Summer Training at

Emcure Uth

A Study for Future Potential of Obicure Gel for Treatment of Obesity Related Cellulite

By

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Under the guidance of

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CERTIFICATE

This is to certify that Mr. Anand Miniyar student of Institute of Health Management Research University; Jaipur has undergone summer training at Emcure Uth, Pune from April 25, 2014 to June 15, 2014.

The candidate has successfully carried out the project "A study for future potential of Obicure Gel for the treatment of Obesity related Cellulite" assigned to him during summer training & his approach to study has been sincere scientific & analytical.

This summer training is in partial fulfillment of the course requirements.

We wish him success in all his future endeavors.

28/7/14

Mr. Rahul Sharma
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IIHMR University, Jaipur

Emcure Uth
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Date : 1st July 1, 2014

I undersigned, wish to certify that Mr. Anand Miniyar has completed his summer training in our organization.

The project given to him To study Future Potential of Obicure Gel for the treatment of Obesity related cellulite.

The project period – May – June 2014, for this he did the product survey at 101 doctors of Pune.

We found him very energetic, passionate about the project. He has completed his project within the time & we found him satisfactory at his work.

We wish Mr Anand Miniyar for his future assignment.

Regards,

Jyoti Thakre

DGM Emcure Uth

(Mukesh Saini)

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My Thanks and appreciation also goes to my colleagues in developing the project and people who have willingly helped me out with their abilities.

Anand Miniyar

Date:

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Introduction

The year 2013 is a landmark for the field of obesity. In June 2013, the American Medical Association declared that obesity be considered a disease.[1] Obesity is on the sharp rise and is fast becoming a major public health concern. Obesity can be described as the "New World Syndrome". Its prevalence is on continuous rise in all age groups in the world. The World Health Organization has described obesity as one of today's most neglected public health problems, affecting every region of the globe.[2] It is the fifth leading cause of premature death worldwide; nearly three million adults die each year as a result of being overweight or obese. The World 4Health Organization's data discloses that over 40% of diabetes, 23% of heart disease, and up to 40% of certain types of cancer is attributable to being overweight or obese.[3]

The prevalence of overweight and obesity is increasing at alarming rate in developed and developing countries. The pandemic is growing at such a pace that prevalence statistics become rapidly outdated. India is following a trend of other developing countries that are steadily becoming more obese. Totally 5% of the Indian population has been affected by obesity.[4] Indians exhibit unique features of obesity: Excess body fat, abdominal adiposity, increased subcutaneous and intra-abdominal fat, and deposition of fat in ectopic sites (such as liver, muscle, and others).According to the National Family Health Survey (NFHS), in India 12.1% males and 16% females are fall under category of overweight and obese.[5]It is estimated that, by 2030, about 58% of the total world population will be obese (Body mass index, BMI >30).[6]

Despite the gravity of the problem and the urgent need for therapeutic intervention, there is currently no safe and effective treatment for the disease. At present, very few drugs are approvedfor treatment of obesity. However, it showed relative lack of efficacy, with most patients achieving only 5-10% weight loss over a one-year period of medication. This is further complicated by various side effects, which have largely limited their use for therapy. In this r4egard, alternative forms of obesity treatment are of intense medical interest. The use of natural product and food supplements that have both weight loss and nutritional benefits is particularly appealing. Natural products isolated from plants and bioactive constituents from food have traditionally been, and continue to be, used for the treatment of a variety of human diseases.

Review of literature:

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have a negative effect on health, leading to reduced life expectancy and/or increased health problems.[7]

Body mass index or BMI is a simple and widely used method for estimating body fat mass. It is defined as a person's weight in kilograms divided by the square of his height in meters (kg/m^2). BMI provides the most useful population-level measure of overweight and obesity as it is the same for both sexes and for all ages of adults.[3]

BMI	Classification
< 18.5	Underweight
18.5–24.9	normal weigh
25.0–29.9	Overweight
30.0–34.9	class I obesity
35.0–39.9	class II obesity
≥ 40.0	class III obesity

Causes of Obesity:

The fundamental cause of obesity and overweight is an energy imbalance between calories consumed and calories expended.

At an individual level, a combination of an increased intake of energy-dense foods that are high in fat and an increase in physical inactivity due to the increasingly sedentary nature of many forms of work, changing modes of transportation, and increasing urbanization is thought to explain most cases of obesity. A limited number of cases are due primarily to genetics, medical reasons, or psychiatric illness. [3, 8]

Complication:

1) **High blood pressure** - Additional fat tissue in the body needs oxygen and nutrients in order to live, which requires the blood vessels to circulate more blood to the fat tissue. This increases the workload of the heart and thereby increases blood pressure.
2) **Diabetes** - Obesity is the major cause of type 2 diabetes. Obesity can cause resistance to insulin, the hormone that regulates blood sugar.
3) **Heart disease** - Atherosclerosis (hardening of the arteries) is present 10 times more often in obese people compared to those who are not obese. Coronary artery disease is also more prevalent because fatty deposits build up in arteries that supply the heart.
4) **Joint problems, including Osteoarthritis** - Obesity can affect the knees and hips because of the stress placed on the joints by extra weight.
5) **Sleep apnea and respiratory problems**
6) **Cancer** - In women, being overweight contributes to an increased risk for a variety of cancers including breast, colon, gallbladder, and uterus. Men who are overweight have a higher risk of colon and prostate cancers.[2, 4, 9]
7)

Management of Obesity:

Treatment may consist of modification of diet, increased physical activity, behavioral therapy, and in certain circumstances weight loss medication and surgery.

a. Non-pharmacological measures
b. Surgery
c. Pharmacotherapy

a. Non-pharmacological measures:

1. **Dietary Therapy**:A low fat and low calorie diet is ideal to obtain weight loss and to maintain lean body. Restrictions of calories represent the first line therapy in all cases except in cases with pregnancy, lactation, and osteoporosis. Low calorie diets, which

provide 100–1500 kcal/day, resulted in weight loss of 8% of baseline body weight over six months but on long run most of the lost weight is regained.

2. **Physical activity**: All individuals can benefit from regular exercise. Physical activity, which increases energy expenditure, has a positive role in reducing fat storage and adjusting energy balance in obese patients.
3. **Behavior Therapy:**Behavior plays a significant role in obesity. Modifying behaviors that have contributed to developing obesity is one way to treat the disease either alone or in conjunction with other treatment. A few suggested behavior modifiers include: changing eating habits, increasing physical activity, becoming educated about the body and how to nourish it appropriately, engaging in a support group or extracurricular activity and setting realistic weight management goals.

b. Pharmacotherapy:

Currently there are few medications that are available for weight-loss: sibutramine, Ribonabant, orlistat, Phentermine-topiramate, and Lorcaserin.

DRUG	**SIDE EFFECTS**
Sibutramine (Banned in India)	Hypertension, serotonin syndrome, dry mouth, insomnia, headache, constipation, seizures, fatal pulmonary hypertension
Ribonabant (Banned in India)	Severe depression and predisposes to neurodegenerative diseases
Orlistat	Stomach pain, gas, diarrhea, and leakage of oily stools.
Lorcaserin	Headaches, dizziness, feeling tired, nausea, dry mouth, cough, and constipation, carcinogenesis, cardiovascular events, cognitive impairment, and psychiatric disorders.

Phentermine-topiramate	Tingling of hands and feet, dizziness, taste alterations, trouble sleeping, constipation, and dry mouth, cardiovascular events, fetal toxicity, and suicidal ideation

Though these drugs are available by prescription, association with serious side effects limits their use, and prescribing is mainly limited to bariatric surgeons.[2, 9, 10, 11]

c. **Surgery:** apart from drug treatment, surgery is also indicated when BMI is exceedingly high and when other treatment modalities have failed. The most popular surgical procedures used for treatment of severe obesities involve gastroplasty, gastric by-pass and banding surgery to aid weight loss in those with BMI > 36. Although it leads to 60% of weight loss, it can be maintained by reduced calorie intake and exercise. It may end up in complications like gall stone formation, malabsorption and other nutrition deficiency.[9]

Cellulite:

Cellulite is characterized by Dimpled or Puckered skin of the buttocks, posterior & lateral thighs, arms, double chins, and cheeks. This condition has also been described as resembling an orange peel or as having mattress like appearance.[12]

Approximately 85% of women over the age of 20 have some degree of cellulite.In men, this condition is very rare as the result of differences in the connective tissue.[13]The truth about cellulite is that it can affect even the slim and trim body. Regardless of age or weight, many people develop a dimpling of the skin, a problem so persistent that even a balanced diet and regular exercise cannot completely make it disappear. Once it occurs, cellulite is impossible to hide.[14]

Causes:

Cellulite appears to be result of localized adipose deposits and edema within the subcutaneous tissue, involving several different factors and mechanisms, such as metabolic imbalances, genetic factors, inflammatory conditions, reduced microcirculation, and hormonal factors. [15]

- **Being overweight:** Though cellulite also appears on thin people, excess weight makes cellulite worse.

- **Aging**: As women age, skin sags and wrinkles. In addition, the body's energy requirement lowers, thus, there is more fat accumulation.

- **Poor blood circulation:** When there is impaired blood flow to the fat-storage area, collagen fibers are damaged due to lack of oxygen and accumulation of toxic wastes. The fibers shrink and thicken, resulting in the quilted appearance of the fat chambers. In addition, because oxygen is needed to burn fat for energy, fat in these poorly oxygenated areas is the last to be used.

- **Poor lymph drainage:** The lymphatic system acts like a sewage system, filtering out and carrying away cellular wastes and toxins. If it is impaired, toxic products accumulate and inflate these fat cells, causing cellulite.

- **Hormones:** Female hormones (estrogen, and to a lesser extent, progesterone) play important roles in the formation of cellulite. Estrogen stimulates lipogenesis and inhibits lipolysis resulting in adipocyte hypertrophy. Progesterone may also contribute to the cellulite problem by weakening veins and causing water retention and weight gain. [12, 16]

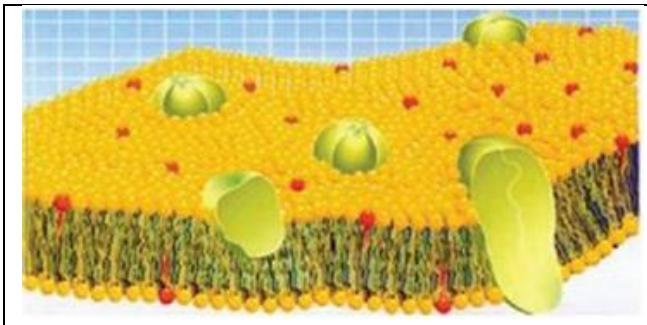
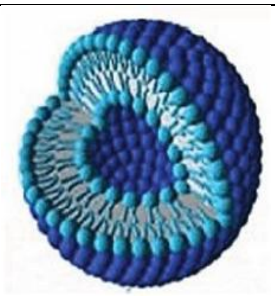
PRODUCT PROFILE

Key Ingredients:

Nano LPD Extract (free fatty acids from Laminaria, Caffeine, and Ivy), Guggul Extract, Aloe Extract, Carbomer 940, Tri Ethanol Amine, Disodium EDTA, Perfume, Purified water.

Nano LPD's:

They are small vesicles (less than 300nm small). Mainly made up of phospholipids arranged in bilayers. They are analogue structure of the cellular membrane (phospholipids). They are natural delivery system of active ingredients.

	
Cellular Membrane	Nano LPD's
Analogy between cellular membrane and Nano LPD's	

They are controlled and release carrier system. The active ingredients reallocate at the interface of Nano LPD's. Because of the structure and also layer of phospholipids composition, Nano LPD's can incorporate (1) Hydrophilic actives (within the vesicles) and (2) Lipophilic actives (between the layers). They increase efficacy and reduce unwanted side effects of active ingredients.

1) Caffeine:
    - Caffeine is being increasingly used in cosmetics due to its high biological activity and ability to penetrate the skin barrier.
    - This alkaloid stimulates the degradation of fats during lipolysis through inhibition of the phosphodiesterase activity.
    - Caffeine has potent antioxidant properties. It helps protect cells against the UV radiation and slows down the process of photoaging of the skin.
    - Moreover, caffeine contained in cosmetics increases the microcirculation of blood in the skin and also stimulates the growth of hair through inhibition of the 5-alpha-reductase activity.
    - Caffeine stimulates lipolysis via the inhibition of PDE (phosphodiesterase) activity and by increasing the cAMP levels in adipocytes.
    - Then caffeine activates hormone sensitive lipase, also by activating kinase enzyme, which leads to the degradation of triglycerides in the lipolysis process, and takes part in the reduction of cellulite.

2) Ivy (Hedera helix)
    - It has vasoconstrictor and antiexudative properties, and reduces capillary permeability - an action attributed to rutin and the flavonoids present.
    - It is also reported to be an effective moderator of peripheral sensitivity and can improve tolerance to skin massage.
    - It is also noted that Ivy extracts activate the circulation, allow drainage of infiltrated tissue and thereby reduce local inflammation, exerting an anti-edematous effect and lowering tissue sensitivity.

3) Laminaria
    - Laminaria extracts used as slimming agent due to its lipolytic actions.
    - The constituents of Laminaria extract include iodine, potassium, magnesium, calcium and iron. Iodine compounds, in particular, are great lipolytic agents as they stimulate lipase activity so help to eliminate fat retention.

4) Guggul extract
    - Guggul extract possess significant anti-inflammatory activity
    - It reduces the appearance of wrinkles and gives the skin a smooth, supple appearance.

5) Aloe Extract
    - Aloe extract supports in reducing obesity-induced inflammatory responses as it possess anti-inflammatory activity.
    - It has a Moisturizing and anti-aging effect.

Lipolytic effect of Obicure Gel is due to below cited effects:

- inhibition of phosphodiesterase activity
- Increment of cAMP in human adipocytes
- Liberation of free fatty acids from adipocytes
- Reduction in infiltrated fat at thigh areas

KEY FEATURES:

- Stimulates Microcirulation
- Quickly penetrates into skin
- Softens, nourishes & refreshes skin
- Reduces body stretch marks
- Strengthens skin elasticity

USAGE:

- As a slimming agent
- As an anti-cellulite agent
- As a smoothening agent

NEED OF STUDY:

The study will help to describe current market scenario for the obesity management. This research is also devoted towards estimating market share and major market competitors for the product. It will be beneficial in picturizing current market position of the product and to convert untapped market into a reliable revenue stream.

Thus, the suggestive outcome of this research study, will contribute to shape the marketing and build up new strategies to nurture the product in the market to greater extent as well as increasing awareness about the product at the same time.

RESEARCH QUESTIONS:

1) What are doctors opinions regarding treatment of obesity & stretch marks?

2) What are the current practices for Obesity management?

3) Is there awareness about product (Obicure Gel) amongst Gynecologists in Pune?

OBJECTIVE OF STUDY:

General objective:

TO STUDY FUTURE PROSPECTS OF OBICURE GEL FOR TREATMENT OF OBESITY.

Specific objectives:

1) To understand doctors opinions regarding treatment of obesity & stretch marks.
2) To investigate current practices for Obesity management with special emphasis on Obicure.
3) To analyze the awareness and reception of product (Obicure Gel) amongst Gynecologists in Pune.

RESEARCH METHODOLOGY

1) **Study design**: A Descriptive cross sectional study

2) **Study area**: study was conducted in different areas in the vicinity of Pune city.

Area wise distribution of Respondents	
Area	No. of Respondents
Shivajinagar, J.M. Road, F.C. Road, Gokhalenagar	24
Peth	22
Kothrud, Warje	17
Sinhgad Road	15
Satara Road, Dhankawadi	9
Hadapsar	8
Sangavi	5
Aundh	4

3) **Sampling design**:

- **Targeted respondents:** Gynecologists
- **Sampling technique:** Convenience sampling
- **Sample size:**104

4) **Tool & technique:**face-to-face interviews were conducted using questionnaire consisted of open ended questions.

5) **Data collection:**both primary and secondary data were collected.

- **Primary data:** the primary data was collected through means of questionnaire targeted toward gynecologists. A questionnaire was designed covering all open ended questions. It was aimed to derived maximum information from respondents.

- **Secondary data:**it is the one that is already available. It was used to study current trends in anti-obesity market, key drivers in anti-obesity market and various treatment options available for treatment of obesity, etc.

6) **Data analysis:** This began with pre-processing of collected data through editing to detect errors and omissions and making of corrections where possible. This involved a careful analysis of the completed questionnaires in order to ensure that collected data were accurate and consistent with other information gathered. The collected data was coded by the researcher for efficiency in order to reduce the replies given by the respondents to a small number of classes. After the coding was completed, the data was classified on the basis of common characteristics and attributes.

   The raw data was then assembled and tabulated for further analysis. Microsoft excel was used to aid the analysis of the data. Data was analyzed by preparing response sheet and then by using techniques like graphical analysis and proportions.

- **Ethical Issues**

The researcher strived to obtain an informed consent from the respondents before undertaking to collect data from the field. The researcher informed and explained the objectives of the research in order to obtain informed consent from the respondents. High level of confidentiality on the information provided by respondents through questionnaires was maintained.

RESULTS

Data collected from 104 doctors are compiled in this section. The data are analyzed and presented under subsections viz. doctors' opinion and practices about treatment for obesity, use of Obicure for treatment of obesity, use of anticellulitegel for treatment of obesity, practices regarding treatment of stretch marks and doctor's reception of product.

Of 104 doctors interviewed during survey, 94 (92.1 %) doctors reported that they received obese patients (Table 1). Although the number of patients received was different. Majority of the doctors were visited by 1 to 4 patients /day. Fourteen (13.7 %) doctors received as high as 5 to 10 patients in a day.

Table 1: Number of obese patients visit to clinic

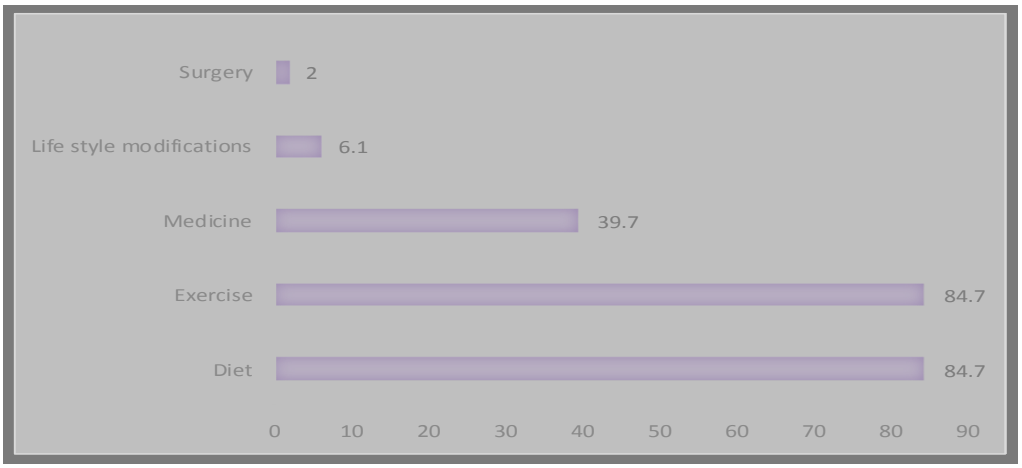
Frequency of patient visit	Number	Percentage
5 to 10 / day	14	13.7
3 to 4 / day	34	33.3
1 to 2 / day	37	36.3
2 to 3/week	3	2.9
1/ week	6	5.9
Rarely	8	7.8

I Opinions and practices regarding treatment of obesity

Multiple treatment options were recorded by the doctors regarding treatment options which they consider for treating obesity. Data in Table 2 indicates that majority of the doctors preferred Diet and Exercise as the treatment option. Followed by Diet and Exercise, 39 doctors reported Medicine as treatment option. Only two doctors also considered Surgery as treatment option for obesity.

Table 2: Treatment options for obese patients

Treatment	Number	Percentage
Diet	83	84.7
Exercise	83	84.7
Life style modifications	6	6.1
Medicine	39	39.7
Surgery	2	2.0
n= 98 *Multiple responses were recorded*		



While selecting molecule or brand for the treatment of obesity doctors considered various parameters. These parameters are grouped under two subheadings; Patients characteristics and Product related parameters (Table 3).

Table 3: Parameters to select molecule or brand for treatment of obesity

Parameter	**Number**	**Percentage**
Patients Characteristics		
Age	3	3.9
Body Mass Index	9	11.7
Affordability/cost	19	24.6
Cause	8	10.4
Product related		
Efficacy	25	32.4
Side effects	21	27.3
Safety	18	23.3

Duration of treatment	2	2.6
Availability	1	1.2
No drug preferred	13	16.8
n= 77 *Multiple responses were recorded.*		

Among patients' characteristic doctors mainly considered Affordability of the brand (24.6 %), Body Mass Index of the patient (11.7 %) and cause of problem (10.4 %). The productrelated parameters considered by the doctors included mainly; efficacy of the drug (32.4 %), its side effects (27.3 %), and safety of treatment (23.3 %).

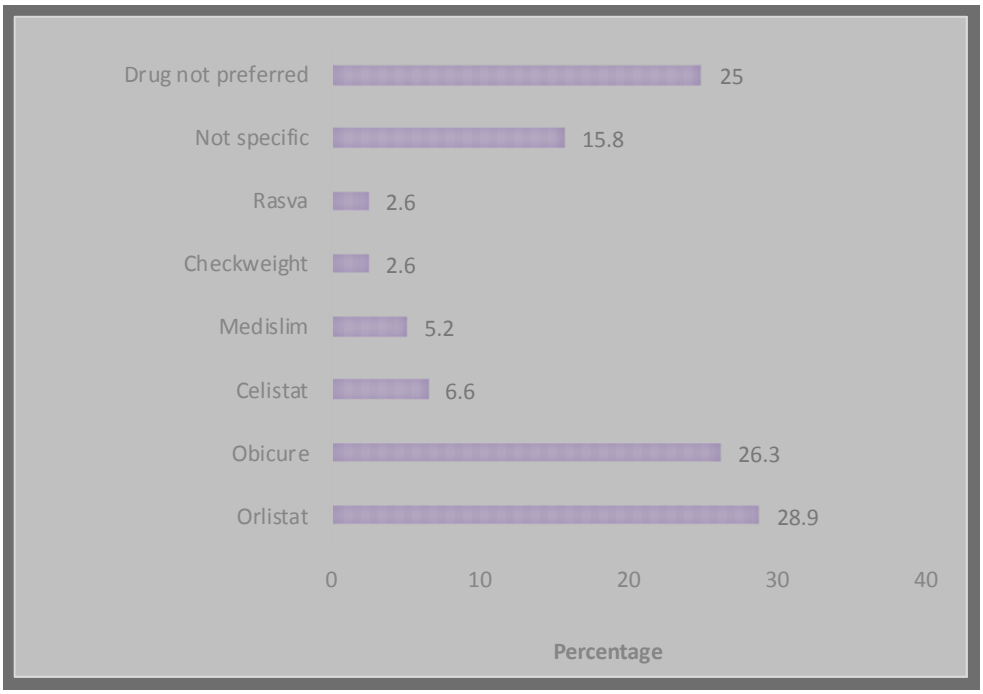
After considering above parameters for selecting treatment for obesity, doctors reported use of mainly two medicines; Orlistat (28.9 %) and Obicure (26.3 %).

Table 4: Preferred drug for treatment of obesity

Treatment	**Number**	**Percentage**
Orlistat	22	28.9
Obicure	20	26.3
Celistat	5	6.6
Medislim	4	5.2
Checkweight	2	2.6
Rasva	2	2.6

Not specific	12	15.8
Drug not preferred	19	25.0
n= 76 *Multiple responses were recorded.*		

Preferred drug for treatment of obesity

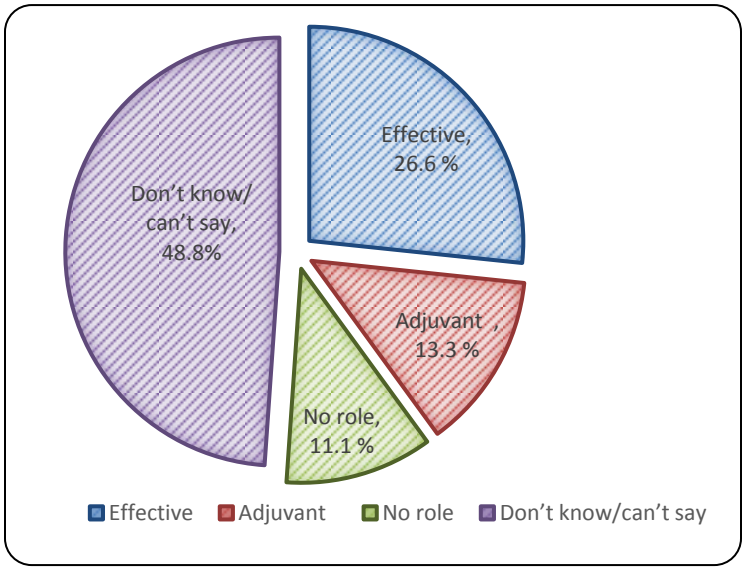


Other drugs used by the doctors were Celistat (6.6%), Medislim (5.2 %), checkweight (2.6%). Use of Rasva was reported by only two (2.6 %) doctors. Whereas, 15.8 % doctors have not specify their choice of drug. Among 76 doctors who have responded to this question, 1/4th of the doctors did not preferred any drug for the treatment of obesity.

Out of 104 doctors only 45 responded to question related to role of bioactive in treatment of obesity. Of these 45 doctors, half of them were not aware or not sure about the role. Only 12 (26.6 %) doctors reported that bioactive are effective in treatment of obesity whereas 6 (13.3 %) reported adjuvant role. According to 5 doctors bioactive does not play any role in treatment of obesity.

Table 5: Opinion on role of bioactive in treatment of obesity

Role	Number	Percentage
Effective	12	26.6
Adjuvant	6	13.3
No role	5	11.1
Don't know/can't say	22	48.8
n=45		



II Use of Obicure for treatment of obesity

Specific questions were asked to doctors regarding use of Obicure for the treatment of obesity and their experience of this treatment. Almost half of the doctors said that they have used brand (Table 6).

Table 6: Use of Obicurefor treatment of obesity

Use	**Number**	**Percentage**
Yes	50	49.5
No	51	50.5
n=101		

Out of 50 doctors who have given Obicure for the treatment of obesity, 40 doctors shared their experience. Around 23 doctors said that the Obicure is good and they had satisfactory results. Six doctors were partially satisfactory. As per seven doctors it was not convincing and two doctors reported side-effects or rebound effect of the treatment.

Table 7: Experience about Obicure treatment for obesity (n=40)

Experience	**Number**	**Percentage**
Good/Satisfactory	23	57.5
Partially satisfactory	6	15.0
Not convincing	7	17.5
Side effects-Rebound effect	2	5.0
Results waiting	2	5.0
n= 40		

Table 8: Reasons for non use of Obicure

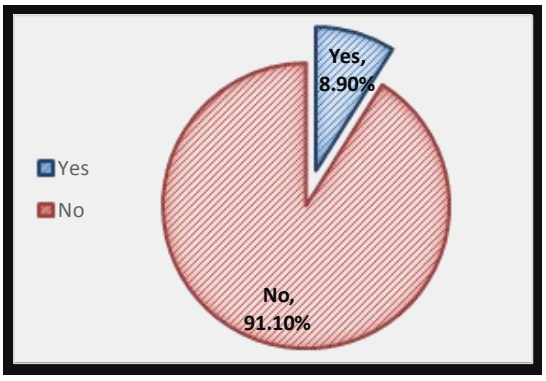
Reasons	Number
Believe in exercise and diet control	1
Don't believe in anti-obesity drugs	2
Not aware about Obicure	5
n=8	

Out of 51 doctors who never used Obicure for the treatment of obesity, only eight doctors have mentioned the reasons for non-use. Of these eight doctors five were not aware about Obicure and three doctors said they don't believe in anti-obesity drug but believe in exercise and diet control

III Use of Anticellulite gel for treatment of obesity

Only nine doctors have used Anticellulite gel for the treatment of obesity. Only three responses were recorded for experience about use of Anticellulite gel in treatment of obesity; one waiting for results and two doctors had reported it was good

Figure 1: Use of Anticellulite gel for treatment of obesity (n=101)



Among the non-users of the Anticellulite gel, 29 doctors demanded for information regarding the product. Types of information required involve viz. product monograph (19), product safety (4), and clinical trial information (2).

Table 9: Type of information required regarding Anticellulite gel

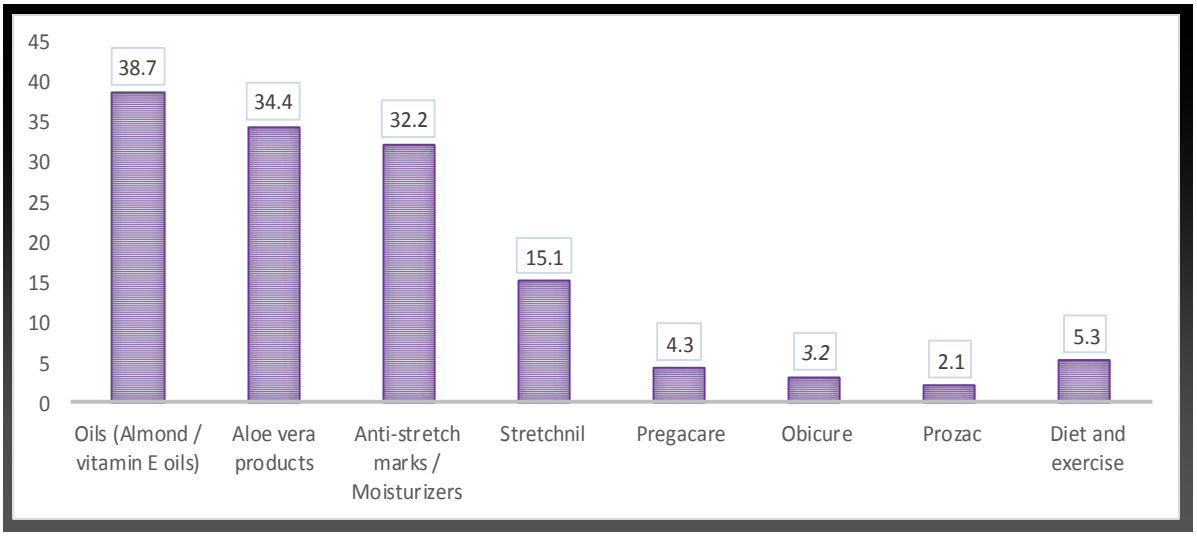
Information	**Number**	**Percentage**
Product Monograph	19	70.4
Product safety	4	14.8
Clinical trial information	2	7.4
Effectiveness	2	7.4
MOA	2	7.4
n=29		

IV Practices regarding treatment of stretch marks

Type of treatment given for stretch marks developed during pregnancy involved; Almond or vitamin E oils (38.7 %), Aloe vera products (34.4 %), anti-strchmarks cream or moisturizers (32.2 %), and Stretchnil (15.1 %). Few doctors also recommended Pregacare (4.3 %), Obicure (3.2 %) and Prozac (2.1 %). Five doctors reported that they advice diet and exercise for treatment of stretch marks developed during pregnancy.

Table 10: Treatment for stretch marks developed during pregnancy

Treatment	Number	Percentage
Oils (Almond / vitamin E oils)	36	38.7
Aloe vera products	32	34.4
Anti-stretch marks / Moisturizers	30	32.2
Stretchnil	14	15.1
Pregacare	4	4.3
Obicure	3	3.2
Prozac	2	2.1
Diet and exercise	5	5.3
n=93 *Multiple responses were recorded*		

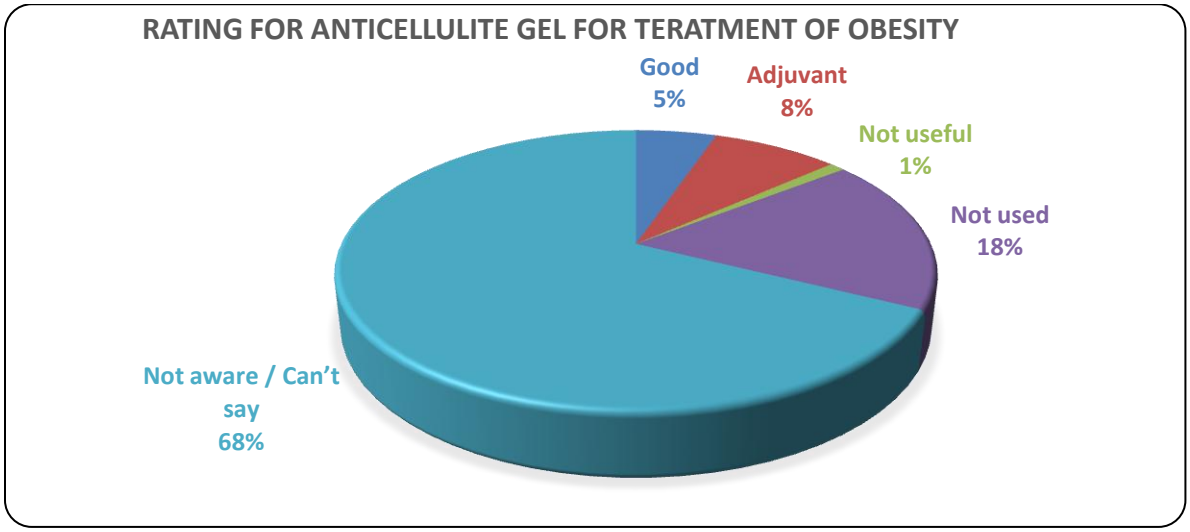


V Reception of Productby the doctors

Doctors were asked to give rating for anticellulite gel in treatment of obesity as well as stretch marks. Majority of them reported that either they are not aware about it (67.4 %) or not used the products (17.9%) (Table 11). Only five and eight doctors rated it good or adjuvant, respectively.

Table 11: Rating for anticellulite gel for treatment of obesity

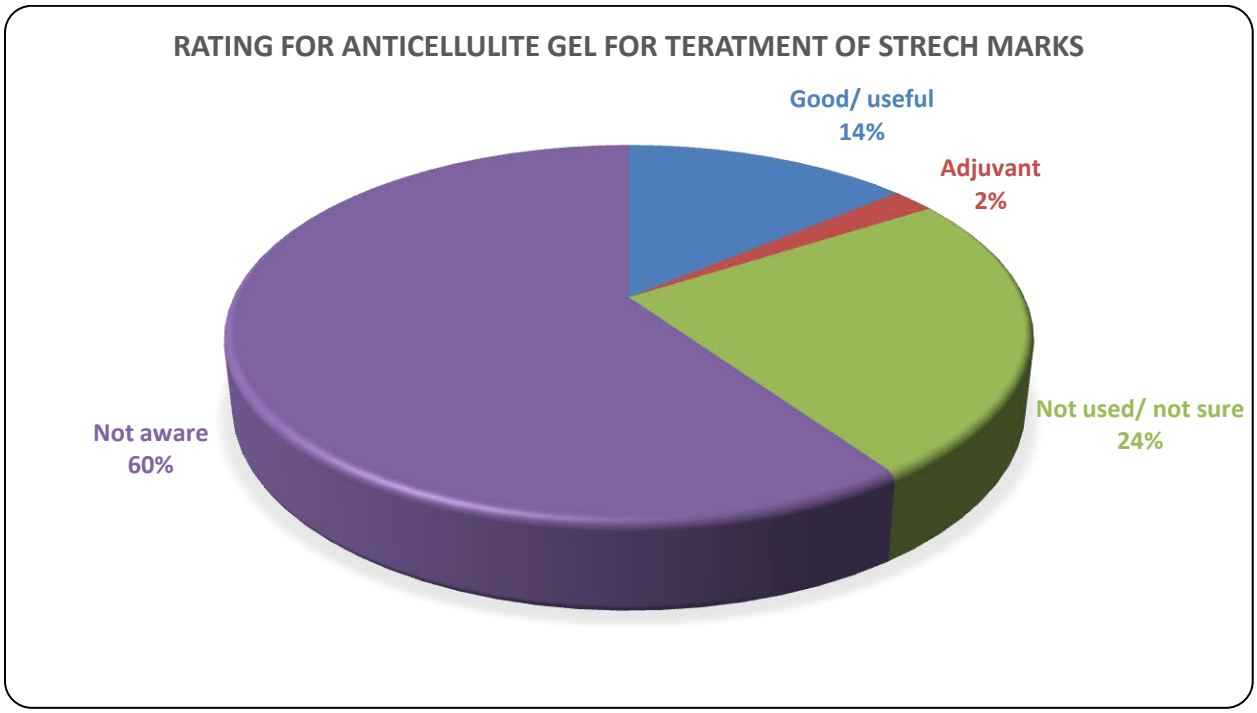
Rating	Number	Percentage
Good	5	5.2
Adjuvant	8	8.2
Not useful	1	1.0
Not used	17	17.9
Not aware / Can't say	64	67.4
n = 95		



Similarly, in case of rating for anticellulite get in treatment of stretch marks, 59.6 % of the doctors were not aware of the product and another 24.5 % were have not used It (Table 12). Only 13.8 % doctors said that the anticellulite gel is good and it is useful in the treatment of stretch marks.

Table 12: Rating for anticellulite gel in treatment of stretch marks

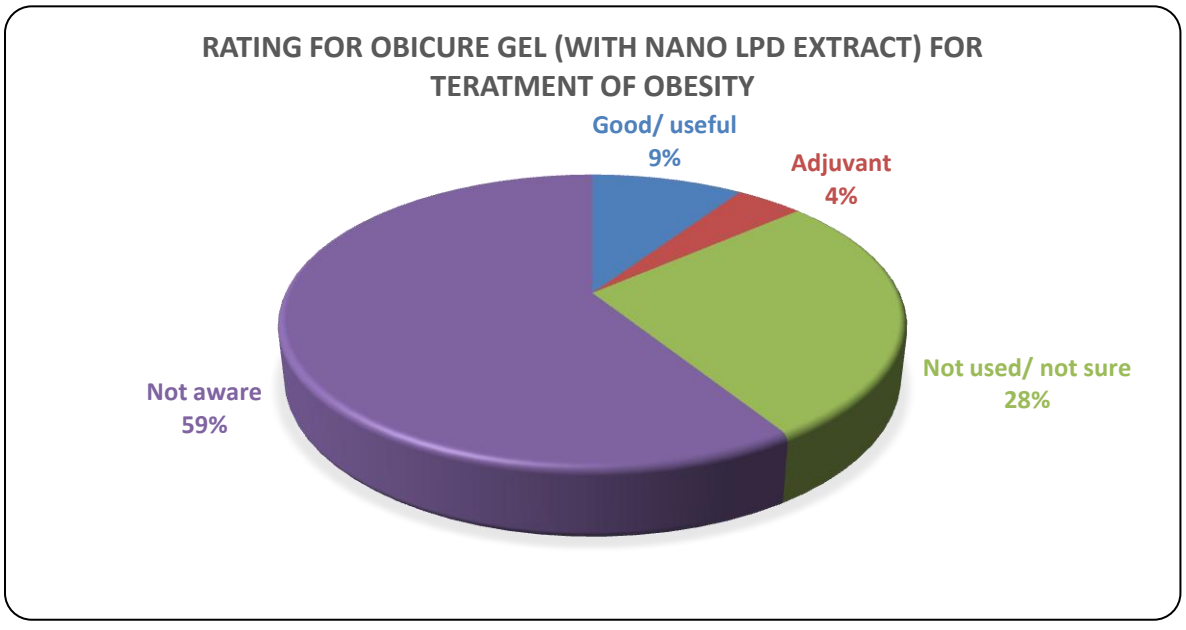
Rating	**Number**	**Percentage**
Good/ useful	13	13.8
Adjuvant	2	2.1
Not used/ not sure	23	24.5
Not aware	56	59.6
n=94		



Out of 95 doctors interviewed in the, only13 doctors have rated for obicure gel in the treatment of obesity. Of which 9 doctors found it useful or good whereas 4 doctors were partially satisfied. Here again majority of the doctors were not aware of the product or its use in the treatment of obesity.

Table 13: Rating for Obicure gel in treatment of obesity

Rating	**Number**	**Percentage**
Good/ useful	9	9.4
Adjuvant	4	4.2
Not used/ not sure	26	27.4
Not aware	56	58.9
n=95		



SUMMARY

Objectives of the present study were to understand opinions of the doctor regarding treatment of the obesity and to investigate current practices with special emphasis Obicure. For this purpose 104 doctors from Pune city were interviewed. Most of the doctors were visited by obese patient on daily basis.

Counseling regarding Diet and exercise was observed to be commonly given treatment for obesity. Only 39.8 % opt for medicine as treatment option for obesity. Furthermore majority of the doctors were not aware or not sure about the role of bioactive in the treatment of obesity. Only 12 doctors included in the study believed that bioactive are effective in treatment of obesity.

Affordability by the patient, efficacy and side-effects of the products were important selection criteria for the molecule or brand for the treatment of obesity. Orlistat and Obicure were observed to be preferred brands for the treatment of obesity.

Among the doctors who have prescribed Obicure to their patients only half of them were satisfied with the treatment. Rests of them were not fully convinced about the treatment. The non-users of Obicure were also asked about the reasons but researcher is not able to conclude anything on that as very few responses were recorded for this question.

Very few responses were recorded for use of anticellulite gel for treatment of obesity. The doctors have demanded more information regarding anticellulitegel mainly in the form of product monograph.

Different practices regarding treatment of stretch marks developed during pregnancy were recorded during this study. Almond or vitamin E oils, Aloe vera products, moisturizers were commonly preferred treatments.

CONCLUSION

Prevalence of obesity is rising in Pune city as an effect of it almost all the doctors enrolled in the survey are visited by obese patients on daily basis. Half of the doctors interviewed were even getting more than three to four patients in a day. Most of these doctors are counseling their patients for diet and exercise for weight reduction and management. Only four out of 10 doctors give medicine as for treatment of obesity. We can infer from this observation that all these doctors can be prospective target for the Obicure.

While approaching the target group for promotion of the product some of the key issues need emphasis are; role of bioactive in treatment of obesity, use of anticellulite gel in treatment of obesity, cost effectiveness of the product and misconceptions about side effects. A comparative picture with other leading brand can be put in front of the doctors which will enable them to understand better effect of Obicure.

For better promotion of the product maybe scientific literature regarding the product in the form of monograph ought to reach to the doctors as well as users. Various ways can be adopted to impart information regarding the products viz. seminars or workshops of the doctors can be arranged, personal visits can be made to answer queries of the doctors as well as patients. Even social media can be used for promotion of the product.

SUGGESTIONS

- For morbid obesity Gynecologist refers their patients to Physician so this can be a potential target group for Obicure.
- A large number of doctors were not aware about the product. Aggressive promotion is mandatorily required.
- Role of bioactive in the treatment of obesity was not clear for majority of the doctors. Awareness regarding the same can be created by arranging seminars or workshops of the doctors.
- Before marketing the product three important parameters need to be considered; cost, efficacy and side-effects.
- Only half of the doctors participated in the study have used Obicure, effort need to be extended to increase Obicure users. Awareness about the product need to be created.
- Special efforts are required to deal with the queries of the doctors and patients who are not satisfied with the treatment.
- As demanded by doctors, informative material should be made available for the doctors in the form of Product monograph.

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Annexure-1

Questionnaire

1. Doctor, in a day how many obese patients come to you for treatment?

   _____
   _____

2. What are the treatment options you consider for treating obesity?

   _____
   _____

3. What are the parameters you see while selecting a molecule/Brand for treatment of obesity?

   _____
   _____

4. What is your preferred choice of drug for treatment of obesity?

   _____
   _____

5. What is your opinion on role of bioactives for treatment of obesity?

   _____
   _____

6. Have you used OBICURE for treatment of obesity?

   If Yes, how is your experience?

   _____

   If No, any specific reason?

   _____

7. Do you have used anticellulite gel for treatment of obesity?

   If yes then how is your experience?

   _____

   If No, then what information you require on this type of gel?

   _____

8. What treatment are you suggesting for your patients who have developed stretch marks during pregnancy?

   _____

   _____

9. How will you rate anticellulite gel for treatment of obesity?

   _____

   _____

10. How will you rate anticellulite gel for treatment of Stretch marks?

    _____

    _____

11. How will you rate Obicure Gel (with Nano lipid extract) for treatment of obesity?

    _____

    _____

12. Any Suggestion/feedback on obesity Management.

    _____

    _____