does not

comes on suddenly. Most people wake up in the morning to find one side of the face feel twisted, along with is some difficulty in drinking, as liquids tend to dribble from the angle of the mouth. The eye on the affected side does not close properly and there is 'watering' from it. Initially, the watering is because the lower eyelid cannot contain the normally produced tears, but later there may be excessive tear production caused by irritation and infection, which can also make the eye red and painful. A few patients may also complain about reduced taste-perception on one half of the tongue.

Facial palsy, per se, does not cause any pain or discomfort, except some dull ache felt behind the ear, a few days before the attack. However, it still generates a lot of anguish. This is not only because of its feared causes and 'uncertain' outcome, but also because it causes a very obvious facial deformity which may be socially embarrassing. The worst affected on

ering (cornea) is prone to dryness and injury by deposition of dust particles. Frequent use of artificial tear drops and eye ointments (as advised by the doctor) provides a protective cover to the cornea which prevents corneal ulcers and other complications. Among those where recovery is incomplete, a residual asymmetry of the face stays as a permanent defect. This may not be obvious on a composed countenance, but becomes obvious on smiling or speaking, when the facial features become awkwardly 'twisted'. In the elderly (especially those with diabetes mellitus), the lower eyelid tends to sag down permanently. This may cause perpetual dribbling of tears. In such people, support can be provided with a simple surgical suture in one corner of the eye. This does no harm the eye in any way. ■

The writer is Emeritus Professor of Neurology, Jinnah Postgraduate Medical Centre, Karachi