

A CASE REPORT OF OBESITY WITH CELLULITIS

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Concept of Obesity (Modern view)

Obesity is a condition in which a person has an unhealthy amount and/or distribution of body fat.

To measure Obesity, we commonly use a scale known as the Body Mass Index (BMI). BMI is calculated by dividing a person's weight (in kilograms) by their height (in meters) squared (commonly expressed as kg/m²). BMI provides a more accurate measure of Obesity than weight alone, and for most people it is a fairly good (although indirect) indicator of body fatness.

The standard weight categories based on BMI for adults age 20 years or older are

BMI in kg/m ²	Weight Category
Below 18.5	Underweight
18.5 to 24.9	Normal
25.0 to 29.9	Overweight
30.0 to 39.9	Obese
40.0 or higher	Severely obese

Concept of Cellulitis (Modern view)

- It is a non-suppurative inflammation spreading along the subcutaneous tissues and connective tissues planes and across intercellular spaces. The term is a misnomer, as the lesion is one of the connective and interstitial tissue and not of the cells.

- The causative organism is mostly the *Streptococcus pyogenes*, though a variety of aerobic and anaerobic bacteria may produce Cellulitis.
- There is a widespread swelling and redness at the area of the inflammation, but without definite localization. Initially, the site of inoculation by a causative organism becomes red. Gradually the skin swells and becomes shiny. In severe infections blebs and bullae form on the skin.
- Initially, the affected part is very much swollen and painful. On examination affected part is warm, swollen and tender. The surrounding blood vessels may be seen as red streaks due to lymphangitis. The regional lymph nodes will be enlarged and tender with Acute Lymphadenitis. Later on the swelling mainly remains.

Concept of Medovruddhi (Ayurvedic view)

- Jatharagni (can be matched to digestive capacity) is responsible for all metabolic activities in body.
- Pathophysiology of Medo-dhatwagnimandya leads to excess homologues 'Poshaka Meda Dhatu' and circulates all over the body during Rasa-raktabhisarana (Circulation).
- There are 2 types of Meda Dhatu- Poshak and Poshya. In short, the Poshak Meda Dhatu is 'Chala' in nature i.e. (Gatiyukta), which is circulated all over the body along with Rasa-Rakta Dhatus for nutrition of Poshya Meda Dhatu, hence increase in vikrut Poshak and Poshya Meda Dhatu leads to Medovruddhi.

Ayurvedic concept of Shotha and Kaphaj Shotha

The vitiated Vata dosha displaces the vitiated (morbid) Rakta (blood), Pitta and Kapha pushing them into the channels of circulation. The Vayu is further obstructed by these morbid elements and causes accumulation of Pitta, Kapha and Rakta in between Twak (Skin) and Mamsa (Muscle). Then occurs swelling at the region of accumulation and is called Shotha.

The symptoms of Kaphaj shotha are

- Guru – Heaviness in the affected limb/ local area
- Sthira – Edema remains stable and confined to one area
- Pandu, Arochaka – Patient suffers from Anemia and Anorexia,
- Praseka – Excessive salivation,
- Nidra – Excessive sleep,
- Vami – Vomiting and

- Vahnimandya – Suppression of the power of digestion
- Krushrajanama prashama- This type of Edema takes a long time to appear and its cure also takes a long time
- Nipidito na cha unnamed- Upon pressing and releasing the pressure, the pit doesn't get filled up immediately and
- Ratribali – The condition gets aggravated at night.

Concept of Ekanga Shotha

If the Doshas get accumulated in any particular part of body, then edema occurs in that specific region which is known as Ekanga Shotha.

Concept of Shleepad (For differential diagnosis)-

In Sanskrit, 'Shlee' means Elephant and 'Pada' refers to foot. A diseased condition where the foot appears like the 'foot of elephant' is termed as 'Shleepada'.

Causes

1. Kapha predominant food and habits (Kaphaja ahara vihara)
2. Heavy food intake (Guru ahara)
3. Stagnant water (Puranodaka)
4. Cold water intake (Sheetala jala pana)
5. Residing in the area where stagnant water is nearby (Puranodaka bhuyishta desha) etc.

Due to the above said reasons, all the three doshas are aggravated, predominantly Kapha Dosha. These Doshas get lodged in the inguinal region first and then gradually move downwards the feet leading to Shleepad.

After observing all above said signs and symptoms, one can correlate Obesity with Medovruddhi and Cellulitis with Kaphaj Shotha (In this case Ekanga Shotha).

DESCRIPTION ABOUT THE CASE

33 year old male patient came in a OPD of M.A. Podar Hospital, Worli, Mumbai with diagnosis as 'Cellulitis' by a Allopathic physician.

Investigations

- All routine investigations like Blood Sugar (Fasting & Post-Prandial), Lipid Profile, LFT, RFT and CBC were within normal limits.
- X-ray (chest) PA view and ECG also showed no major abnormalities.
- Colour Doppler of venous system of both lower limbs on 17/08/2017-Skin thickening and Subcutaneous edema in dorsum of lower 1/3rd of right leg and foot region.
- Filariasis Antigen in 2015 was Positive but same test in 2017 is negative.
- USG (Abdomen+pelvis) on 7/8/2017- Hepatomegaly with grade 2 Fatty liver.



Physical Examination



Lower limb measurement

Modern Clinical Examination

- Temp - Normal;
- Pulse - 84/min; Vol- Good;
- Respiratory Rate- 22/min;
- B.P- 124/82 mm Hg;
- RS- Clinically NAD;
- HS- Sinus Rhythm;
- P/A- Mild Gaseous Distension;
- Urine- Passed;
- Stool-Passed.

Ayurvedic clinical exams**A) Ashtavidha Parikshan**

- 1) Nadi- 78/min;
- 2) Mala- shows no abnormality;
- 3) Mutra- shows few pus cells;
- 4) Jivha- Sama (Coated);
- 5) Shabda- Shows no abnormality;
- 6) Sparsha- Anushna;
- 7) Druk- shows no abnormality;
- 8) Aakruti- Sthula

B) Vikruta Strotas Parikshan

- 1) Rasavaha Strotas- Kandu (Itching), Strava (Secretions in initial stage);
- 2) Raktavaha Strotas- Raktabh Vaivarnya (Reddish Discoloration);
- 3) Mamsavaha Strotas- Shotha (Edema);
- 4) Medovaha Strotas- Sthaulya , Shopha.

Treatment given**1) For Internal Use After some food (5months)**

- i) Triphala Guggulu 500mg x 3;
- ii) Gokshur Guggulu 500mg x 3;
- iii) Punarnava+ Haridra+Mustaka+ Guduchi Kwath (Koshna)100ml x 3

2) For External Use at Night (2 weeks)

- i) Malahara (Ointment) made by mixture of Shatadhauta Ghruta 200 gms + Haridra Churna 5 gms + Raktachandan Churna 5 gms

3) Panchakarmas

1. Virechan by Koshna Triphala Kwath 100ml + Eranda Taila 20ml on 14/09/2017 - 12 vegas.
2. Siravedha done from Right Cubital vein (approximately 70ml blood-letting was done) on 23/09/2017 (i.e. After Sansarjan karma for 1 week).
3. Virechan by Abhayadimodak 500mg with koshna jala on 02/11/2017 - 08 vegas.



Siravedha Karma

Observations with result of Subjective parameters

Symptoms	Before Treatment	After Treatment
Sthanik Pada Shotha (Right Leg Local Edema)	At the level of knee joint - 1+	At the level of knee joint - 0
	At the level midway between the knee and ankle joints -3+	At the level midway between the knee and ankle joints -1+
	At the level of ankle joint- 1+	At the level of ankle joint- 0
Strava	1+	0
Shula	2+	0
Kandu	2+	0
Sparshashtva	1+	0

Parameters Gradations Description**I. Sthanik Pada Shotha (Right Leg Local Edema)**

- Grade 0- Absence of Edema
- Grade 1-Mild (Pitting Edema <2mm)
- Grade 2-Moderate (Pitting Edema 2-4mm)
- Grade 3-Marked (Pitting Edema 4-6mm)
- Grade 4-Severe (Pitting Edema 6-8mm)

II. Strava (Secretions)

- Grade 0- Absence of Strava
- Grade 1-Mild (Occasionally)
- Grade 2-Moderate (Not continuous and disappears in a short time after Local Application)
- Grade 3-Severe (Continuous and tolerable with bandaging).

III. Shula (Pain)

- Grade 0- Absence of Shula
- Grade 1- Mild (Occasionally and tolerable without medication)
- Grade 2-Moderate (Tolerable after medication only)
- Grade 3-Severe (Can't tolerable after medication also).

IV. Kandu (Itching)

- Grade 0- Absence of Kandu
- Grade 1- Mild (Occasionally)
- Grade 2-Moderate (can do routine work without disturbance)
- Grade 3-Severe (Disturbance interferes in routine work).

V. Sparshasahatva (Tenderness)

- Grade 0- Absence of Sparshasahatva
- Grade 1- Mild (Occasionally & tolerable)
- Grade 2- Moderate (Can't tolerate for few hours)
- Grade 3- Severe (Can't tolerate throughout the day)

Observations with result of Objective parameters-

Weight	
Before Treatment	After Treatment
140 kg	136 Kg

Body Mass Index	
Before Treatment	After Treatment
44.69 kg/m ²	43.40 kg/m ²

Waist-Hip ratio	
Before Treatment	After Treatment
1.21	1.16

Lower limb measurment				
Region	Before Treatment		After Treatment	
	Right	Left	Right	Left
At the level of Knee joint	43.8 cms	44 cms	43.5 cms	43.7 cms
Midway between Knee and Ankle joint	46.5 cms	43.5 cms	44.5 cms	43.3 cms
At the level of Ankle joint	34.5 cms	27.8 cms	34.1 cms	27.6 cms

Discussion with Probable mode of action**I. Importance of Panchakarmas**

Medication	Benefits
A) Virechan	One of the Panchakarmas- Body purification method of Purgation (by Abhayadi Modak in this case)
B) Siravedh	One of the Panchakarmas-Body purification method of blood-letting

II. Importance of Medicinal Drugs

Medication	Benefits
A) Triphala Guggulu	Acts as a Immunomodulator, Antiseptic, Antibiotic, beneficial to reduce Local Pain, Swelling with inflammation, as well as Obesity. Also eradicates Secretions.
B) Gokshuradi Guggulu	Acts as a Diuretic and beneficial to reduce Swelling with Inflammation.
C) Punarnavadi Kwatha	Acts as Diuretic and beneficial to reduce Swelling with inflammation with valuable help of Punarnava. Qualities of ingredients of Punarnavadi Kwatha- I) Punarnava (Boerhavia diffusa)- Diuretic, Anti-inflammatory and useful to reduce Lipids and Pain. II) Haridra (Curcuma longa)- Germicide, Antiseptic, Anti-Inflammatory, beneficial to eradicate Itching, useful to reduce Lipids and for healing of ulceration. III) Mustaka (Cyperus rotundus)- Germicide, beneficial to eradicate Itching and useful to reduce Lipids.

	IV) Guduchi (<i>Tinospora cordifolia</i>)- Immunomodulator, beneficial to eradicate Itching and useful to balance Tridoshas i.e. Vata, Pitta and Kapha.
D) Shatadhaut ghrīt malahar (Ghee based Ointment)	Acts to reduce swelling with inflammation. The ingredient Haridra churna acts as a Germicide as well as Raktachandan is beneficial to eradicate Burning sensation and bleeding.

Special quality of Guggulu (One of the ingredients of Triphala Guggulu and Gokshuradi Guggulu) - It is most Shreshtha (predominant) dravya among Medo-Vatahara dravyas. Its Anti-inflammatory, Anti-obesity, Hypolipidemic activity has proven already by clinical research trials and projects.

CONCLUSION

Obesity/ Cellulitis/ Obesity with Cellulitis can be relieved by Ayurvedic therapies.

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