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Research Article

Exploring the Impact of Systemic Conditions in Shaping Chief Complaints in Iraqi Dental Patients: A Focus on Their Prevalence

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Abstract

Background: Systemic health conditions can significantly influence oral health and are often associated with tooth loss and specific dental complaints. These diseases may accelerate periodontal breakdown or complicate existing oral conditions, thereby shaping patients' chief complaints and their reasons for seeking dental care. **Objective:** To assess the impact of systemic conditions on reasons for tooth extraction and evaluate the prevalence of these conditions within the study population. It also documented the most common chief complaints, categorized by gender, age, and systemic conditions. **Methods:** This prospective cross-sectional study was conducted amongst the Iraqi population, involving a total of 2,581 patients who attended the Oral and Maxillofacial Surgery Department for tooth extraction. **Results:** The most common chief complaint was a need for prostheses (43%), followed by dental pain (28.4%). Amongst the 2,581 patients, 659(25.5%) had controlled systemic diseases. The most frequently reported condition was hypertension (12.63%), then diabetes (9.33%), thyroid disease (2.24%), ischemic heart disease (2.16%), and respiratory disease (2.05%). A highly significant relationship was observed between diabetes and periodontal diseases, as indicated by the chi-square test ($p=0.004$). **Conclusions:** This study offers the first epidemiological insights into the impact of systemic diseases on the reasons for tooth extractions amongst the Iraqi population. The findings reveal a significant correlation between specific systemic conditions and oral health issues that ultimately lead to tooth extraction. Additionally, the study underscores the high prevalence of medically compromised individuals.

Keywords: Chief complaint, Dental patient, Oral surgery, Systemic conditions, Tooth extraction.

استكشاف تأثير الحالات الجهازية في تشكيل الشكاوى الرئيسية لدى مرضى الأسنان العراقيين: التركيز على انتشارها

الخلاصة

الخلفية: يمكن أن تؤثر الحالات الصحية الجهازية بشكل كبير على صحة الفم وغالباً ما ترتبط بفقدان الأسنان وشكاوى الأسنان المحددة. قد تسرع هذه الأمراض من انهيار اللثة أو تعقد حالات الفم الحالية، وبالتالي تشكل شكاوى المرضى الرئيسية وأسباب طلبهم لرعاية الأسنان. **الهدف:** تقييم تأثير الحالات الجهازية على أسباب قلع الأسنان وتقييم انتشار هذه الحالات بين المشاركين في الدراسة. كما وثقت الشكاوى الرئيسية الأكثر شيوعاً، مصنفة حسب الجنس والعمر والظروف النظامية. **الطرائق:** أجريت هذه الدراسة المقطعية المستقبلية بين السكان العراقيين، وشملت ما مجموعه 2,581 مريضاً حضروا إلى قسم جراحة الفم والوجه والفكين لقلع الأسنان. **النتائج:** احتلت آلام الأسنان (28.4٪) والحاجة إلى الأسنان الاصطناعية (43٪ لكل منهما) المرتبة الأولى والثانية من حيث الشكاوى الرئيسية. من بين 2,581 مريضاً، كان 659 (25.5٪) يعانون من أمراض جهازية خاضعة للسيطرة. كانت الحالة الأكثر شيوعاً هي ارتفاع ضغط الدم (12.63٪)، ثم مرض السكري (9.33٪)، وأمراض الغدة الدرقية (2.24٪)، وأمراض القلب الإقفارية (2.16٪)، وأمراض الجهاز التنفسي (2.05٪). لوحظت علاقة ذات دلالة عالية بين مرض السكري وأمراض اللثة، كما هو موضح في اختبار مربع كاي ($p=0.004$). **الاستنتاجات:** تقدم هذه الدراسة الرؤى الوبائية الأولى حول تأثير الأمراض الجهازية على أسباب قلع الأسنان بين السكان العراقيين. تكشف النتائج عن وجود علاقة كبيرة بين حالات جهازية محددة ومشاكل صحة الفم التي تؤدي في النهاية إلى قلع الأسنان. بالإضافة إلى ذلك، تؤكد الدراسة على ارتفاع معدل انتشار الأفراد المعرضين للخطر طبياً.

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INTRODUCTION

Tooth loss is a key indicator of a population's oral health and is a widely favored variable in numerous studies [1]. The term "medically compromised patients" refers to patients with systemic diseases, who are pregnant, or who are immunodeficient [2]. Such individuals not only require specialized treatment plans

and care in dental settings, but these conditions can also impact upon their oral health [3]; therefore, it is necessary to identify the changes in disease patterns associated with specific demographic populations in each country. In the last decade there was a high number of studies that assessed the relationship between systemic diseases and oral health [4,5]. Researchers found associations between periodontal

disease and systemic diseases, including diabetes [6], hypothyroidism [7], and cardiovascular disease, amongst others [8]. Systemic conditions can affect oral health directly via pathological processes or indirectly as a result of disease treatment [9]; oral health can similarly impact upon general health. The American College of Cardiology reported that adults missing one or more teeth are at a higher risk of developing heart disease [10]. Numerous studies have reported a strong association between tooth loss and CVD (morbidity) [11,12]. One recent systematic review reported that being edentulous or having fewer than 10 teeth is a predictive indicator of CVD mortality [10]. Oral health can also be an early marker of multiple chronic conditions [13]. The connection between tooth loss and chronic conditions may be linked to either nutritional or inflammatory mechanisms; further, missing teeth hinder the ability to chew effectively and restrict food choices, which can, in turn, influence nutritional intake and overall health [14,15]. Additionally, tooth loss may be a direct consequence of periodontal disease, which is associated with inflammatory markers corresponding to various systemic health conditions [16]. Beyond this, tooth loss has aesthetic consequences, potentially impacting upon self-esteem and driving social isolation, leading to poor psychological and physical well-being [17]. Oral health and systemic conditions may also be connected via shared risk factors such as smoking, alcohol consumption, and unhealthy dietary habits, all of which are often associated with low socioeconomic status [13]. Studies propose that oral microbiota have both local and systemic effects in maintaining overall health and its interplay with various oral and systemic diseases [18]. The increased prevalence of oral disease amongst older adults highlights age-related shifts in oral flora that contribute to disease development [19]. Understanding the most common systemic conditions and how they affect oral health is important for improving overall oral care and customizing dental treatments for medically compromised patients. Additionally, looking into the connection between systemic conditions, dental chief complaints, and oral diseases gives us useful information about how health is connected in general. By analyzing these connections, healthcare providers can better understand how systemic conditions contribute to common oral health issues and how dental problems might indicate underlying medical concerns. To the best of the authors' knowledge, this is the first study aimed at understanding the effect of systemic conditions on the causes of tooth extraction amongst Iraqi patients, including a subgroup analysis of each disease in relation to the chief complaint. This study aims to assess the impact of systemic conditions on reasons for tooth extraction amongst Iraqi dental patients and evaluate the prevalence of these systemic conditions within the study population, whilst also examining the influence of risk factors such as age, gender, and smoking, and documenting the most prevalent chief complaints by gender and age, as well as the distribution of the site and type of extracted teeth amongst the participants.

METHODS

Study design and setting

The research protocol was reviewed and approved by the institutional review committee in the oral and maxillofacial surgery department at the College of Dentistry, University of Baghdad. This study followed the Declaration of Helsinki for medical protocols and ethics (ethical approval #979124). This is a prospective cross-sectional study conducted on Iraqi patients who attended the oral and maxillofacial surgery department from 1st August 2023 to 31 December 2023. Informed consent was obtained from all participants prior to their inclusion in the study.

Inclusion criteria

The total number of patients was 2581, considered based on the following criteria: Patient seeking dental therapy, including intra-alveolar extraction (simple extraction). Patient age ≥ 12 years, patients with controlled medical systemic condition(s), and patient who was informed about the research purpose and signed the consent form.

Exclusion criteria

Patients who refused treatment. Patients with uncontrolled systemic condition(s). Patients who require surgical extraction (trans-alveolar tooth extraction).

Outcome measurements

All patients completed a standardized questionnaire including demographic data and medical, social, and family history before undergoing careful clinical (intra- and extraoral) examination. All Patients' records were then scanned and imported into Microsoft Office Excel 2016. The assessed variables were demographic data—including sex, age, and race (Iraqi or not)—smoking status, number of extracted teeth, and systemic disease(s). To accurately record the prevalence of each systemic condition amongst patients, a separate category for individuals with comorbidities was not created; consequently, duplicate records exist for patients with multiple systemic conditions. The enrollment of participants is illustrated in Figure 1.

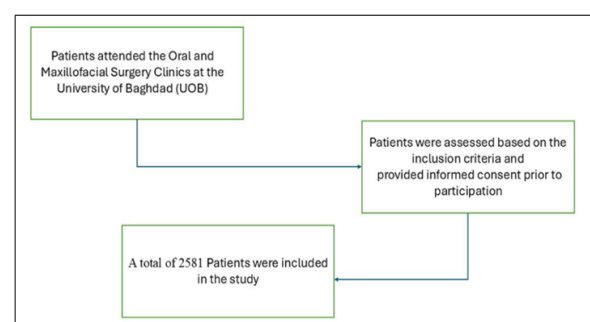


Figure 1: Flowchart depicting the inclusion of patients in the study.

Statistical analysis

Statistical analyses were conducted using GraphPad Prism software version 10 for Windows (GraphPad Software, San Diego, CA, USA). Continuous variables were presented as mean $\pm$ standard deviation, whilst categorical variables were summarized as frequency and percentage. Chi-squared and Fisher's exact tests were employed to compare categorical variables.

Table 1: Characteristics of patients participated in the study

Total (n) of patients	Total patients (n= 2581)	Patients with non-systemic conditions (n= 1922)	Patients with systemic conditions (n= 659)
Age (year) (range) mean	(12-80) 44.4	(12-80) 41.2	(12-80) 58.2
Gender (n/%)	Male: 1347(52.19) Female: 1234(47.81)	Male 1034/53.79 Female 888/46.20	Male 313/48 Female 346/52
Total number of extracted teeth (average $\pm$ SD)	3,232 (1.19 $\pm$ 0.48)	2,286 (1.22 $\pm$ 0.52)	946 (1.13 $\pm$ 0.37)

The most common age group of patients who participated in this study was 41–50 years, comprising 639 patients (24.76%), whilst the least represented age group was 12–15 years, with only 20 patients (0.77%). A total of 3,232 teeth were extracted from 2,581 patients. Amongst these, the first molar was the most commonly extracted tooth (537; 16.6%), followed closely by the second premolar (527; 16.2%) and the first premolar (509; 15.7%), as illustrated in Table 2.

Table 2: Type, distribution and site of the teeth extracted in this study.

Tooth Extraction	Upper	Lower	Total
Central Incisor	133	260	393
Lateral Incisor	205	144	349
Canine	200	91	291
First premolar	325	184	509
Second Premolar	302	225	527
First Molar	267	270	537
Second Molar	139	136	275
Third Molar	164	149	313
Retained Deciduous tooth	20	12	32
Supernumerary Tooth	6	0	6
Total	1761	1471	3232

We found that 1,761 teeth (54.5%) were extracted from the upper arch, compared with 1,471 teeth (45.5%) from the lower arch. Pain (28.4%) and a need for prostheses (43% each) were the two main complaints. Other complaints included retained roots (5.5%), routine check-ups (4.9%), mobility (3.6%), orthodontic issues (2.5%), aesthetic concerns (2.4%), discomfort (2.3%), and non-restorable teeth (2.2%). The least common complaints were fractured teeth (1.2%), swelling (1%), and the need for tooth replacement with implants (0.8%). Retained roots or unrestorable teeth (66.4%) were the most common diagnoses, followed by chronic periodontitis (13.4%) and chronic pulpitis (8.4%). The least common diagnoses were acute periodontitis (0.2%) and acute periapical lesions (0.4%). These findings are summarized in Table 3. Out of 2,581 patients, 659 (25.5%) had controlled systemic conditions, whilst 1,922 (74.5%) had no history of any systemic conditions. Of the 659 patients with controlled systemic conditions, 346 (52%) were female, and 313 (48%) were male. As shown in Table 4, among the 659 patients with systemic conditions,

RESULTS

A total of 2,581 patients aged 12 to 80 years participated in this study, with a mean of 43.65 years; 1,347 (52.19%) were male, and 1,234 (47.81%) were female, as outlined in Table 1.

hypertension (12.63%), diabetes (9.33%), thyroid disease (2.24%), ischemic heart disease (2.16%), and respiratory disease (2.05%) were the most frequently reported conditions.

Table 3: Percentage of diagnoses for the extracted teeth in patients

Diagnosis	n(%)
Retained Root/Non-Restorable Tooth	1788(66.4)
Chronic Periodontitis	361(13.4)
Chronic Pulpitis	226(8.4)
Chronic Periapical Lesion	112(4.2)
Acute Pulpitis	78(2.9)
Acute Periapical Lesion	12(0.4)
Acute Periodontitis	5(0.2)
Others	111(4.1)

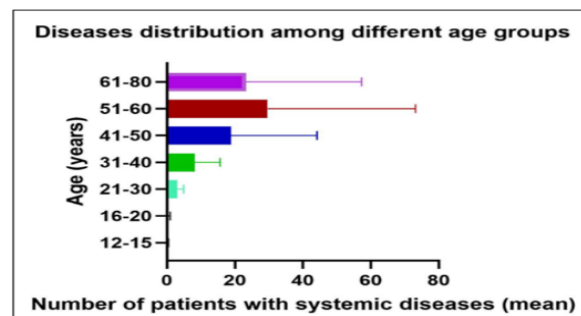
Table 4: Prevalence of systemic conditions amongst Iraqi dental patients

Systemic conditions	n(%)
High blood pressure	326(12.63)
Diabetes	241(9.33)
Thyroid disease	58(2.24)
Ischemic heart disease	56(2.16)
Respiratory disease	53(2.05)
Git disease	43(1.66)
Kidney disease	23(0.89)
Epilepsy	13(0.5)
Bleeding disease	10(0.38)
Pregnant	1(0.03)
Others	11(0.42)

A chi-square test of independence conducted in GraphPad Prism revealed a statistically significant association between sex and disease category ($p < 0.0001$). Subgroup analysis using Fisher's exact test revealed that hypertension showed a significant association with sex, with $p = 0.0192$. Similarly, thyroid disease exhibited a preference towards females ($p < 0.0001$); further, bleeding disorders also displayed a significant difference between sexes ($p = 0.0005$). No significant associations were identified between other diseases and sex. These findings are summarized in Table 5. The most prevalent age group in those with systemic conditions was 51-60, with a mean of 29.6 ± 43.5 , as shown in Figure 2.

Table 5: Relationship between systemic conditions and sex

Systemic conditions	Total (n)	Male (%)	Female (%)
High blood pressure	326	46.62	53.37
Diabetes	241	56.01	43.98
Thyroid disease	58	13.79	86.20
Ischemic heart disease	56	48.21	51.78
Respiratory disease	53	58.49	41.50
Git disease	43	55.81	44.18
Kidney disease	23	34.78	65.21
Epilepsy	13	69.23	30.76
Bleeding disease	10	0	100

**Figure 2:** Relationship between systemic diseases and age.**Table 6:** Relationship between systemic diseases and cause of tooth extraction

Diagnosis	No systemic diseases	High BP	Respiratory disease	IHD	DM	Kidney disease	Epilepsy	GIT disease	Thyroid disease	Bleeding disease	Pregnant	Other diseases
Acute pulpitis	63	6	2	0	3	1	0	1	3	1	0	0
Chronic pulpitis	156	37	6	7	14	4	3	3	2	1	0	0
Acute periapical lesion	8	2	0	0	0	0	0	0	0	1	1	0
Chronic periapical lesion	76	14	1	4	6	1	0	2	8	0	0	0
Acute periodontitis	5	0	0	0	0	0	0	0	0	0	0	0
Chronic Periodontitis	244	38	5	6	50	3	4	8	2	1	0	0
Retained root/non-restorable tooth	1277	220	37	38	161	14	6	28	41	6	0	11
Others	93	9	2	1	7	0	0	1	2	0	0	0
Total patients	1922	326	53	56	241	23	13	43	58	10	1	11

Values were expressed as frequency.

Notably, 704 out of 2,581 patients (27.3%) were identified as smokers. Amongst these, 644 (91%) were male and 60 (9%) were female, with the highest prevalence of smokers in age groups 41-50 (27%) and 51-60 (23%), respectively, as shown in Table 7. There was a significant positive association between the prevalence of non-smokers and certain diseases, such as hypertension, diabetes, and thyroid diseases, with

The data indicates a positive relationship between age and both hypertension and diabetes, starting at age 41. This relationship is statistically significant, with a Fisher's exact test yielding a p -value of < 0.0001 . Additionally, there is a significant relationship between age and ischemic heart disease for individuals older than 51, with a p -value of 0.0237. There was no statistically significant relationship between hypertension and tooth extraction due to retained roots ($p = 0.93$), chronic periodontitis ($p = 0.87$), or chronic pulpitis ($p = 0.15$). There was a strong association between diabetes and periodontal disease ($p = 0.004$), but not with retained roots ($p = 0.993$). There was no significant relationship between ischemic heart disease or thyroid disease and retained roots, with p -values of 0.97 and 0.79, respectively. No correlation between ischemic heart disease and periodontitis $p = 0.8854$. Distribution of systemic conditions among different diagnosis was shown in Table 6.

Fisher's exact test yielding $p < 0.0001$, 0.0439, and 0.0008, respectively. The association between smoking status and both ischemic heart disease and respiratory disease was found to be statistically not significant. Fisher's exact test yielded p -values of 0.1686 for ischemic heart disease and 0.87 for respiratory disease. No association was found between smoking status and other systemic conditions.

Table 7: Relationship between smoking and systemic diseases

Smoking status	High BP	Respiratory disease	IHD	DM	Kidney disease	Epilepsy	GIT disease	Thyroid disease	Bleeding disease	Pregnant	Other diseases
Total patients	326	53	56	241	23	13	43	58	10	1	0
Smoking	52	15	10	48	4	7	16	5	1	0	0
Non-smoking	274	38	46	193	19	6	27	53	9	1	11
Teeth extracted for smoker	54	19	15	54	5	10	18	0	1	0	0
Teeth extracted for non-smoker	308	45	58	214	22	5	31	65	9	1	11
Total extracted teeth	362	64	73	268	27	16	49	65	10	1	11

Values were expressed as frequency.

DISCUSSION

Systemic conditions can impact routine dental care, increasing the risk of complications during or after treatment, necessitating careful attention and management by dental professionals. In our study, we observed a high prevalence of medically compromising

conditions (25.5%) amongst Iraqi dental patients, highlighting the importance of preoperative medical screening to ensure the success of dental treatment. This high prevalence may be attributed to several factors, including the fact that many Iraqi patients seek dental care at the Oral and Maxillofacial Surgery Department—a low-cost academic health institution—for economic reasons: the majority of these patients

come from lower socioeconomic backgrounds, with the most common age group being 41–50 years (24.76%), and often present with underlying medical conditions. Additional contributing factors include the country's history of conflict, a strained healthcare system, limited access to routine medical check-ups, and the often-asymptomatic nature of conditions such as hypertension, which can delay diagnosis. This proportion of medically compromised patients exceeds that reported in numerous other literature: for example, a similar study conducted in Saudi Arabia by Aimas *et al.* [3] found that out of 743 patients, 10% had medically compromising conditions. Another study by Dhanuthai *et al.* [20] demonstrated that, out of 58,317 patients attending the Faculty of Dentistry at Chulalongkorn University, 7,167 (12.2%) were medically compromised, and, similarly, a study by Bhateja [21] on 36,729 dental patients in India found that 375 patients (1.02%) fell into this category. Conversely, a greater proportion of medically compromised patients were identified by Smeets *et al.* [22] (28.2%) amongst 29,424 dental patients in the Netherlands. We assessed the impact of smoking status on the prevalence of systemic conditions and found no correlation between them. Surprisingly, there was a significant positive association between the prevalence of non-smokers and certain diseases, such as hypertension and diabetes. This may be related to unequal sample size, as the smokers account for only 27.3% of all the included population. The present study illustrated that tooth extractions were more prevalent amongst male patients, potentially due to their lower attention to and time available for restorative care, a finding consistent with Passarelli *et al.* [23]. This observation aligns with the tendency of females to be more conscious of their appearance and to seek dental treatment at an earlier stage. The age group least represented in the study was 12–15 years, which may be attributed to the fact that patients in this age range are typically treated in pediatric clinics. The most prevalent chief complaint was a need for prostheses (43%), followed by pain (28.4%), which may be attributed to the presence of a specialized prosthodontics department within the same institution as the Oral and Maxillofacial Department, resulting in a higher referral rate for tooth extractions. This finding differs from other studies, which identified pain as the most common chief complaint for tooth extraction [24,25]. The most common diagnosis was retained root/non-restorable tooth (66.39%). This may be due to patients neglecting their teeth until they become unrestorable, at which point they realize the loss of both function and aesthetics and seek to regain them. This behavior may be influenced by factors such as lack of awareness of the need for early restorative treatment, financial constraints, or a preference for extracting non-restorable teeth rather than opting for more extensive or costly interventions. Chronic periodontitis was the second most common diagnosis (13.4%), which aligns with findings from other studies [23,26]; however, other studies have reported dental caries as the primary reason for tooth extraction [23,26]. Hypertension is a global public health concern

and the most prevalent disease amongst the dental population in this study (12.63%), in agreement with other studies [27, 28]. It was also observed that the highest prevalence of hypertension was found within the 51–60-year age group, followed by the 61–80-year age group; it was positively correlated with age $p < 0.0001$. One study involving 21,800 participants examined the link between oral health, periodontal disease, and the prevalence of hypertension. Amongst the participants, 11,017 (50.54%) were in the hypertensive group, whilst 10,783 (49.46%) were in the non-hypertensive group. The study found a notable association between poor oral health, periodontitis, and higher prevalence of hypertension [29]. Another nationwide cohort study involving 706,584 participants revealed that chronic periodontitis is linked to a moderately elevated risk of developing hypertension [30], though we did not replicate this finding in the current study. Possible confounders include the fact that blood pressure can be elevated due to dental anxiety, the physiological effects of the procedures themselves vis-à-vis stress response, and as a consequence of epinephrine contained in local anesthesia [31]. Nonetheless, it remains important for the practitioner to take measures to mitigate patient stress within the dental environment and liaise with medical colleagues to maintain healthy blood pressure, as prolonged hypertension is a risk factor for stroke and heart disease [32]. Diabetes is a chronic metabolic disorder characterized by persistently elevated serum glucose levels, which impair the body's inflammatory response to dental plaque, resulting in more severe cases of gingivitis and periodontitis [33]. Our study found that diabetes mellitus was the second most common systemic condition amongst Iraqi dental patients, with a prevalence of 9.33%. This finding is consistent with other studies in literature [3,21]. Out of the 241 diabetic patients in our study, 161 were diagnosed with retained roots (non-restorable teeth). Whilst this finding was not statistically significant, it underscores the connection between diabetes and the destructive impact of oral diseases. Additionally, in our population, tooth extractions due to periodontal disease were significantly more common amongst diabetic patients compared to non-diabetic patients ($p = 0.004$), and this is consistent with other studies in literature [6]. The 51-60 age group was most affected by diabetes, with a positive correlation found between diabetes and age ($p < 0.0001$). In our study, thyroid disease was identified as the third most prevalent condition, affecting 2.24 % of the population; it predominantly affected females ($p < 0.0001$), with the highest prevalence in the 51-60 age group. Amongst the 58 patients with thyroid disease, 41 were found to have retained roots; however, this relationship was not statistically significant. Furthermore, given the relatively high prevalence of thyroid diseases amongst Iraqi patients, it is important to investigate dietary iodine intake in the country. A systematic review and meta-analysis investigating the impact of thyroid disease on oral health highlighted that thyroid hormone imbalances can influence the metabolic activity of various tissues, including the periodontium.

Additionally, autoimmune diseases are linked to an increased risk of periodontal disease. The meta-analysis found that patients with hypothyroidism had significantly poorer periodontal health compared to healthy individuals [34]. In addition, Song et al. conducted a study to explore the link between periodontitis and thyroid dysfunction. Their nationwide population-based research—involving almost 5,500 participants—found that lower levels of thyroid-stimulating hormone (TSH) were significantly associated with an increased risk of developing periodontitis [35]. In our study, however, we were unable to elicit this relationship, likely due to the small sample size of patients with thyroid diseases, and a positive correlation between thyroid disease and periodontitis was not observed ($p=0.1004$). Ischemic heart disease was the fourth most common systemic condition in our population (2.16%) and most prevalent in the age group 61–80 yrs. Aging leads to a decline in physical health and functionality, with frailty being a major risk factor for negative health outcomes, including disability, hospitalization, falls, institutionalization, dementia, and increased mortality [36]. Age itself is an independent risk factor for cardiovascular disease, especially when combined with other comorbidities such as frailty, diabetes, and obesity [37]. In recent years, it has been acknowledged that oral infections, particularly periodontitis, can influence the development and progression of several systemic conditions, including cardiovascular disease, bacterial pneumonia, diabetes, and low birth weight [38]. It has been observed that periodontitis increases the risk of coronary heart disease, with individuals suffering from periodontal diseases being approximately 19% more likely to develop cardiovascular issues. This risk is particularly significant in individuals over the age of 65. Likewise, various studies and case reports indicate that patients with periodontal disease are at a higher risk of developing cardiac problems compared to those without the condition [39]. However, we could not find this positive relationship in our population.

Study limitations

The limitations of this study include the possibility that it may not fully reflect the actual prevalence of infectious diseases such as HIV, HBV, and HCV due to the lack of comprehensive screening programs in our developing country. Additionally, patients may withhold this information because of societal stigma, fearing that the dentist might postpone or refuse treatment. Moreover, the patient sample may not be fully representative of the general population, as individuals seeking prosthodontic treatment were overrepresented in our institution. The single-center design may limit the generalizability of the findings to populations outside Iraq, as the sample represents a specific cultural and geographic context. Finally, selection bias may be present, as patients attending a dental teaching institution may differ from those seeking care in private clinics or rural areas.

Conclusion

This study provides the first epidemiological data on the impact of medical conditions on the reasons for tooth extraction amongst Iraqi dental patients and reveals the prevalence of these conditions amongst the population; furthermore, it highlights the importance of training dentists to effectively treat medically compromised patients, ultimately improving their quality of life. Additionally, the study underscores the need for screening programs for infectious and asymptomatic diseases in our developing country.

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Conflict of interests

The authors declared no conflict of interest.

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Data sharing statement

Supplementary data can be shared with the corresponding author upon reasonable request.

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