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Research Article

PREVALENCE OF JUNK FOOD HABIT AS A RISK FACTOR IN GRAHANI DOSHA IN JAIPUR AND ITS SURROUNDING AREAS: AN EPIDEMIOLOGICAL STUDY

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ABSTRACT

In the modern era of globalization, there has been a major shift in diet pattern, life styles and behavioral pattern that is not suitable for the normal physiology of digestion. Junk food is responsible for rising cases of obesity and Non Communicable Diseases (NCDs). Present study was done to assess the junk food habit as a risk factor in Grahani dosha. A survey study was conducted at National Institute of Ayurveda, Jaipur, India campus and junk food outlets in Jaipur, India. Total 250 subjects were surveyed on the basis of dully prepared survey proforma. Continuous intake of junk food with sedentary and stressful life creates disruption in the status of Agni and Aam formation. An etiological triad like continuous intake of junk food, agni dusti and aam formation have a pivotal importance in the pathogenesis of Grahani dosha. Our findings showed that habit of junk food betokens dependency on such types of alternative food items rather than traditional home made food is hazardous and people should be cognizant of its consequences.

Keywords: Grahani roga, Junk food habit, Sedentary life style, Agni, Aam.

INTRODUCTION

Today, status of living in every aspect of life is highly advanced. Cost of living is very high. There is imbalance not only in environment but change or irregularity vividly can be seen in all the means of life including our diet pattern, life styles and behavioral pattern that is not suitable for our normal physiology of digestion of body. In the recent years, surprisingly demand of packaged food or junk food is rising. Due to shortage of time, busy job schedule, rise in standard of living, convenience and influence of western countries people are compelled to change their food habits and types of food. Junk food is an example of unbalanced diet responsible for malnutrition that is most wide spread condition. In the recent years, there has been an unprecedented increase of incidences related to gastrointestinal system due to changing in life style, diet pattern, behavioral pattern and mental stress and strain. One such type of common gastrointestinal disorder is Grahani Dosha caused by regular intake of junk food that weakens the digestive fire and disharmony is produced between the digestion and absorption of body. According to Acharya Caraka - Etiology of Grahani dosha directly points out uncontrolled eating habits without minding his capacity of digestion in shastra due to covetousness in diet and not following the appropriate procedure of food taking (depicted as Ashtaaharavidhivisheshaytan, Dvadash ashan and Chaturvinshati kalpana). All these etiological factors affect Jathara Agni causing Grahani dosha very soon.¹ Intake of food during indigestion and during the period when previous meal is not digested causes vitiation of Grahani.² Junk foods are highly guru, snigdha and vidahi in nature responsible for

delayed digestion and indigestion of food and continuous intake of such type of food diminishes digestive fire and ultimately weakening of Grahani.³ People should prevent from such faulty eating habits because prevention is better than repeated treatments, hence this study is important. This prospective cohort study was done to assess the etiology of Grahani dosha.

MATERIALS AND METHODS

The prospective hospital-based cohort study was done over the period of one year from September 2012 to August 2013 at National Institute of Ayurveda, Jaipur, India various camps organized by institute in Jaipur, India and certain junk food outlets in Jaipur, India. To gather the data for measurement of junk food habit as a risk factor in Grahani patients, a dully prepared proforma was made. Total 250 subjects between the age groups of 18-70 years were surveyed for junk food habit.

Inclusion criteria

- Patients complaining of Muhur badda drava mala pravritti, muhur muhur mala pravritti and with or without other symptoms of Grahani were selected.
- Patients between age group of 18-70 years were selected for the study.
- Patients irrespective of sex, religion, occupation and chronicity were selected for the study.

Exclusion criteria

- Patients of asadhya lakshanas and upadravas of Grahani were excluded.
- Patients suffering from major acute diseases like- T.B., Cancer, HIV/AIDS, Pregnant ladies and severe diarrhoea were excluded.
- Patients bearing age less than 18 years and more than 70 years also were excluded.

RESULT AND DISCUSSION

Regarding age out of 250 cases maximum numbers of cases i.e. 64.8 % were found in the age group of 26-35 years. The next common age group is 18-25 years (16.4 %) followed by 15.2 % cases in age group of 36-45 years and then 3.6 % cases in age group of 46-55 yrs (Figure 1). 64.8 % were found in the age group of 26-35 years this may be because of addiction of junk food habit is common in youngsters and Fast food restaurants appeal especially to person less than 35 years.⁴ Distribution of Sex in 250 cases revealed that 64.8 % of cases were female followed by 35.2 % were male (Figure 2). No conclusion can be put forward from this data. Out of 250 cases, maximum (64.4 %) were students, 14 % were in Business occupation, followed by service class 11.6 %, 8 % were house-wives and 2 % were unskilled (Figure 3). Probably stressful life and unwholesome food habits in these vocations would have increase the incidence of Grahani roga.⁵ On considering the data of Sharira Prakriti, maximum i.e. 51.2 % patients had Vata-Pitta Prakriti, 26 % had Pitta-Kapha Prakriti and 22.8 % patients had Vata-Kapha Prakriti (Figure 4). As Grahani is Pitta-pradhan vyadhi so pitta dominant prakriti subjects would have increase the prevalence for disease. Out of 250 cases, maximum subjects (66.8 %) were fond of Indian junk food, followed by 33.2 % western junk food (Figure 5). In the survey study, maximum subjects (56.8 %) were Non-user, followed by 22.4 % regular, 12 % Addicted and 8.8 % Frequent (Figure 6). Regular, addicted and frequent user was taking junk food twice, thrice or four times in a week while non-user sometimes in a month or year. There was no problem in 40 % subjects (Figure 7), followed by indigestion in 34.4 % subjects and excess gas along with heaviness in abdomen in 25.6 % subjects (Figure 8). Out of 250 cases, there was no heart-burn in 61.2 % subjects, followed by heart-burn in 30.8 % subjects and sometimes heart-burn in 8 % subjects (Figure 9). Out of 250 cases, delayed digestion of food was not noticed in 40 %, presence of delayed digestion in 36.8 % and sometimes delayed digestion in 17.2 % subjects (Figure 10). As most of subjects were non-user so they had no problem but who were regular, frequent or addicted type of junk food user facing problem. Continuous intake of junk food causes nutritional deficiency so fatigue was noticed in 45.2 % and no fatigue in 54.8 % (Figure 11). There was absence of pain or any discomfort in 62 %, sometimes in 12.8 % and presence of pain or discomfort in 25.2 % subjects (Figure 12). Probably because of continuous intake of junk food causes aam formation that give rise to anilmudhta. Out of 250 cases, there was absence of gurgling sound in 47.2 %, followed by presence in 31.2 % and sometimes in 21.6 % subjects (Figure 13), probably due to perpetual intake of junk food is responsible for vitiation of vata. In this study, tendency of flatulence was not found in 65.6 %, while sometimes in 18.4 % and noticed in 16 % subjects (Figure 14), probably

continuous intake of junk food is responsible for aam formation and vitiation of vata dosha. This study showed that 68.4 % subjects have no difficulty to digest heavy meal, followed by sometimes in 23.2 % and difficulty to digest heavy meal was noticed in 8.4 % subjects (Figure 15), probably regular intake of junk food is responsible for agni dushti so digestive secretions are disrupted. In the survey study, there was no sleep after taking junk food in 70.8 % subjects, followed by sleep just after taking junk food in 27.6 % subjects and sometimes sleep in 1.6 % subjects (Figure 16). Out of 250 cases, maximum subjects (64 %) were not lacking of interest in work, followed by 28 % were lacking of interest in work and sometimes apathy in work in 8 % subjects (Figure 17). Study showed that in 70.8 % subjects no altered bowel habit, followed by presence of altered bowel habit in 28 % subjects and sometimes in 1.2 % subjects (Figure 18), because continuous intake of junk food causes vitiation of agni that is responsible for it. It was found in survey study that there was absence of watery stool in 66 % subjects, followed by watery stool in 25.6 % subjects and sometimes in 8.4 % subjects (Figure 19). Out of 250 cases, semi-solid stool consistency in 74 %, followed by liquid stool with mucous in 21.6 % and dry/hard stool in 4.4 % subjects (Figure 20). Samagni was noticed in 56 % subjects, Tikshnagni 20 %, Mandagni 12.8 %, and Vishmagni 11.2 % (Figure 21). Altered agni were observed in regular, frequent and addicted junk food user while samagni in non-users. Pravara jarana sakti was found in 60.8 % subjects, avara jarana sakti 24 % and madhyam in 15.2 % subjects (Figure 22). Avara and madhyam jarana sakti were found due to disruption of Agni in regular, frequent and addicted type of junk food user. Pravara abhyavarana sakti was found in 54 %, followed by Avara in 24 % and Madhyam in 22 % subjects (Figure 23), as most of the subjects were non-user so they showed pravara abhyavarana sakti but those were taking continuously junk food showed madhyam and avara sakti due to disrupted agni.

CONCLUSION

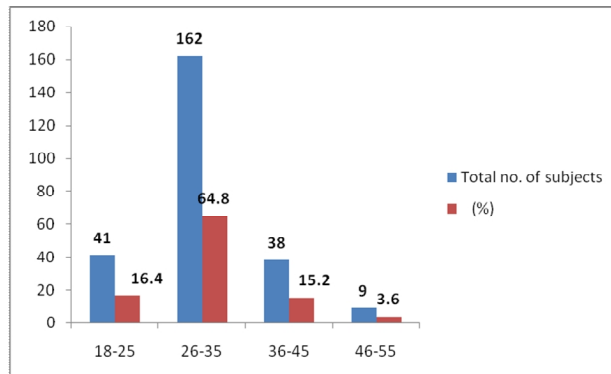
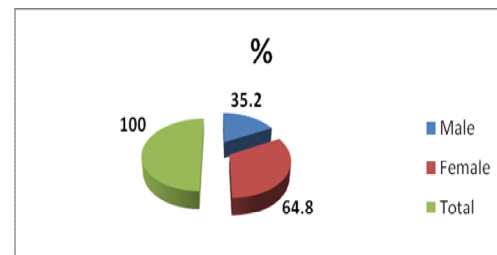
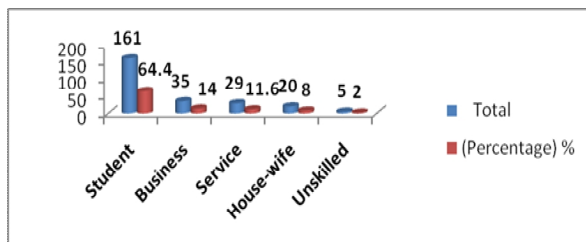
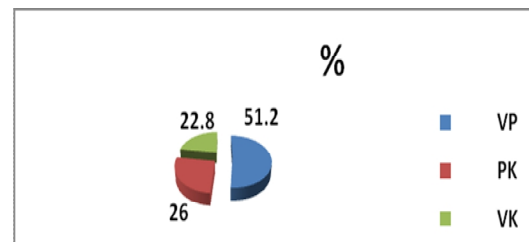
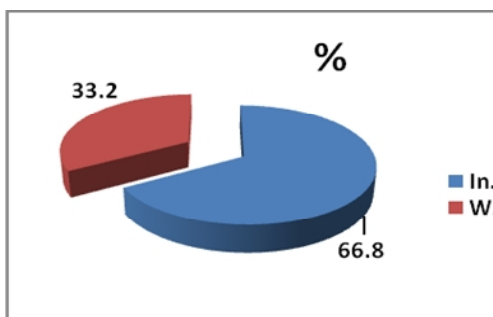
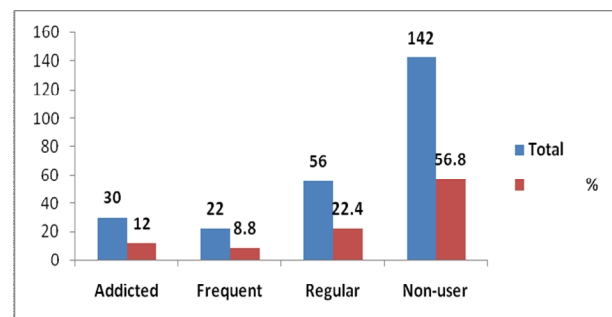
The study revealed that junk food habit was more in the age group of 18-35 years, female are more used to taken, high prevalence in students, business class and accommodation class. Maximum incidence of junk food habit was observed in vata-pitta prakriti and pitta-kapha prakriti, 22.4 % were conventional utilize, 12 % addicted and 8.8 % were frequent utilize. Associated health quandaries such as indigestion, excess gas along with heaviness in abdomen, heart-burn, delayed digestion of food, fatigue, abdominal pain or discomfort, gurgling sound in abdomen, flatulence, apathy, altered bowel habit, watery stool often, disrupted agni in 44 %, avara jarana sakti in 24 % and avara abhyavarana sakti in 24 % subjects (Table 1). The overall study concluded that junk food habit is one of the most paramount etiological factors in the pathogenesis of Grahani roga as described in Ayurvedic texts.

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Table 1: Filtration of Grahani patients according to various risk factors

Parameters	Total	%
Occupation	225	90
Prakriti (P dominant)	193	77.2
Junk food user	108	43.2
Problem after taking junk food	150	60
Indigestion, excess gas and heaviness in abdomen	140	56
Heart-burn	97	38.8
Delayed digestion of food	135	54
Fatigued/Lethargic	113	45.2
Pain or any discomfort	95	38
Gurgling sound in abdomen	132	52.8
Tendency of flatulence	86	34.4
Difficulty to digest heavy meal	79	31.6
Sleep after taking junk food	73	29.2
Altered bowel habit	73	29.2
Status of Agni	110	44
Jarana sakti	98	39.2
Abhyavara sakti	115	46

**Figure 1: Age wise percentage prevalence of 250 subjects****Figure 2: Sex wise percentage prevalence of 250 subjects****Figure 3: Occupation wise Percentage prevalence of 250 subjects****Figure 4: Prakriti wise percentage prevalence of 250 subjects****Figure 5: Junk food type wise percentage prevalence of 250 subjects****Figure 6: Junk food user wise percentage prevalence of 250 subjects**

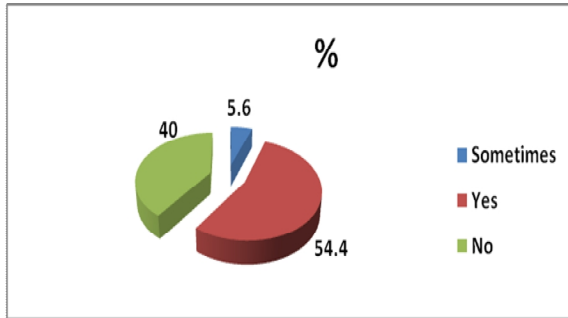


Figure 7: Problem after taking junk food wise percentage prevalence of 250 subjects

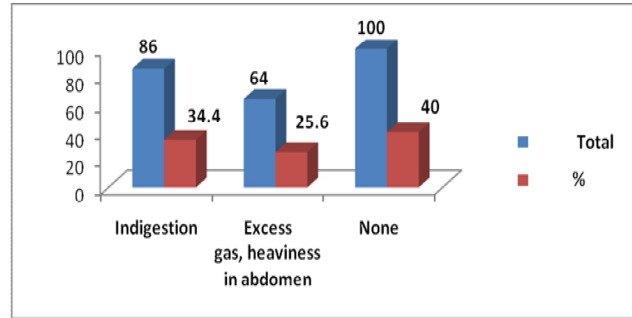


Figure 8: What problem after taking junk food wise percentage prevalence of 250 subjects

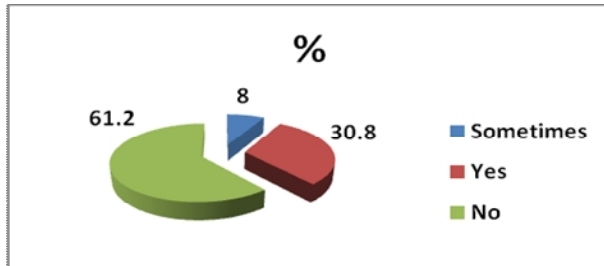


Figure 9: Percentage prevalence of 250 subjects according to Heart-burn after taking junk food wise

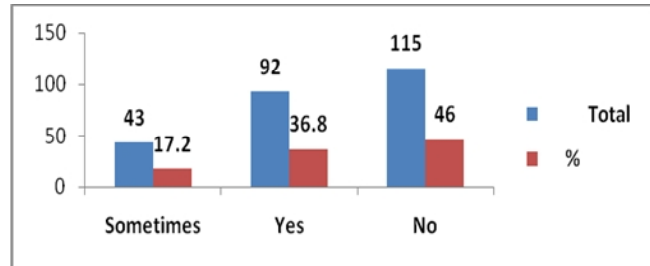


Figure 10: Percentage prevalence of 250 subjects according to delayed digestion of food

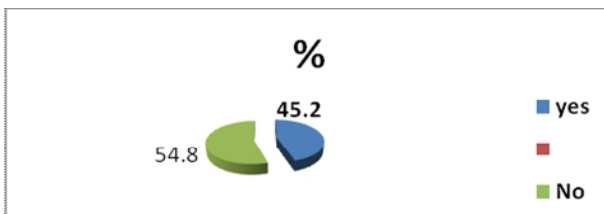


Figure 11: Percentage prevalence of 250 subjects Fatigued or Lethargic wise

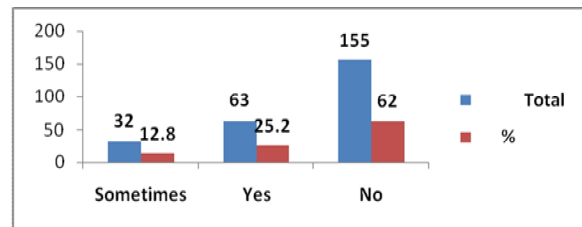


Figure 12: Percentage prevalence of 250 subjects having pain/discomfort

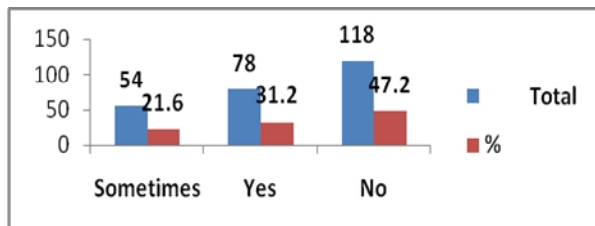


Figure 13: Percentage prevalence of 250 subjects having Gurgling sound in abdomen

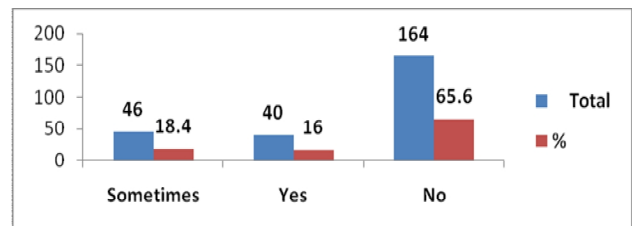


Figure 14: Percentage prevalence of 250 subjects having tendency of flatulence

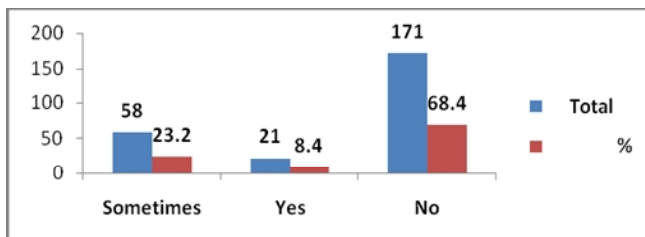


Figure 15: Percentage prevalence of 250 subjects having difficulty to digest heavy meal

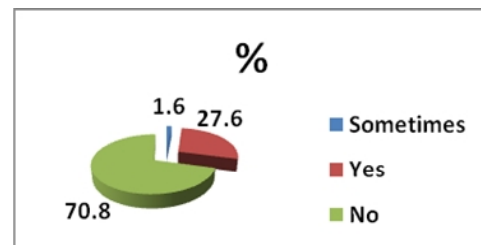


Figure 16: Percentage prevalence of 250 subjects according to sleep after taking junk food

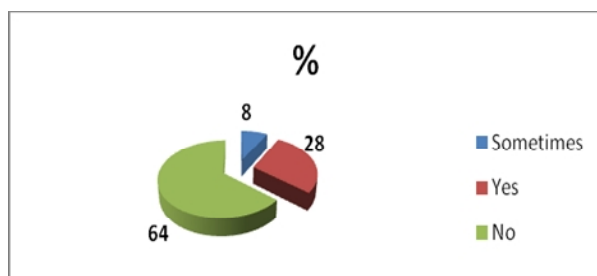


Figure 17: Percentage prevalence of 250 subjects according to lack of interest in work wise

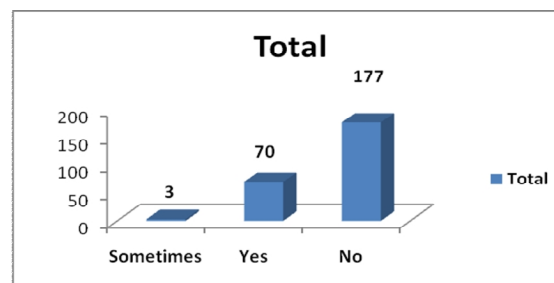


Figure 18: Percentage prevalence of 250 subjects according to altered bowel habit

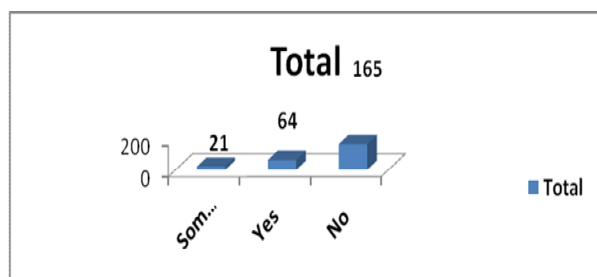


Figure 19: Percentage prevalence of 250 subjects showing watery stool often

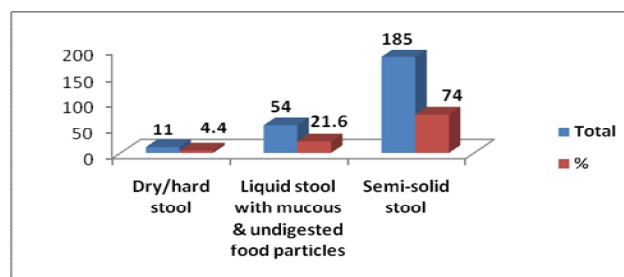


Figure 20: Stool consistency wise percentage prevalence of 250 subjects

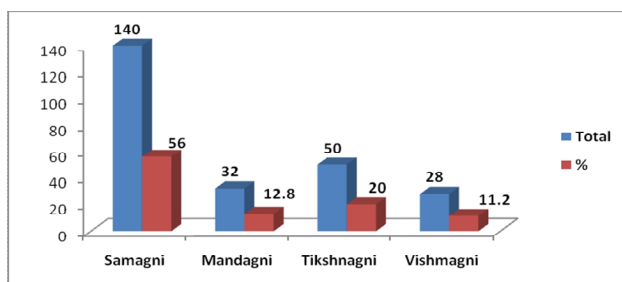


Figure 21: Status of agni wise percentage prevalence of 250 subjects

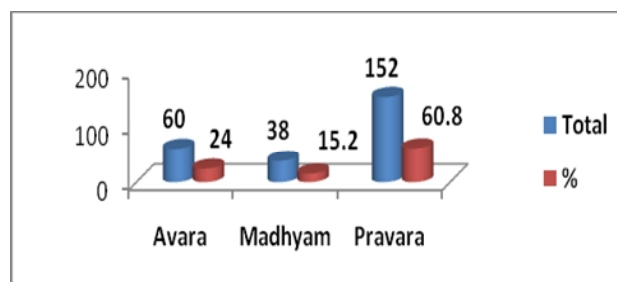


Figure 22: Jarana sakti wise percentage prevalence of 250 subjects

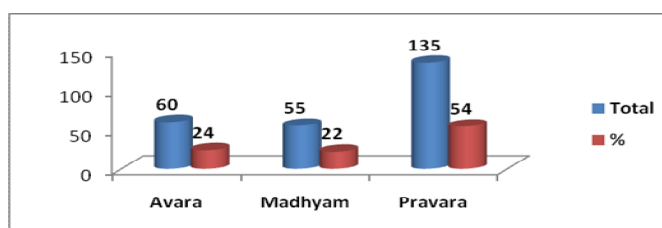


Figure 23: Abhyavarana sakti wise percentage prevalence of 250 subjects

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