**Delirium and Fever**

– Dr Lorraine S Dias

**Delirium  
What is Delirium?**

To put it simply, delirium is a sudden/recent state of confusion. It could happen over a few hours or over 1-2 days. In comparison, dementia is a slowly progressive disease where the person has forgetfulness and decreased thinking and judgement abilities. Delirium is reversible once the cause is identified and treated. The progression of dementia can be slowed but it cannot be reversed or cured.

**How to recognize delirium?**

A delirious person will be unable to focus and complete a given task. The changes in behaviour and routine may not always be obvious; they may be subtle and episodic. Look for the following:

* Change in patterns of movements and speech (for example, a usually quiet person may become very restless, hyperactive and talk excessively; or a talkative person may become unexplainably quiet and withdrawn)
* Repetitive speech, irrelevant replies (“Did you have your lunch?” may be answered with “The news was showing a cyclone today.”
* Reduced/loss of memory of recent events like meals eaten, visit to the market, etc.
* Inability to recognize familiar persons/places/objects
* Reduced appetite
* Reduced self-care – not talking bath, brushing teeth, changing clothes, etc.
* Imbalance – swaying while walking and having falls
* Decreased interest in routine activities
* Change in sleep pattern – sleeping more, at unusual hours or waking up before usual time.
* Mood shifts – being excessively irritable, angry, sad

**What are the common causes of Delirium?**

* Medications:  
  - elderly people usually have many medicines for multiple illnesses and sometimes, these medicines taken together may cause confusion,  
  - elderly people may accidentally take extra medicines,  
  - suddenly stopping some medicines may also cause delirium.
* Alcohol – abrupt discontinuation/excessive intake (binge drinking)
* Changes in level of blood sugars (low sugar level – below 70 mg/dl or high sugar level – above 300 mg/dl)
* Changes in levels of blood electrolytes like sodium, calcium
* Changes in blood oxygen &/or carbon dioxide levels
* Fever/infectious illness
* Dehydration, malnutrition
* Sleep deprivation
* Emotional stress
* Severe pain
* Around the time of medical/surgical hospitalization and procedures

**How is Delirium managed?**

It becomes crucial to identify delirium and its cause. A person’s clinical condition can deteriorate rapidly and may warrant ICU admission. Hence, a prompt visit to a medical professional/facility is needed. The doctor will take a focused history, do a physical examination and blood investigations and scans (if needed) to detect the cause of delirium. A Physician would usually be in-charge of evaluation and treatment. He/she would consult with other specialists, like the Neurologist and Psychiatrist as and when needed. Once the cause is identified and treated, the patient usually makes a complete recovery. Repeated attacks of delirium need detailed evaluation once the person recovers from the episode. Repeated episodes can affect a person’s memory, motor skills, thinking and analyzing abilities and may lead to persistent impairment.

The involvement of family and friends in management becomes crucial.   
-They can help in reorientation of the patient.  
-They can reinforce usage of a patient’s eye-glasses and hearing aids.   
-They can talk about familiar topics and reinstitute a familiar routine of daily activities.   
-They can help restore a normal sleep pattern by encouraging the patient to be awake and active throughout most of the day and provide a calm, noise-free surrounding for restful sleep.

**Delirium in the Hospitalized Patient**

Delirium is commonly seen in the hospitalized elderly patient, especially in the post-operative period. Factors like pain, medications and underlying illness can trigger it.

Steps to avoid /reduce delirium in hospitalized patients are: minimizing sleep deprivation, minimizing visual and hearing impairment, ensuring familiar people visit frequently, encouraging physical activity and minimizing use of sedatives and appropriate pain management.

**Delirium Tremens**

It occurs ~ 2-5 days after alcohol withdrawal in chronic alcohol users. Mild symptoms like sleeplessness, headaches, increased heartbeat and anxiety can occur as early as ~ 6 hours after the last drink. These can progress to hallucinations, fluctuating blood pressure and heart rate, raised body temperature and excessive sweating and sometimes fits (seizures).

Delirium Tremens can be potentially life-threatening and requires admission for at-least 4-5 days and often more. A Physician and Psychiatrist will usually co-consult for the management. Baseline blood tests will be conducted. Treatment to control agitation, control heart rate and blood pressure and to reduce risk of fits will be administered. IV fluids and multivitamins and importantly thiamine will be given. Alcohol deaddiction will be advised once the patient recovers.

**Fever and Infections**

Fever is temperature above 37.6 \*C or 99.6\* F in adults (recorded under the arm).

Fever usually is an indication of infection. However, it could also be a symptom of inflammatory disorders (like joint diseases) or cancers. Hence, persistent fever or recurring fevers, not responding to paracetamol and antibiotics/antivirals given as a routine course of treatment, must not be neglected.

Elderly people are prone for infections with strong microbes, infections by multiple organisms, infections which rapidly lead to involvement of multiple organs and infections which do not always present with fever or typical localizing symptoms. Infections may manifest as a change in mood/ appetite, hypothermia (body temperature below 35\* C/95\*F) or delirium.

Common infections in the elderly are as follows:

1. **Urinary Tract Infections (UTIs):**

A person may have increased frequency of urination, complain of burning/difficulty while passing urine, change in urine colour, blood in urine, lower abdominal/back pain, nausea, vomiting and fever.

The doctor will ask for a urine test to check for pus cells and a urine culture and sensitivity to identify the microbe growing and antibiotics which will kill it. Complete blood counts, a kidney function test and sugars levels will be tested. Men with UTI will be evaluated for prostatic enlargement.

The doctor will advise increased fluid intake, appropriate antibiotics and paracetamol.

1. **Pneumonia:**

Lung infection/pneumonia presents commonly as cough with or without sputum, one sided chest pain which increases on taking a breath, shortness of breath and noisy breathing. Pneumonia can cause a rapid drop in blood oxygen levels which leads to a state of confusion or drowsiness. Elderly people are prone for pneumonic infections by unusual micro-organisms.

The doctor will ask for complete blood counts, sugars, kidney function tests and blood electrolyte levels. Sputum will be collected for gram stain, culture and sensitivity. A chest x-ray will be taken.

The doctor will treat the pneumonia with antibiotics, cough medications, paracetamol and if indicated, bronchodilator nebulization/inhalers. A patient will be admitted in case of low blood oxygen levels or deranged kidney function/blood electrolyte levels or delirium.

1. **Gastroenteritis:**

All ‘stomach-upsets’ are not due to infections and not all infectious gastroenteritis are due to bacteria. Bacterial gastroenteritis is usually associated with foul-smelling stools, mucus, sometimes blood in stools and crampy abdominal pain.

The doctor will emphasize rehydration, rehydration, rehydration and prescribe supportive medications for gastritis and probiotics. Antibiotics will be advised if bacterial gastroenteritis is diagnosed. Medications like loperamide/Lomotil/Imodium are usually avoided if a bacterial infection is suspected, until appropriate antibiotics are started. The doctor will order tests for blood counts, kidney function test, electrolytes, sugars and stool routine.

1. **Skin and related infections:**

The elderly usually have dry and fragile skin which cracks easily. It is prone for skin infections/infections just below its surface called subcutaneous infections. A common infection seen is cellulitis which occurs in the leg. Abscesses are pus filled swellings. The doctor will prescribe antibiotics and anti-inflammatory medicines and skin moisturizers.

1. **Dental infections:**

Tooth infections are common due to poor dental care, caries teeth, poor gum hygiene etc. The treatment of dental infections can be long drawn and can affect the patient’s food intake. The doctor will advise frequent monitoring of blood sugars, salts and blood pressure. Certain medications like blood thinners may be temporarily stopped during dental procedure.

An important point which cannot be emphasized enough is to avoid self-medication for fevers/infections. There could be drug interactions, use of inappropriate antibiotics in incorrect dosages and abuse of pain-killer medications. Self-medication may also mask important signs which would aid the treating doctor in making a diagnosis.

Self- medication can hence be detrimental to the person’s health and may lead to (avoidable) hospitalizations in many cases.

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