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“An Observational Study on *Upadrava* of *Atisthoulya* (Complications of Obesity)”

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Abstract

Ayurveda, the ancient Indian system of Medicine, science of life, emphasizes on maintenance of positive health in healthy individuals and alleviation of ailments of diseased one. *Acharya Charaka* has explained various features of *prashashta purusha* which is one among the features of healthy individual. Deviation from the features is considered as the *nindita pursha* i.e forbidden people in the society. *Atisthoulya* being one among the *ashta nindita*, is characterized by *medomamsa vridhhi*, *chala sphik*, *chala udara*, *chala sthana* and *ayatopachayaotsaha*. In order to cure the disease of the diseased one, it is very crucial to understand the stage of disease. *Upadrava* is the secondary change produced in a disease, indicates the progress of the disease condition. Ignorance of them in the treatment can further harm the patient. *Atisthoulya* being a difficult one to manage compared to *karshya* depicts *upadrava* like *prameha pidaka*, *vatavikara*, *kushta*, *visarpa*, *meha*, *kamala*, etc. which have been mentioned by our acharyas. In contemporary science the complications of obesity are type II diabetes mellitus, hyperlipidemia, diabetic complications, stroke, non-alcoholic steatohepatitis, cirrhosis, exertional dyspnea, sleep apnea, respiratory failure, osteoarthritis, varicose veins etc. Thus, an attempt has been done to understand the occurrence of *Upadrava* in *Atisthoulya* conditions for which observational study was carried out among 100 patients and data was collected.

Result: Among the 14 *Upadrava* of *Atisthoulya* mentioned in the *Ayurveda classics*, 11 were present in the subjects, of which *Dhatukshayajanya vatavyadhi* being the most prevalent one and *Jwara* being the least prevalent one.

Key words: *Upadrava*, *Atisthoulya*, *Vatavikara*, *Prameha*, *Kushta*.

Introduction

Equilibrium of *dosha*, *agni*, *dhatu*, *mala* in terms of quantity and its function accompanied by the pleasantness of *indriya* and *manas* is the definition of health in our science.^[1] *Dhatu* plays a vital role in the maintenance of health. *Dhatwaagni* has a crucial role to play in the maintenance of normalcy of *Dhatu*. Deviation of *Dhatwagni* from its normal function leads to *Dhatwagni maandya* leading to improper formation of *Dhatu*. one among the *dhatwaagnimandyaajanya vikara* is *atisthoulya* where the presence of *ativridhhi* of *meda dhatu* is seen.^[2]

Atisthoulya is a *bahudoshavsta*,^[3] caused due to *santarapanooha aahara* ^[4]. It is a *kaphaja nanaathmaja*^[5] *dhatwagnimaandyajanya vikara*. Cardinal features of *Atisthoulya* are *medomamsa ativriddhi*, *chalsphik*, *chalodara*, *chalastana*, *ayathaopachaya* and *anutsaha*.^[6] Along with these features, *Charaka* mentions 8 morbid conditions coined as *Ashtadosha* i.e. *aayushohrasa*, *javoparodha*, *krchravyavaayatha*, *dourbalya*, *dourgandhya*, *swedaabadha*, *kshudaatimaatra*, *pipaasaatimaatra*^[7] which manifests in later stage of disease due to its chronicity. It manifests due to various causative factors like *avyayaama*, *divaswapna*, *shleshmala aahara*.^[8] *Acharya Charaka* mentioned *harsha nitya*, *achintana* and *beeja swabahava*^[9] as the additional causative factor for *Atisthoulya*. Due to the above mentioned causative factors, there will be formation of *madhura aahara rasa* which is predominant with *sneha guna* leads to *ativriddhi* of *meda dhatu*. Due to *ativriddhi* of *meda dhatu*, *marga* gets obstructed with *medas* leading to improper nourishment of other *dhatu*.^[10] Due *medasaavruta marga*, *vaayu* gets restricted in the *kostha*, and its constant movement within *kostha* leads to *sandhookshana* of *agni* and will result in rapid *shoshana* of *aahara*. This will lead to rapid digestion of the *aahara*, further enhancing the craving for food. If the craving is not met on time, the person will be inflicted with severe disorders.^[11] Thus, the involvement of *medodhatwaagni* in the manifestation of *Atisthoulya* plays a vital role.

Due to the similarity in the etiology, pathogenesis and the clinical manifestations *Atisthoulya* is analogous to Obesity where the *dhatwaagni maandya* understood as metabolic error in a parallel perspective. Obesity is the excessive or abnormal accumulation of adipose tissue in the body that impairs health via its association to the risk of development of diabetes mellitus, cardiovascular disease, hypertension and hyperlipidemia ^[12]. It is a significant public health epidemic which has progressively worsened over the past 50 years. It is a complex disease with multifactorial etiology. It is the second most common cause of preventable death after smoking. Various metabolic changes occurring due to the excess accumulation of adipose tissue consequently lead to complications. Thus, it has adverse effects on both mortality and morbidity. Type II diabetes mellitus, Hyperlipidemia, Diabetic Complications, Stroke, Non-Alcoholic Steatohepatitis, Cirrhosis, Exertional Dyspnea, Sleep Apnea, Respiratory Failure, Osteoarthritis, Varicose Veins are some of the major complications of Obesity.^[13]

Upadrava is a disease produced after the formation of the main disease, and irrespective of its chronicity, it is dependent on the main disease.^[14] It is produced by the same *dosha* which is responsible for the manifestation of main disease.^[15] *Acharyas* have mentioned various terms like *upasargika*^[16], *anubandha*^[17] *anugaami*^[18]. It manifests during the *bheda avastha* of *kriya kala*^[19] making it difficult in the management due to the chronicity of *vyadhi*.

Acharyas have enlisted various *Upadrava* like *Prameha Pidaka*, *Jwara*, *Bhagandhara*, *Vidradhi*, *Vata vikara*, *Kushta*, *Visarpa*, *Atisaara*, *Meha*, *Arsha*, *Sleepada*, *Apachi*, *Anu Jantu*.^{[20][21]} *Acharya Charaka* opines that involvement of morbid *Agni* and *Vaayu* in the pathogenesis of the disease leads to *Upadrava* further causing morbidity and mortality which is picturized with the help of simile of forest fire destroying the forest.^[22] The culprit for the severity of the condition is *Margavarana* occurring in the *Samprapti* of *Atisthoulya*. *Medasaavruta marga* in the *shareera* leads to manifestation of various *Upadrava* based on the susceptibility of *Srotas*. *Sthoulya* being a difficult one to manage compared to *karshya*,^[23] understanding *Upadrava* of *Atisthoulya* is a need of the hour pertaining to Diagnosis, Prognosis and Treatment. Thus, an attempt to understand the *upadrava* of *atisthoulya* had carried out.

Aim

To evaluate *Upadrava* of *Atisthoulya*.

Objective

- To prepare the questionnaire for the assessment of *upadrava* of *Atisthoulya*
- Critical study of *Atisthoulya Upadrava* with possible correlation with obesity complications

RESEARCH METHODOLOGY**METHODOLOGY****STUDY DESIGN**

This was a cross-sectional survey study. The study consisted of a conceptual and an observational aspect. In the conceptual aspect relevant literature about the concept of *Upadrava*, *Atisthoulya*, *Upadrava of Atisthoulya*, understanding of each *upadrava* was collected, conceptualized and analyzed from ayurvedic perspective. Case proforma was prepared which included the demographic data, detailed history pertaining to *Atisthoulya*, *Dashavidha Pareeksha*, *Asthasthaana Pareeksha*, various examinations of the patients. Questionnaire comprising of both closed and open-ended questions related to each *upadrava* with its clinical symptoms were prepared and validated. In the observational aspect, *upadrava of atisthoulya* was assessed in 100 patients who fulfil the inclusion criteria with the help case proforma and questionnaire. Data collected was classified, interpreted and analysed to draw conclusion.

PROCEDURE OF COLLECTION OF DATA

As per the study protocol approved by the Institutional Ethical Committee, written informed consent was obtained from all the study participants. Participants were made to respond to the questionnaire in the closed Interview method.

SAMPLE SOURCE

Patient attending OPD & IPD of Alva's Ayurveda medical college and hospital, Vidyagiri and other referrals. Other referrals included for the study Patients attending OPD & IPD of Alva's College of Naturopathy & Yogic Sciences, Mijar. Based on the inclusion & exclusion criteria, 100 diagnosed cases of Obesity were selected among patients aged between 19 to 70 years.

INCLUSION CRETERIA

- (a) Patient fulfilling the diagnostic criteria.
- (b) Patient were selected irrespective of gender.
- (c) Patient between 19 to 70 years of age.

EXCLUSION CRETERIA

- (a) Patient having obesity as Complication of other diseases.
- (b) Patient who is under long term steroid medications.
- (c) Patient suffering from other endocrinal diseases.
- (d) Pregnant and lactating women.

DIAGNOSTIC CRITERIA:

- (a) BMI – subject with BMI above 30kg/m^2 ^{[24][25]}
- (b)Waist circumference: Male > 90 cm
 Female > 80cm
- (c) Waist to hip ratio: Male > 1.0
 Female > 0.8
- (d) Based on the clinical features of *Atisthoulya* mentioned the classics^[26]
- (e) *Upadravas of Atisthoulya are* ^{[27][28]}

- *Prameha pidaka*
- *Jwara*
- *Bhagandhara*
- *Vidradhi*
- *Vata vikara*
- *Kushta*
- *Visarpa*
- *Atisara*
- *Meha*

- *Arshas*
- *Sleepada*
- *Apachi*
- *Kamala*
- *Anu jantu*

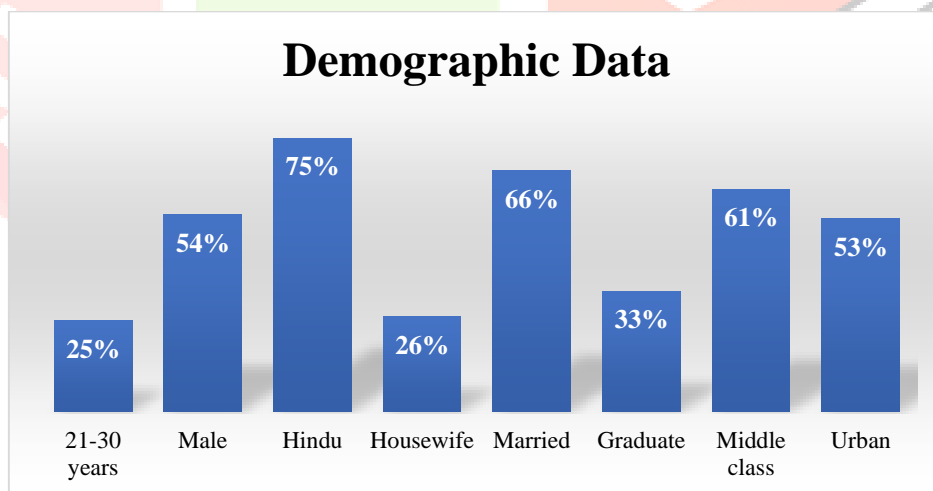
Patient having features of *Atisthoulya* and any of the above *Upadrava*.

ASSESSMENT CRITERIA

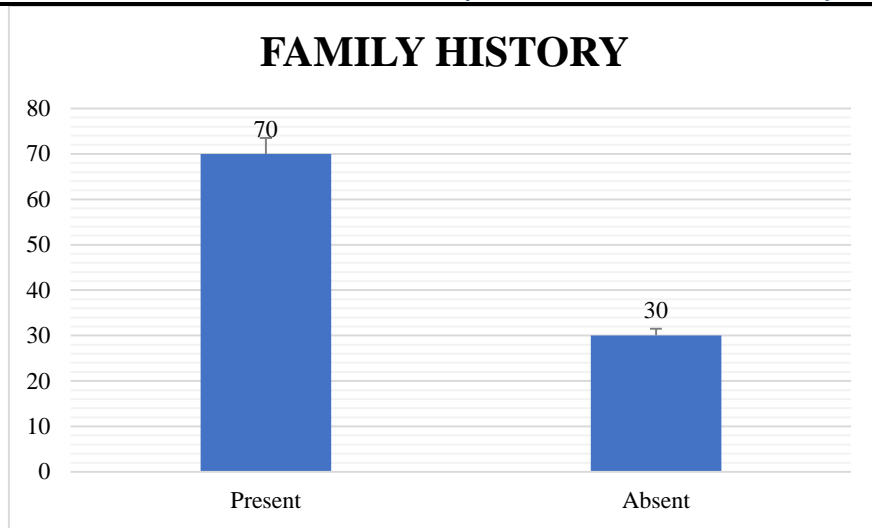
Based on following *Upadrava* of *Atisthoulya* assessment is carried out

- *Prameha pidaka*
- *Jwara*
- *Bhagandhara*
- *Vidradhi*
- *Vata vikara*
- *Kushta*
- *Visarpa*
- *Atisara*
- *Meha*
- *Arshas*
- *Sleepada*
- *Apachi*
- *Kamala*
- *Anu jantu*

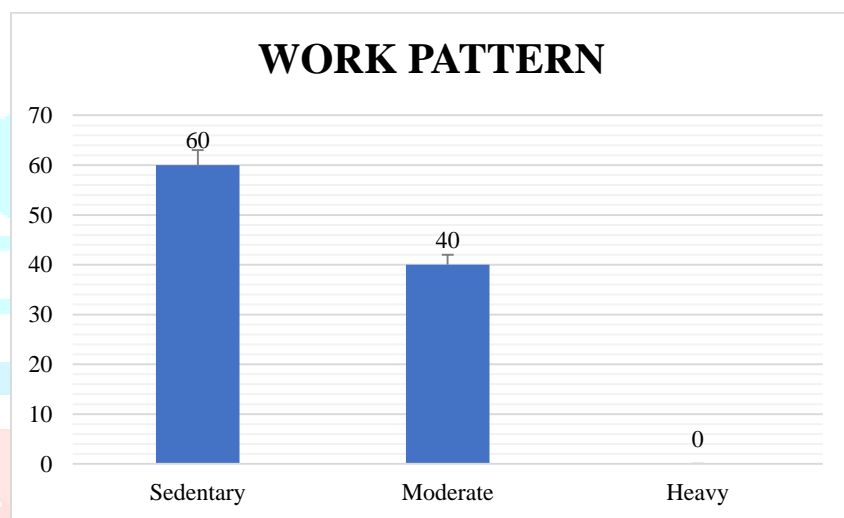
OBSERVATIONS



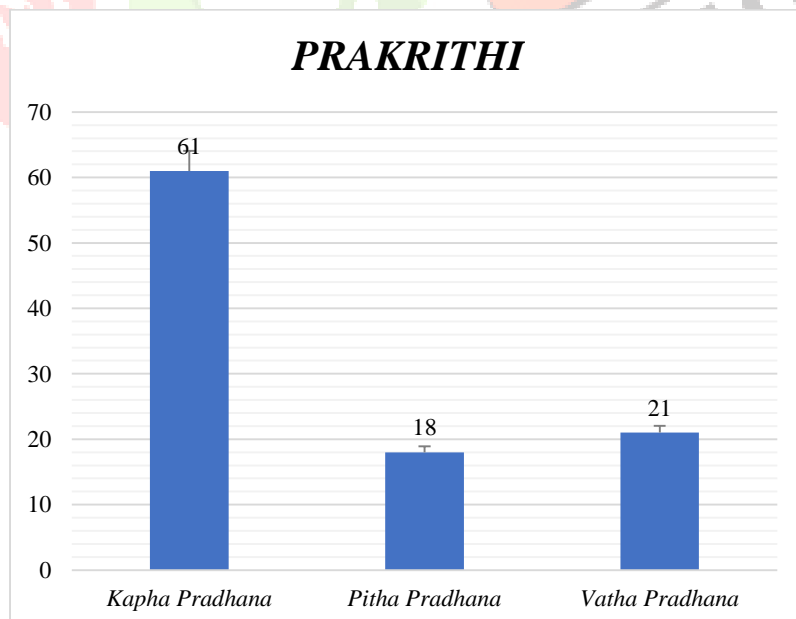
Graph No.1. Demographic Data



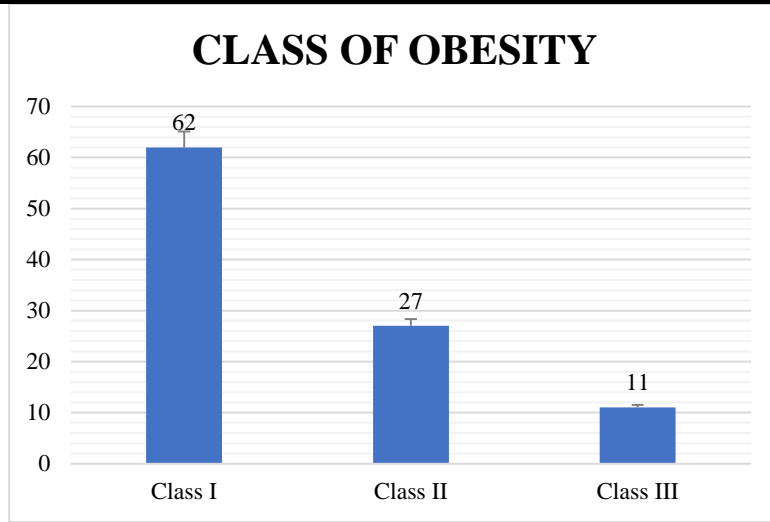
Graph No.2. Distribution of patients based on Family History



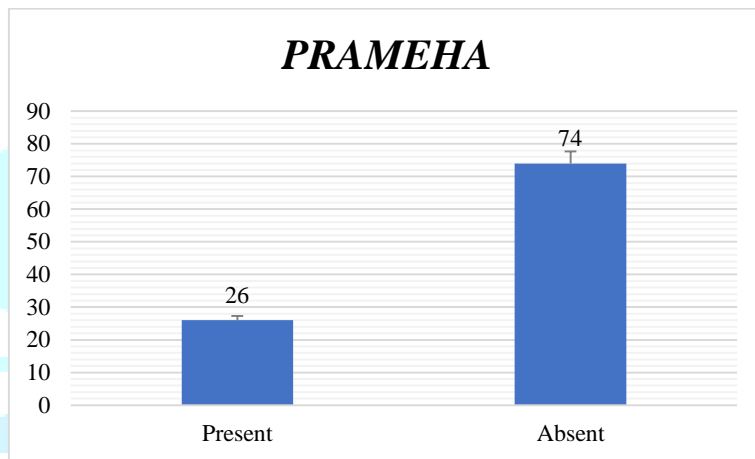
Graph No.3. Distribution of patients based on Work Pattern



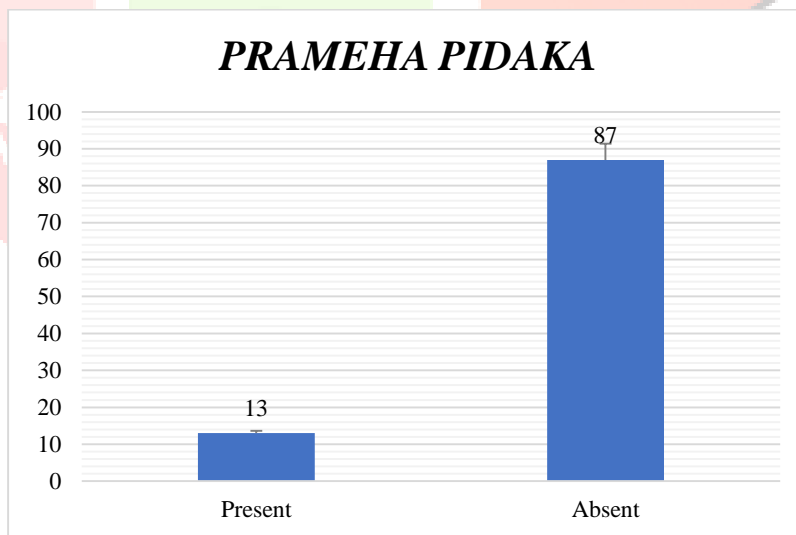
Graph No.4. Distribution of patients based on *Prakrithi*



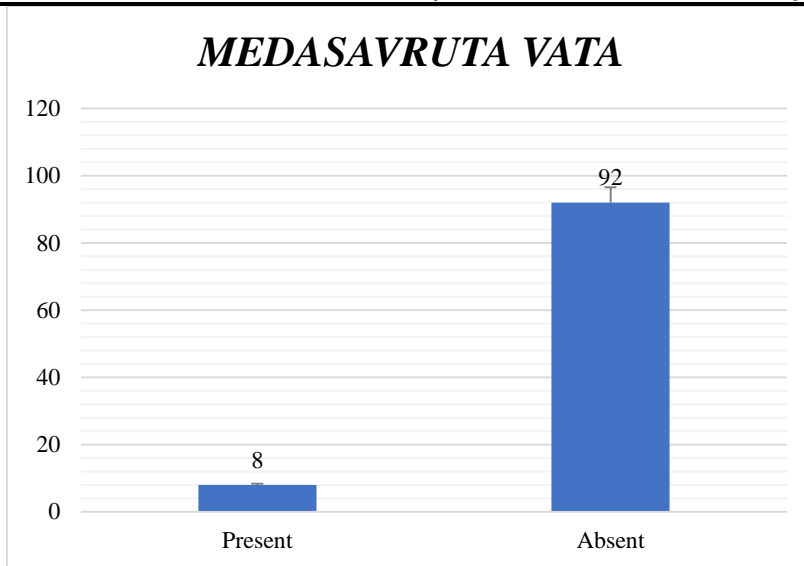
Graph No.5. Distribution of patients based on Class of Obesity



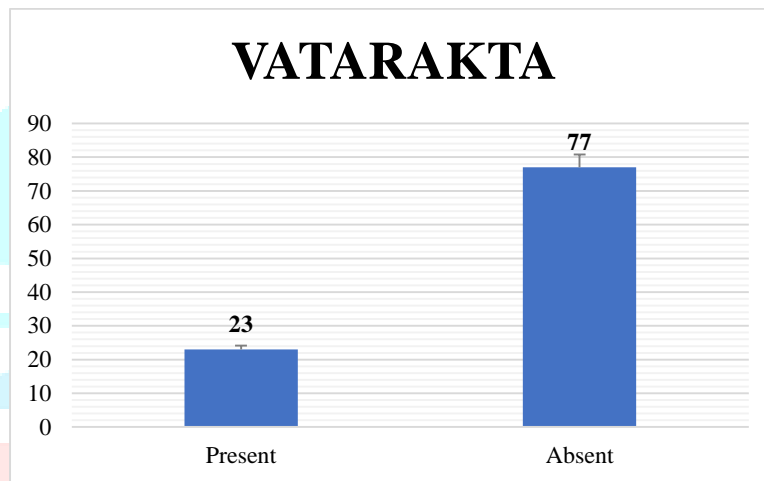
Graph No.6. Distribution of patients based on incidence of Prameha



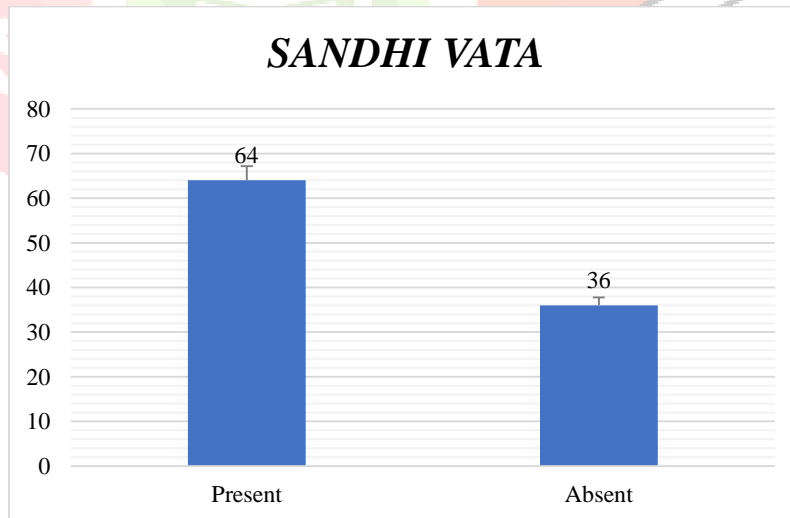
Graph No.7. Distribution of patients based on incidence of Prameha Pidaka



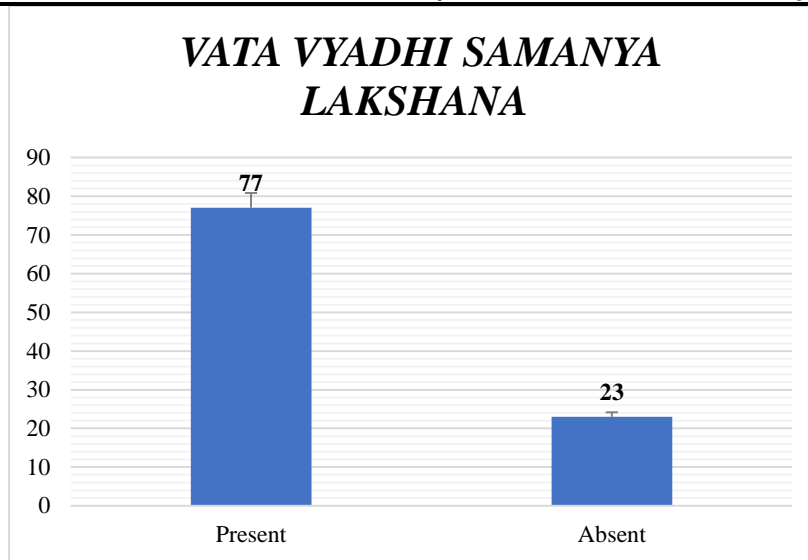
Graph No.8.1 Distribution according to incidence of *Medasavruta Vata*



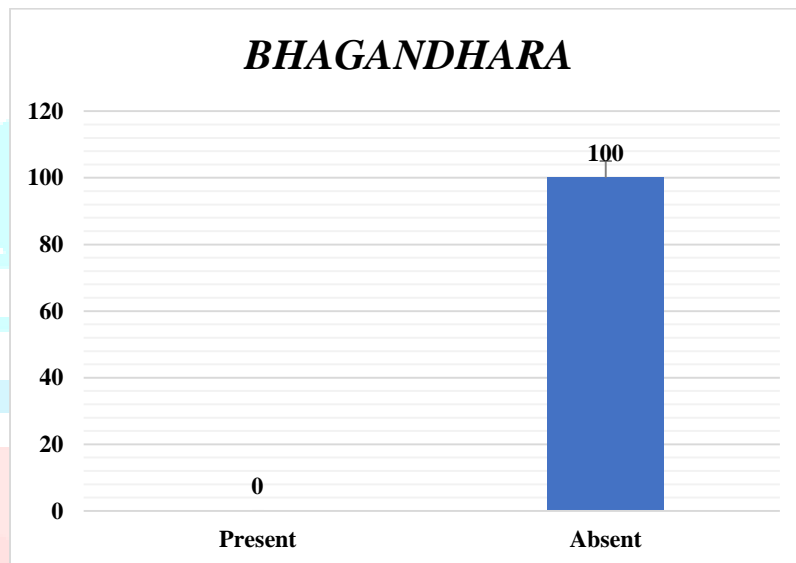
Graph No.8.2 Distribution of patients based on incidence of *Vatarakta*



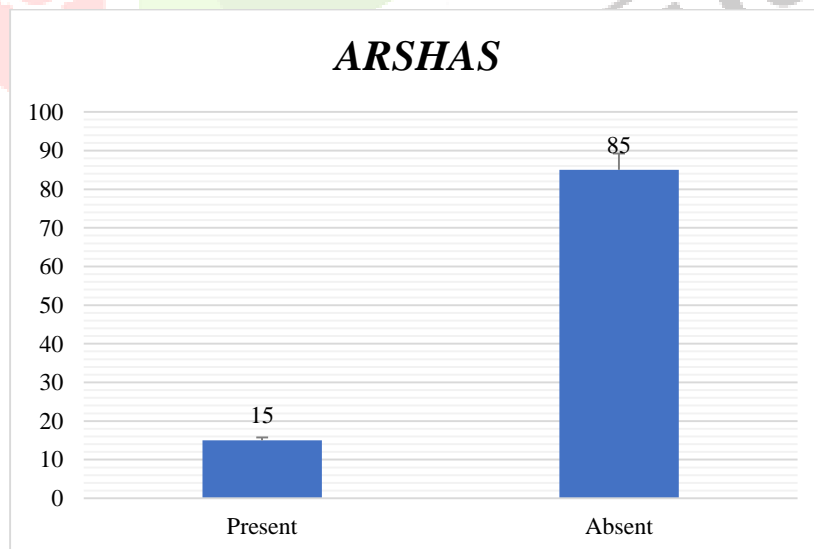
Graph No.8.3 Distribution of patients based on incidence of *Sandhi vata*



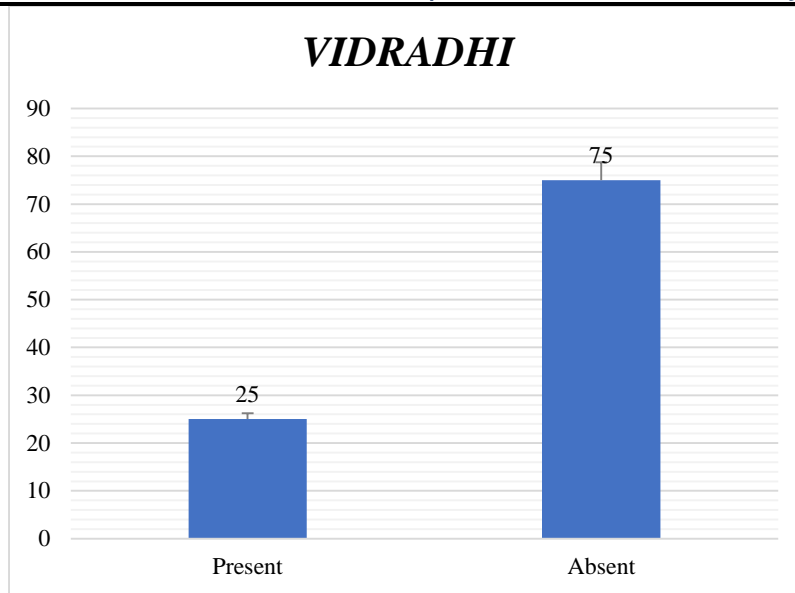
Graph No.8.4 Distribution of patients based on incidence of *Vatavyadhi Samanya Lakshana*



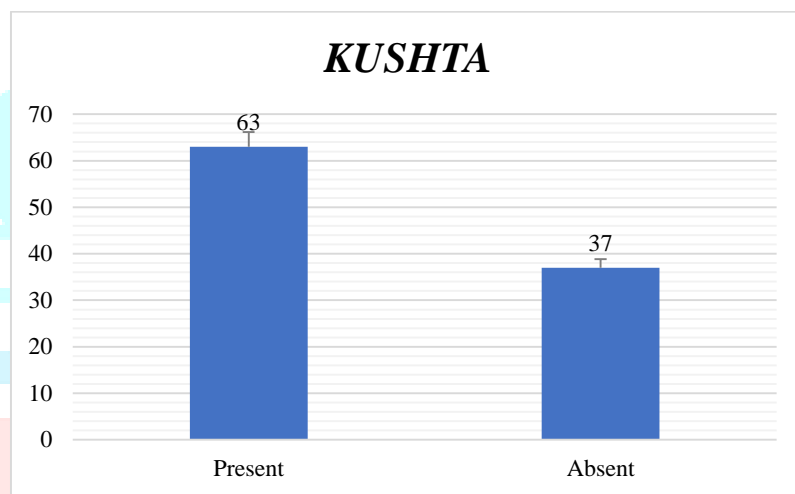
Graph No.9. Distribution of patients based on incidence of *Bhagandhara*



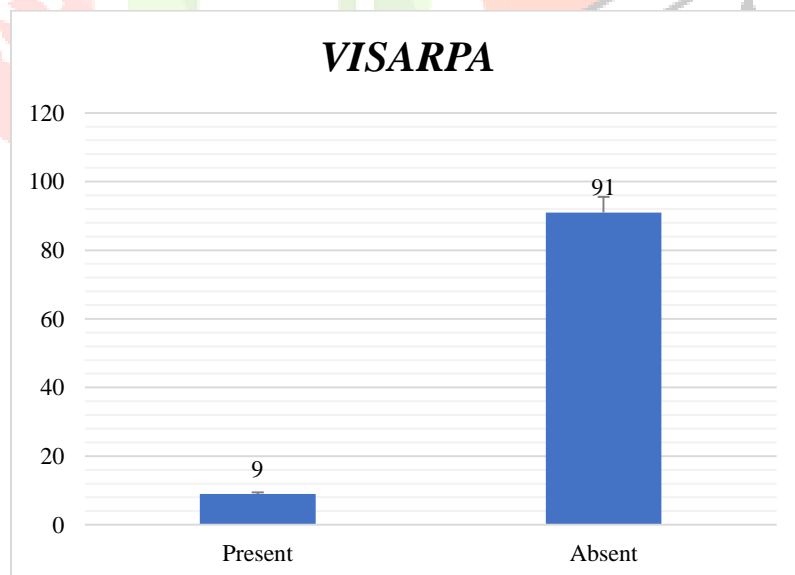
Graph No.10. Distribution of patients based on incidence of *Arshas*



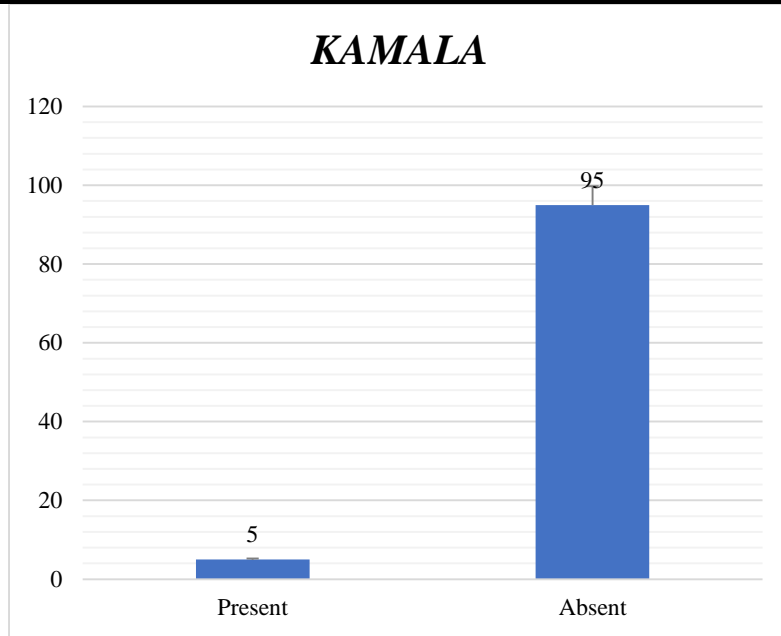
Graph No.11. Distribution of patients based on incidence of *Vidradhi*



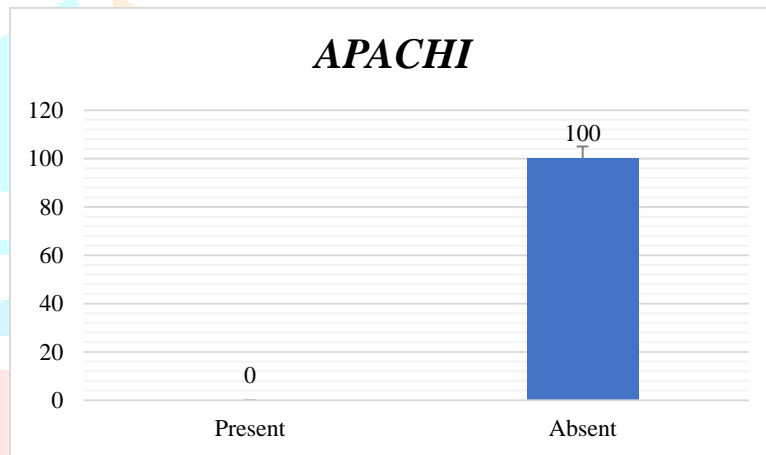
Graph No.12. Distribution of patients based on incidence of *Kushta*



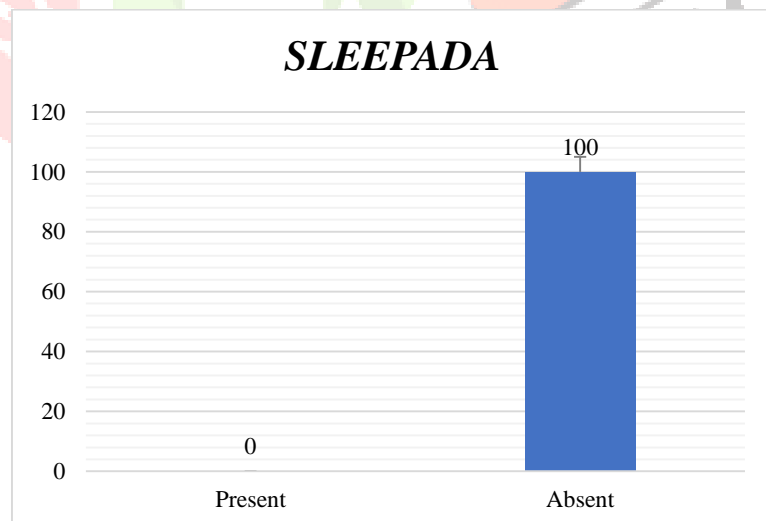
Graph No.13. Distribution of patients based on incidence of *Visarpa*



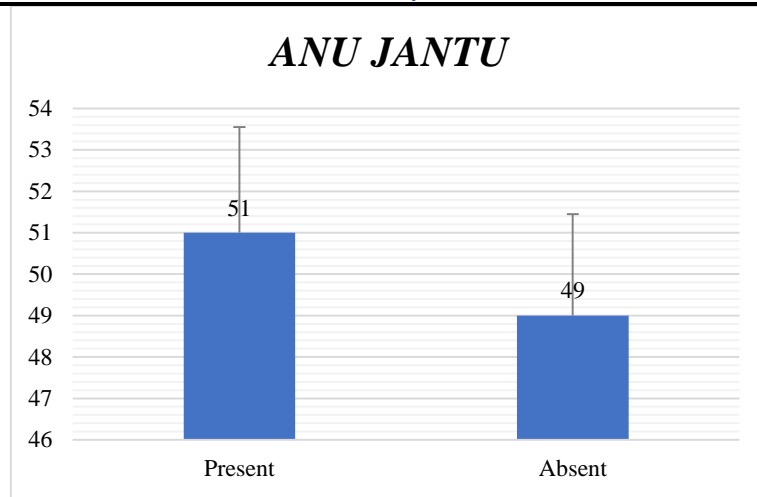
Graph No.14. Distribution of patients based on incidence of *Kamala*



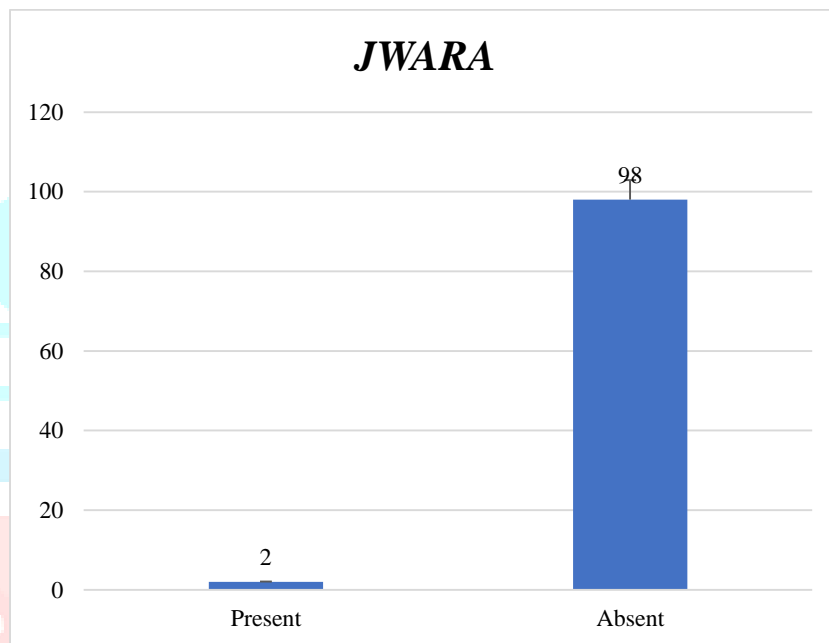
Graph No.15. Distribution of patients based on incidence of *Apachi*



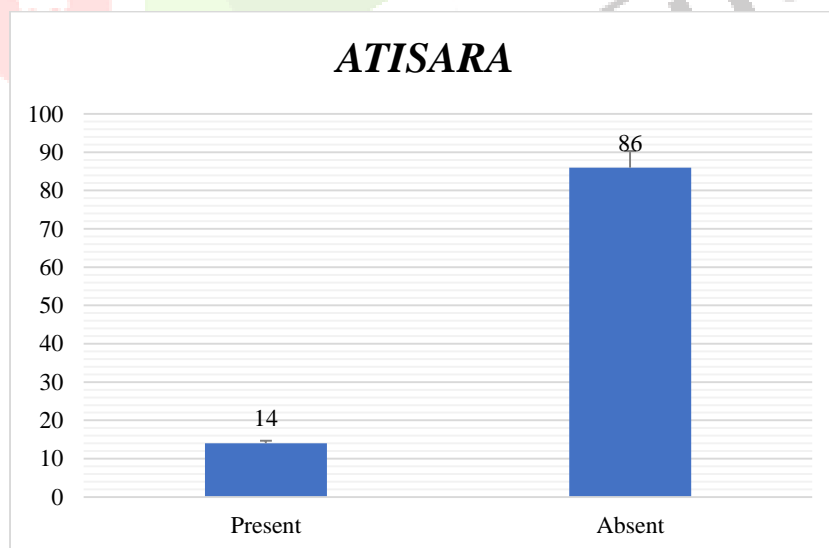
Graph No.16. Distribution of patients based on incidence of *Sleepada*



Graph No.17. Distribution of patients based on incidence of *Anu Jantu*



Graph No.18. Distribution of patients based on incidence of *Jwara*



Graph No.19. Distribution of patients based on incidence of *Atisara*

RESULTS AND DISCUSSION

Discussion on demographic data:

Age: Among 100 patients, 25% were belonging to the age group of 20-30 years. As the study was conducted on wide range of age group, the above observation was recorded.

Gender: Among 100 patients, 54% were male which is more compared to female. As per statistical data, Females are more prone to obesity compared to male.

Religion: Among 100 patients, 75% belonged to Hindu community. This is because of study population which is predominant of Hindu community. As per the statistical data there is no particular religion, race or caste which leads to obesity.

Occupation: Among 100 patients, 26% were housewives. They are habitual of eating while cooking and providing company to their family members, guests. Due imbalance in the energy intake and expenditure, lead to manifestation of the disease.

Marital Status: Among 100 patients, 66% were married. Incidence is high in married may be due to change in food habits, pregnancy, psychological factors.

Educational Status: Among 100 patients, 33% were graduates. Researchers have reported that there is direct relationship between increase in obesity with the number of years of education in lower income countries.^[29]

Socio-Economical Status: Among 100 patients, 61% belonged to middle class, which is due to the study population is predominant of middle class.

Locality: In the present study, obesity was more prevalent in urban area compared to rural area. Obesity prevalence in urban population is attributed to the increase in the available resources to be spent on the food and leisure time activities, lot of sophistication leads to sedentary life style causes obesity.^[30]

Discussion on Familial History: In the present study, it is observed that majority of the obese individuals has positive family history which indicates the role of genetic factors leading to obesity. *Beeja swabhava* is one among important *nidana* leading to *ati sthoulya*.^[31]

Discussion on Work Pattern: Among 100 patients, 60% were having sedentary work pattern. Most of the study subjects were doing desk job. Desk jobs are the work were people are working for long in sitting. *Asya Sukha* leads to *Sthoulya*.^[32]

Discussion on Prakriti: 61% of the current study were belonging to *kapha pradhana prakrithi*. *Atisthoulya* is *kapha nanathmaja vikara* and has predominantly seen in *kapha prakrithi*.^[33]

Discussion on Class of Obesity: Out of 100 patients of *atisthoulya*, 62 patients belong to Class I obesity. Body Mass Index is measured using the weight of the individual in Kg and the square of the height in meters, where Class I Obesity ranges from 30-34.99kg/m², Class II ranges from 35- 39.99kg/m² and Class III Obesity is above 40kg/m².^[34]

Discussion on Upadrava of Atisthoulya:

1.Prameha: In the present study, 26% showed the symptoms of *prameha* as *upadrava* of *atisthoulya*. Prolonged untreated *atisthoulya* condition with continuity of *nidana sevana* leads strengthening of the *vyadhi*. Due to *medasavruta marga*, there won't be *poshana* of other *dhatu*^[35] leading to formation of *aparipakwa dosha* and *dhatu*. Due to the continuous consumption of *santarpanotha aahara*, vulnerability of *aparipakwa dosha*, along with *abaddha medas*, promotes the *utpathi* of *prameha* based on the *vikaravighaatha bhava abhava*. While mentioning of the *nidana* susceptibility towards the disease, *Atisthoulya* is mentioned.^[36]

Imbalance in energy intake and expenditure lead to the accumulation of adipose tissues mainly white adipose tissues, which lowers the production of adiponectin leading to impairment in the glucose uptake from muscles further leading to Insulin Resistance. It causes Type II Diabetes Mellitus in obese individuals.^[37]

2.Prameha Pidaka: In the current study, 13% were presented with *prameha pidaka* as *upadrava* of *atisthoulya*. In *Atisthoulya*, there is *utpathi* of *ama rasa dhatu*^[38] which leads to *utpathi mamsa dhatu* which is in *aparipakwa avastha*. Due to the *saamyata* of *nidana*, *dosha* and *dooshya* in *atisthoulya* and *prameha pidaka*, *bahudrava shleshma* and *abaddha medas* affects the *aparipakwa mamsa dhatu*, leading to *shaitilyatha of mamsa* causing *prameha pidaka*.^[39]

3. Vatavikara:

3.1 Medasaavruta Vatavikara:

a. Medasavruta Pakshaaghata: 8 % were diagnosed with *medasaavrutha vata* as *Upadrava of Atisthoulya*. Here the *lakshana* of *margaavarana janya pakshaaghata* were assessed. *Atisthoulya* is a *santharpanotha vikara* which leads in the formation of *abaddha medas* due to *dhatwaagni maandya*. Due the *medasaavrutha marga*, *anya dhatu* doesn't get *poshana* which leads to *kshaya* of *dhatu*. *Asthi dhatu* has *ashraya ashrayi bhava* with *vata*^[40] where *kshaya* of *asthi dhatu* will cause *vriddhi* of *vata dosha*. *Vata* which is in *prakopavastha* gets *avrutha* by the *abaddha medas* in *rasa rakta marga* which obstructs the *vata gati* leading to manifestation of *avarana janya pakshaghata*.

Dyslipidemia is commonly seen in patients of obesity where there will be increased levels of LDL cholesterol, increased abnormal lipoprotein and decreased level of HDL cholesterol which promotes the atherosclerosis by various mechanism like increase blood pressure, increased glucose level, systemic inflammation leading to ischemic stroke.^[41]

b. Vatarakta: In the study, 23% had *vatarakta lakshanas* as *upadrava of atisthoulya*. *Vata rakta* is a *avarana janya vikara*, where *rakta* does *avarana* of the *vata dosha* in the *raktavaha srotas*. Morbid *kapha* and *medas* involved in manifestation of *atisthoulya* promotes the *avarana*. *Rakta* along with these does *avarana* of *vata* leading to *vatarakta* in *atisthoulya* condition. *Sthoulya* is one of the *nidana* for the manifestation of *vatarakta*.^[42]

3.2 Dhatukshayajanya Vatavikara:

a. Sandhivata: 64% patients of *atisthoulya* had symptoms of *sandhivata*. *Sandhivata* is *vyadhi* which occurs due to the *prakopavastha* of *vata dosha* in the *shareera*. The cause for the *vata prakopa* is *dhatu kshaya* which is evident in the patients of *atisthoulya*. Due to the *ama anna rasa* formed due to the *atisthoulya nidana*, does *atipoorana meda dhatu*, thereby, the upcoming *asthi dhatu* gets *kshaya*.^[43] This leads *vriddhi* of the *vata* in *shareera* and due to *kha vaigunaya* in the *sandhi*, gets lodged in it causing *sandhi vata*.

In obese individual, due to increased mechanical pressure on weight bearing joints and increase in the pro inflammatory interleukin's due accumulation of adipose tissue lead to osteoarthritis.^[44]

b. Samanya Vata vyadhi Lakshana: 77 % were suffering from *samanya vata vyadhi lakshanas*. In *Atisthoulya*, due to the *samprapthi*, *vata prakopa* is predominantly seen which on getting lodged in various *sthaana* of *shareera* develops various *samanya lakshanas* of *vata vyadhi* like *spandana*, *gatra suptata*, *kati graha*, *anidratha* etc based on *kha vaigunya*.

4. Bhagandhara: In the current study, there were no patients with *bhagandhara* as *upadrava of atisthoulya*.

5. Arshas: 15% were having *Arshas* as *upadrava of Atisthoulya*. *Nidana* of *Arshas* speaks about the intake of *guru*, *Madhura*, *sheetha*, *abhishyandi ahara*, consumption of *dadhi*, *pishitha* and following certain like *divaswapna*, *sukha shayana*, *asana* and *sthaana* will lead to impaired *agni* and *mala sanchaya*^[45]. *Atisthoulya* individuals are prone to such *nidana* and due to *prabhootha vaayu in koshta*^[46], there will *apana dusthi*. These contributes for manifestation of *arshas* in *atisthoulya*.

6. Vidradhi: 25% patients in the study had encountered *vidradhi* as *upadrava of atisthoulya*. In *vidradhi*, there is *dusti* of *twak*, *mamsa*, *meda*, *asthi*, *snayu*, *asrk*, *kandara*.^[47] *Dosha*, *dhatu*, *upadhatu* in *ati sthoulya* patients are improperly formed and are in the vitiated state. This favors the *dushti* of the *dooshya* involved in the manifestation *vidradhi* and based on the *kha vaigunya*, *utpathi* of *vidradhi* occurs on various parts of *shareera* as *upadrava*.

Obesity results in deficiencies of the human self-tolerance mechanisms by promoting pro inflammatory processes which causes systemic immune impairment, which facilitates the various infections. Abscess majorly caused due to staphylococcus aureus can infect the obese individual due to the impairment of immunity.^[48]

7. Kushta: 63 % patients had *lakshanas* of *kushta* as *upadrava of atisthoulya*. In the present study, the patients were assessed based on the definition of *kushta* which refers to deformity and discolouration of skin^[49]. *Kushta* involves *saptha dravya sagraha* which includes *tridosha*, *twak*, *mamsa*, *shonitha* and *lasika*.^[50] In patients of *atisthoulya*, there will be vitiation of *tridosha* and *asamyak dhathu utpathi*. As per *dhatu poshana krama*, each *dhatu* gets *poshana* from its prior *dhatu* and later does *poshana* of its *upadhatu*. Thus, there will

be *utpathi* of *aparipakwa upadhatu* in *atisthoulya*. Presence of the *dosha dhooshyas* involved in the manifestation of *kushta* can be seen in *atisthoulya*. Due to the similarity in the *nidana* and vulnerability of the *dooshyas* makes it easy for the manifestation of *kushta* as *upadrava* of *atisthoulya*.

Altered epidermal barrier, thickened layer of subcutaneous fat, impaired lymphatic flow in the subcutaneous tissues and increased pro inflammatory cells in obesity leads to various skin manifestations.^[51]

8. Visarpa: 9% patients had *visarpa* as *upadrava* of *atisthoulya*. *Visarpa* is a *vyadhi* manifesting due to *saptha dravya* with predominance of *pitha dosha* and *rakta dhatu*^[52]. Due to vitiation of tridoshas and dhatus in *atisthoulya* patients, along with the consumption of *snigdha, drava ahara* further vitiates the *rakta dhatu* will make body susceptible for manifestation of *visarpa* in the *atisthoulya* patients.

Obesity stresses the delicate lymphatic vessels and serves as significant risk factor for lymphedema which on untreated state further lead to tissue breakdown, limited motion and development of cellulitis. Immunosuppressed state of the obesity promotes the entry of pathogen to the body worsening the condition in obesity.^[53]

9.Kamala:

5% patients were found to have *kamala* as *upadrava* of *atisthoulya*. Here the patients diagnosed with non-alcoholic fatty liver disease were included in the study. Due to calorie over load and ectopic accumulation of triglycerides in liver leads to non-alcoholic fatty liver disease in obesity patients.^[54]

10.Apachi:

Apachi was not seen in any of the *atisthoulya* patients as a *upadrava*.

11.Sleepada:

In the current study, *sleepada* was not observed as the *upadrava* of *atisthoulya*.

12.Anu jantu:

51% patients were having *anu jantu* as the *upadrava* of *atisthoulya*. *Anu jantu* is referred as *krimi* manifesting due to *medas* and *sweda dourgandhya*.^[55] Recurrent attacks of *anu jantu* were noted and documented in the patients of *atisthoulya*. *Swedadikya* is one of the *lakshanas* of *atisthoulya*^[56]. From the *abaddha medas* present in *atisthoulya* condition, there will be *utpathi* in *sweda* which is *vikrutha* and will be increased quantitatively. This enables the *utpathi* of *krimi* in places where there is *swedadikya* leading *anu jantu*.

Increase in the accumulation of adipose tissues leads to increase in the release of pro inflammatory interleukins, altering the immune system of the patients with obesity. Due accumulation of adipose tissue, core body temperature will be raised. In order to maintain the body temperature, body will sweat. Due to increase sweating and altered immune system in obesity, fungal infections tend to develop in obese individuals.^[57]

13.Jwara: 2% had *jwara* as *upadrava* of *atisthoulya*. Here the patients were enquired about the recurrent attacks of fever. *Atisthoulya* is a *rasa nimiththaja vikara*^[58] where *asamyak rasa utpathi* which leads to the formation of *asamyak dhatus*. Deranged *agni, rasa, sweda* will be present in *atisthoulya* condition leads *jwara* in *atisthoulya*.

14.Atisara: 14% patients were diagnosed with *atisara* as *upadrava* of *atisthoulya*. In *atisthoulya*, due to *avrutha vata in koshta* and deranged *agni*, *atisara* develops in *atisthoulya* as *upadrava*^[59]. Studies suggest that there is higher prevalence of diarrhea associated with obesity which is due to changes in bile acids resulting in bile acid diarrhea, accelerated colonic transit, increased mucosal permeability.^[60]

CONCLUSION

- *Atisthoulya* is a *santharpanooha, dhatwaagni maandyajanya, kaphaja nanaathamaja vikara* caused due to morbid *medas*.
- *Upadrava* which manifest after the genesis of the main disease can be single or multiple based on the severity of the disease.
- Among the 14 *Atisthoulya Upadrava* mentioned in our classics, 11 were encountered in the study. Encountered *Upadrava* of *Atisthoulya* are *Prameha, Prameha Pidaka, Margavaranajanya Pakshaaghata, Vatarakta, Sandhi Vata, Samanya Vata Vyadhi Lakshana, Arshas, Vidradhi, Kushta, Visarpa, Kamala, Anu Jantu, Jwara, Atisara*.

- Most prevalent *upadrava* in the present study population was *vata vikara*, predominantly the *dhathu kshayajanya vata vikara*.
- *Upadrava* can be classified as *sthoola* and *anu* based on its severity of the manifestation of disease.
- *Sthoola upadrava* are *medasavruta pakshaaghata, prameha, visarpa*.
- *Anu upadrava* are *prameha pidaka, kushta, vidradhi, vata rakta, sandhivata, samanya vata vyadhi lakshanas, arshas, anu jantu, atisara, kamala* and *jwara*.
- *Sarvadaihika upadrava* are *pakshaaghata, prameha, vata vikara, kamala, kushta, visarpa, jwara, atisara* whereas *sthanika upadrava* are *vatarakta, arshas, anujantu, prameha pidaka*.

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