

Case Report

“Neglecting an Elderly Diabetic Parent”

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Abstract: Diabetes is a common metabolic condition that is frequently encountered by dental practitioners and hospital health care workers. India has a large diabetic population of the world and also has one of the largest geriatric populations. Oral manifestations are rare and occur only if and when the underlying metabolic condition is untreated or neglected. Elder neglect of children has started being reported by medical professionals. This article presents a case of a 67 year old female patient who presented with a chief complaint of oral ulcerations along with xerostomia, dysphagia and glossodynia. Suspicion of neglect (self or by children) was investigated in diagnostic procedure using the mode of an interview. Oral manifestations included a mix of large and small ulcers, those with an inflammatory component being painful while others painless. Elder neglect was diagnosed at stage 1 of treatment and new anti diabetic drug regimen was prescribed to her with diet control.

Keywords: maltreatment, diabetes mellitus, ulcer, glossodynia, halitosis, xerostomia.

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INTRODUCTION

Diabetes is a group of metabolic disorders that have a common phenotypic expression of hyperglycemia. The course and outcome of this metabolic condition are influenced by a complex interaction of genes, environmental factors and lifestyle. Diabetes mellitus (DM) is a very common type of carbohydrate and lipid metabolism disorder that affects millions globally (Diabetes. 2000). The disease is caused by impairing either secretion or function of insulin with evidence pointing to induction by viral infections in human beings and animals (Yoon, J. W. 1990). Although one who suffers from DM is not more, vulnerable to infections, but if infected, the probability of developing serious infections is particularly very high (Tennenberg, S. D. *et al.*, 1999). Surprisingly, India holds the world largest diabetic population in the world with a frequency of 1 in every four persons being diabetic. It is estimated that by 2025, she will have almost 72 million diabetic patients, which will be itself a challenge to health care system. At the same time the problem of elder neglect is still a distanced problem in India, although it has been reported in the literature with

increased frequency (Mattoo, K. A. *et al.*, 2009; & Mattoo, K. A. *et al.*, 2010). While both are different scientific entities having wide ramifications the scope of which is beyond the objective of this article. However, we present a possible link between existing poorly controlled diabetes and elder neglect through this case report. Besides the possible link worth investigating, we also highlight some serious oral ulceration associated with diabetes.

CASE REPORT

An elderly female patient aged 67 years reported to department of oral medicine and diagnosis for treatment of painful ulcerations in her oral cavity. The patient had developed multiple ulcers over a period of few months which used to appear and disappear on her own. Patients medical history revealed that she was a known diabetic (DM type 2) since six years and was has been regularly taking medicine since the metabolic condition was diagnosed by a local doctor in a private clinic. Patients also gave a history of severe dry mouth at



Figure 1: Intra oral view showing gross decay, missing teeth with the supra eruption of opposing tooth, large ulcers on buccal mucosa while medium to small ulcers on the floor of the mouth and buccal mucosa

Times, dysphagia and glossodynia. She reported with a history of foul odor from her mouth complaints by her family members at times. Extra oral examination did not reveal any negative clinical findings. Intra oral examination revealed reddish pink mucosa with impaired oral hygiene and severe halitosis. The mucosa was ulcerated at multiple locations, especially pronounced in the region of left buccal mucosa along the occlusal plane (**Fig 1**) and in the labial vestibule and gingiva of the mandibular arch (**Fig 2**).

Dental examination disclosed a severely neglected mouth with gross calculus, severe plaque around posterior teeth, multiple decayed teeth, multiple missing teeth along with supraeruption of few maxillary teeth (**Fig 1**). Some of the oral ulcers were tender on palpation while others were non painful. Painful ulcers had inflammatory borders with white slough in the center. The patient was asked to undergo fasting plasma blood glucose, oral.



Figure 2: Medium sized ulcers in the labial vestibule. The ulcers limited to lining mucosa only thus differentiating it from gingival ulcerations.

Glucose tolerance and random plasma glucose test. All tests showed a range of between 30 to 40 percent higher values than normal level of glucose. The patient was presented with a treatment plan that was divided into stages. Stage 1 was to identify existing self or elder neglect in the patient, stage 2 was to bring the blood glucose level under control while at the same time control of local infection through removal of caries and oral prophylaxis, stage 3 was to initiate the

extraction of grossly decayed teeth followed by a stage 4 that included various endodontic, restorative and prosthetic treatment. The dental treatment plan was to be carried in synergy with a medical treatment plan given by a diabetologist. The diabetic treatment plan was modified drug therapy (Repaglinide 1 mg, 20 units premixed insulin analogue (30/70), metformin 500 mg). Patients diet was also modified after consultation. The patient consented to the treatment plan during stage 1.

Exploration into existence of self neglect or elder neglect showed that patient was suffering from elder neglect at home. An interview with a female doctor was conducted during which open ended and closed ended questions were asked to identify elder maltreatment. The patient had two sons and both were married and living together. The patient showed signs of self neglect also since she has been neither taking medicines regularly nor informing her family about her existing medical problems. After stage 1 she did not return to undergo further treatment.

DISCUSSION

A case of an elderly female patient has been presented whose chief oral complaints were probably due to her inability to take regular medications (by self) for diabetes. The case is unique since a patient who is suffering from neglect by his family members is directly bringing harm to her health. Elevated level of blood sugar indicates that the patient had not been either taking medicines regularly or may be the medicines were not working for her condition. In either case the caretaker neglect is obvious and from a brief investigation during Stage 1, the patient reluctantly admitted that she was not properly attended by her children at home. Research has shown that diabetes management involves a high degree of patient involvement in monitoring blood glucose, avoiding restricted diet and engaging in some form of physical activity (Hopkins, R. *et al.*, 2016). Studies have also shown that elder abuse victims are likely to have metabolic syndromes than non abuse elders (Koehler, C. *et al.*, 2007; Basol, G. *et al.*, 2011; & Dong, X., & Simon, M. 2015). A dental practitioner although not being associated with medical treatment, he should be aware of the underlying psychological conditions since it has a direct impact on the outcome of his dental treatment (Mattoo, K. A. *et al.*, 2010; & Hopkins, R. *et al.*, 2016). One also needs to differentiate elder neglect from self neglect (Nagaraj, K. *et al.*, 2014). Prevalence of elderly neglected geriatric patients that report to the dentist have been seen to be about 35 to 40 percent in India (Mattoo, K. A. *et al.*, 2009). While there are questionnaires to assess child neglect by parents (Mattoo, K. A. *et al.*, 2018a; & Mattoo, K. A. *et al.*, 2018b) there are little or no methods one can assess elder abuse by children quantitatively.

Oral examination of the patient showed presence of ulcers resembling like aphthous ulcers which were painful. Diabetes is considered to be an important modifying factor for persistent non healing ulcers (Al-Maskari, A. Y. *et al.*, 2013). Such ability is attributed to its ability to cause vascular sclerosis which in turn leads to poor tissue perfusion thus causing hypoxia and delayed wound healing (Preeti, L. *et al.*, 2011). Tissue irritation due to xerostomia that is initiated by rough calculus or sharp surfaces of carious or grossly decayed tooth leads to development of mucosal erosion eventually becoming an ulcer

(Cutando, A. *et al.*, 2003). A patient with such a grossly decayed natural dentition is prone to develop mucosal ulcerations irrespective of her systemic status. Since it is beyond the scope of this article to have a detailed discussion of either elder neglect or diabetes, the authors were curious to know why the patient did not turn up for treatment after disclosing her problem of being neglected by the family during stage 1 of treatment. The answers can be many but perhaps the most convincing answer came from a psychologist who stated that neglect was her primary concern and once she had disclosed her problem to the doctor it is probable that she was afraid it could be revealed to his family members who at some point of time would accompany her to the hospital. Existing of uncontrolled diabetes by an elderly person suffering from elder abuse has also been termed as a potential marker in elderly forensics (Mattoo, K. A. *et al.*, 2015).

CONCLUSION

Within the scope and limitation of this case report, it can be concluded that detailed research in the field of elder neglect needs to be initiated in countries like India where cultural and traditional principles on one side have given a higher preference towards ones parents while changing lifestyle in urban population is not able to fulfill demands of care towards parents.

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