

About elder mistreatment: a brief report

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Abstract

Elder mistreatment, initially coined as 'Granny Battering' in 1975 by British gerontologists is an issue that has seldom received any attention in our part of the world, mostly due to lack-luster reporting. With tertiary care setups in low to middle income countries administering care to a burgeoning population of elderly patients, elder abuse has now become increasingly apparent. This case report examines elder mistreatment in a drowsy patient living with her son, who had recently appointed a private nurse for her care. Our healthcare team proceeded to provide the best available medical and community resources in the care and intervention of the patient.

Introduction

Elder mistreatment, initially coined as 'Granny Battering' in 1975 by British gerontologists¹ is an issue that has seldom received any attention in our part of the world, mostly due to lack-luster reporting. Elder abuse may be defined as 'a deliberate action or failure of action by a caregiver or another person in a relationship involving an expectation of trust that risks harm to an older adult.'² While the term is now fairly established and recognized in the developed countries of the world, in developing countries such as Pakistan, cases often get missed due to failure of recognition of signs and symptoms of abuse, and a general complacency and lack of a discourse regarding health and quality of life of our elderly population by the younger demographic-indeed most symptoms of an elderly persons deteriorating health are considered the inevitable consequence of their 'old age'. Many hospitals may not have a proper system in place, that is devoted to managing cases of abuse, therefore, healthcare workers, despite having an inkling of foul-play may not know how and who to approach when encountering such cases. Our case report highlights the case of an elderly

female who presented to us with drowsiness and an inadequate history was provided by the son and her appointed nurse. She was initially treated on the lines of suspected septic and metabolic encephalopathy but was eventually found to be and treated as a case of elder abuse. We discuss some of the challenges in reaching the diagnosis of elder abuse and responsibilities of a healthcare team when faced with such a scenario.

Case Report

A 72-year old lady, presented to us in the emergency department with increasing drowsiness for the past ten days. One day previously she had been taken to another hospital's emergency department but was referred to our setup. She was previously known to have diabetes mellitus (DM), hypertension with a history of left sided anterior cerebral artery stroke 21 years back and scar epilepsy. After her stroke she was mostly bed-bound and being taken care of by her son, but due to increasing work commitments, he had appointed a private nurse for her care from 02 weeks. Her home medications included aspirin, atorvastatin, sitagliptin, rampril, esomeprazole and lev-tiracetam. She had a hospital admission 10 years back due to hypercapnic respiratory failure. Her primary care physician at that time suspected her to have obstructive sleep apnea but this was never worked up at any time following her discharge. According to the son, she had never needed or was provided continuous positive airway pressure (CPAP) at home.

On arrival, her general physical examination revealed a frail and unresponsive elderly female. Her Glasgow coma scale was the following: eye: 1, motor: 5 and verbal: 1. Her pupils were 4 mm, with sluggish reaction to light. Dolls eye reflex did not reveal any brainstem damage. Fundoscopy was normal. There was normal bulk and tone in all four limbs. The deep tendon reflexes were 1+. Plantares were bilateral flexor. The pattern of breathing was normal, but her respiratory rate was 09 breaths per minute. Her other vitals were stable. There was no other remarkable finding on her systemic examination except occasional crept in bilateral lung bases.

The baseline workup along with septic markers, liver function tests and urine detailed report was normal. Severe acute respiratory syndrome-coronavirus 2 (SARS-CoV-2) rapid polymerase chain reaction test to detect coronavirus disease 2019 (COVID-19) was negative. Complete blood count was normal. An arterial blood

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gas (ABG) was done while patient was on room air. It showed pH 7.26, partial pressure of carbon-dioxide (PCO₂) - 69, partial pressure of oxygen (PO₂): 91, oxygen saturation (SpO₂): 95%. Due to her drowsiness first, she was provided bag and mask ventilation for 15 minutes but once the pH was 7.33 and PCO₂ was 50, there was still not improvement in her drowsiness, so we applied bi-level positive airway pressure (Bi-PAP). It was assumed that the patient had retained carbon-dioxide due to pneumonia complicating previously suspected

history of obstructive sleep apnea. A chest X-ray (CXR) was done which was normal, so it was assumed that her pneumonia was likely viral or due to some atypical organism. We started her on azithromycin.

However, even after her PCO₂ spiraled down to its normal range and 03 days to her initial antibiotic treatment, the patient remained drowsy. A computed tomography (CT) scan had been done one day prior to presenting to our hospital and was reported to be normal. It was also re-reviewed by our team, and we found no abnormality. We ordered a magnetic resonance imaging (MRI), an electroencephalogram (EEG) and cerebrospinal fluid (CSF) studies. Clotting profile done prior to lumbar puncture was also normal. We then started an empiric regimen of antibiotics and antivirals in meningitis doses to cover possible meningoencephalitis.

The following work-up was done to rule out possible metabolic and septic causes of drowsiness in our patient (Table 1).

Her drowsiness did not improve even after a week of treatment. We now postulat-

ed that her drowsiness could be due to dose-dependent or long term effect of levetiracetam, which she had been taking for many years in a dose of 500 mg twice daily. We discontinued the levetiracetam. The test for levetiracetam levels in plasma was not available in our setup so it was not done. A long-lead EEG was then ordered which failed to find any subclinical seizures.

The patient's son would only visit her in the evening. Her private nurse always remained by her bedside. She started insisting that all updates by our team should be provided to her and not the patient's family members. Upon enquiring, she got visibly upset and divulged that the patient's family member's neglect and abuse her. We had not found any signs of physical abuse on the patient. Later our hospitals nursing staff complained to us that the patient's private nurse often interferes during the administration of feed and medications to the patient *via* nasogastric tube (NG) asking them to let her administer them to the patient instead. We noted that the time of this nurse's hiring coincided with the time of patient's symp-

toms. She displayed profuse attachment towards the patient which was seemingly peculiar given that she had been employed as her caretaker only recently.

Prompted by this strange behavior we sent a urine toxicology screen (Table 2).

The urine toxicology was positive for benzodiazepines. The patient had not been given any benzodiazepine during our admission. The drug history was reconfirmed from her son. He was very surprised when he learnt that we believed the patient had been administered benzodiazepines recently. He clearly recalled that due to her previous history of hypercapnia and suspected obstructive sleep apnea, her doctor strongly advised against giving the patient any sort of sedative and he certainly never brought them for her. Drugs which cause false positive appearance of benzodiazepines were also enquired about but had not been given by either his family or during any time of her hospital stay. We procured the list for medications she had been given in the emergency department of the hospital she was taken to at the start of her

Table 1. Laboratory workup to rule out all causes of encephalopathy.

Possible causes	Laboratory work-up +/- interventions	
Drugs	Levetiracetam	
Meningo-encephalitis	Cerebrospinal fluid (CSF) studies	
	Opening pressure (cmH ₂ O):	8 (Normal: 5-25)
	Glucose (mmol/L):	3.0 (Normal: 2.5-4.4)
	Leucocytes (leukocytes/mm):	1 (Normal: 0-8)
	Red blood cells (RBC/mm ³):	0 (Normal: <1)
	Proteins (mg/dL):	58 (Normal: 15-45)
	CSF culture:	No growth (Normal: sterile)
	CSF HSV-antigen:	Negative (Normal: negative)
	CSF Biofire assay:	Negative (Normal: negative)
	CSF lactate mmol/L:	1 (Normal: 1.2-2.1)
Neuro-sarcoidosis	ACE levels:	22 (N: <40 nmol/mL/min)
Subclinical seizures	Electroencephalogram showed non-specific findings attributable to metabolic <i>versus</i> septic encephalopathy	
Metabolic and endocrine	Blood glucose remained within normal limits	(4.1-5.9 mmol/L)
	Serum sodium (mmol/L):	139 (Normal: 136-145)
	Serum calcium (mmol/L):	2.4 (Normal: 2.2 to 2.7)
	Blood urea nitrogen (mmol/L):	3.5 (Normal: 2.1-8.5)
	Arterial ammonia levels (micromol/L):	32 (Normal: 11-32)
	Free thyroxine (nmol/L):	68 (Normal: 57-148)
	Thyroid stimulating hormone (mIU/L):	2.4 (Normal: 0.5-5)
	8:00 a.m. cortisol (nmol/L):	362 (Normal: 140-690)
	CPK (U/L):	48 (Normal: 26-192)
Cardiopulmonary	Chest X-ray:	Normal
	Echo:	Normal left ventricular function, no segmental wall abnormality, ejection fraction of 55-60%
Hepatic	Liver function test and ultrasound liver and gallbladder showed no abnormalities	
Septic	White cell count:	8.1×10 ⁹ /L (Normal: 4.0×14.0)
	C-reactive protein (mg/L):	19 (Normal: <10)
	Procalcitonin (ng/mL):	0.04 (Normal: <0.1)
	Lactate dehydrogenase (IU/L):	140 (Normal: 105-333)
	ESR (mm/h):	24 (Normal: 1-20)
	Blood, urine, sputum and CSF cultures:	No significant growth
	Beta-D-glucan (pg/mL):	0.9 (Negative: <60)
	Galactomannan:	0.118 (> or equal to 0.5)

illness before being referred to our facility. We found no drug in the list that could account for the presence of benzodiazepines in the urine.

We started suspecting that the patient had been given the benzodiazepines by her private nurse. This case was notified to the Medico legal Committee of our hospital. They asked for an audience with the doctors and the staff as well as the son and the private nurse. We informed her son and let him know that the matter needs to be handled discreetly. However, enraged, he had an altercation with the private nurse in our privy, during which he snatched her bag and found several packets of bromazepam. The nurse insisted that the medication was for her own use. Both the son and the private nurse were then questioned by our hospital's medico-legal team. The nurse was no more allowed to visit the patient. The patient's condition started improving gradually with intravenous hydration. She started waking up and was able to speak gradually.

A social worker appointed by our hospital's medico-legal department had an inquisition with the patient and her family before a safe discharge could be planned. As the patient started getting more alert she was asked about events prior to presenting to the hospital. The patient was not aware if there was any sort of malicious intent from her newly appointed caregiver but indicated to us that she felt safe and preferred being taken back home. Her son seemed heavily concerned regarding patients care once at home, stating that he would not have time to personally care for her. On the other hand, keeping the patient in the hospital for completion of recovery was not financially feasible for him and it would put the patient at risk of hospital acquired infections. Therefore, she was discharged home with a home health care team including a nurse and a physiotherapist from the hospital. The medico-legal team was also on board for home visits and any additional intervention.

Table 2. Results of the urine toxicology screen.

Benzodiazepine:	Positive (>900 ng/mL)
Amphetamines:	Negative
Opiates:	Negative
Cannabinoids:	Negative
Barbiturates:	Negative
Repeat test on the next day:	
Benzodiazepine:	Positive (>900 ng/mL)

Discussion and Conclusions

There are several barriers to diagnosing suspected cases of elder abuse, as there is usually a lack of proper history by the patient's or their care-providers. The physical exam may or may not elucidate abuse. Therefore, physicians must be quick to suspect foul-play in cases where an elderly presents with a history that does not 'add up'. Elder abuse stretches beyond the confines of being merely a social and public health issue - as evident from our case, it can affect a patient's survival.

There are various definitions of the term 'elder abuse'. Broadly it pertains to a single or repeated act that may cause physical, emotional or psychological harm to an elderly person. The definition also includes the failure to take timely action that could be of benefit to the elder under a person or institutions care. In 2016 the CDC published surveillance data on elder abuse defining six major categories of abuse: physical, psychological/emotional, sexual, financial, and neglect.³

One in six older adults are sufferers of this form of abuse worldwide, with an estimated 141 million people affected, according to Yon *et al.* in a meta-analysis and systematic review performed in 2017.⁴ The review concluded that data from low-income and middle income countries has been limited. The actual statistic within our population may be even more dismal and can only be expected to rise since the advent of COVID-19.⁵

Abuse of the elderly is a common public health problem, one that is easily missed due to inability of most people within the geriatric population to report or even comprehend the abuse. Several other factors put elderly patients at risk of abuse by their caregivers; in general human rights, is a lesser priority in countries that suffer an over-arching economic plight. Additionally, the elderly patients have little agency in decisions regarding themselves. Also, in eastern cultures with its joint family setups, it is simply assumed that the elderly living with their family will be accorded great care. However, in our case it is apparent that for many elderly people the reality might not be as assuring as their tradition promises.

In our patient reaching the diagnoses of abuse was difficult as the patient did not have any signs of violence on her physical exam. What we found suspicious, was the

exaggerated concern her nurse portrayed for her despite being recently appointed as her caregiver. According to the history the patient diverged from her usual disposition after the nurse's appointment. Additionally, we could not despite exhaustive workup find any other cause explaining the cause of drowsiness. All these clues led us to performing a urine toxicology screen and reach our diagnoses.

After the diagnosis was confirmed the patient improved with conservative management. Our healthcare team had to decide the next steps in patient's management. Since the patient displayed emotional outbursts during her recovery period her condition could be explained to her reliably. Her son held the power of attorney and was involved as part of our shared decision making process. The hospital's medico-legal team was involved so direct confrontation with the suspected perpetrator was avoided by our primary healthcare team.

In conclusion doctors have a very important role to play, as we possess an armamentarium of medical knowledge and diagnostic approaches that enable us to often be the first ones to recognize and report the abuse. A multidisciplinary approach must be sought towards subsequent care of such patients. There is a need for us as physicians in a developing world, to further our education on the matter to adequately serve the elderly community.

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