



CASE STUDY PRESENTATION: DYSPHAGIA



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General Information

- Name: Mr XYZ
- Age: 81 yrs
- Sex: male
- Date of Admission: 13.6.2013
- Date of Discharge:12.7.2013
- Total number of days : 29 days

Medical history

- History of past illness:

He is a known case of bronchial Asthma,
DM(Type II), subclinical hypothyroid,
Hyperlipidemia ,HTN

ERCP/ Biliary stent : 30.9.99

Lap cholecystectomy & TURP: 24.3.2010

Patient presented with

- Retrosternal burning, SOB, Profuse sweating since few hours
- No cough, palpitations, loss of consciousness, fever
- He had one episode of bilious vomiting.

Diagnosis

- Acute Coronary Syndrome
- Acute inferior wall Myocardial Infarction
- Posterior Circulation CVA
- Hemorrhagic cystitis

Assessment of Nutritional Status

- Food Allergies: None
- Food Preferences : Non vegetarian
- Diet Instructions : Diabetic low salt soft diet

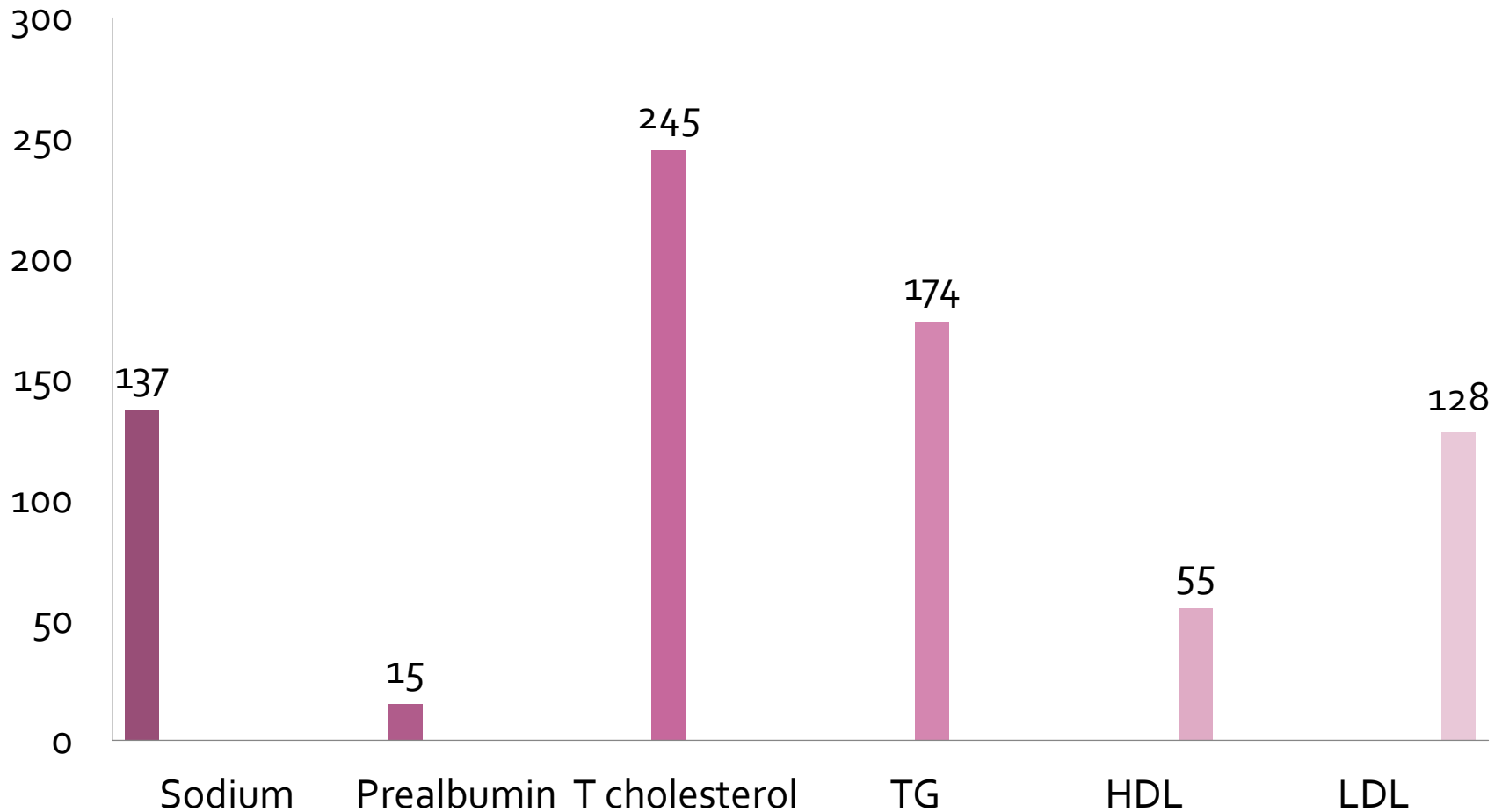
Nutritional screening

- GI symptoms: Only one episode of bilious vomiting
- Current feeding Pattern: oral
- Adequacy of Preadmission nutrient intake: > 75% intake
- Nutritional assessment rating: Mild moderately nourished

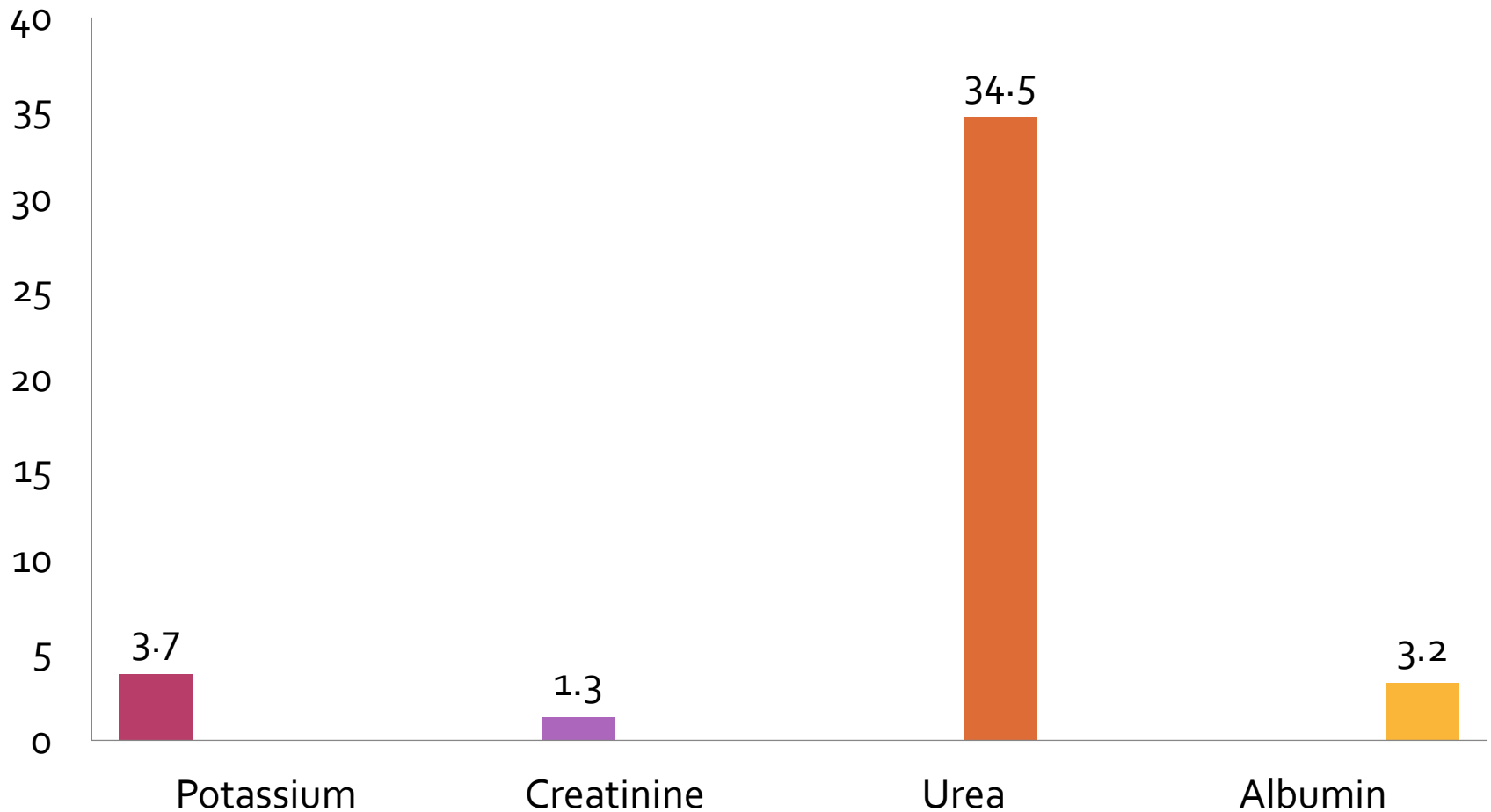
Anthropometric Assessment

- Height : 6'2"
- Weight: 112kgs
- BMI: 32
- IBW: 87 kgs

Biochemical Assessment



Biochemical Assessment



Dietary Assessment

- Energy Requirement: 1740 -1780 kcal/day (As per the Harris Benedict Equation and Thumb Rule)
- Protein Requirement: 87g/day (1 gm/ kg IBW)

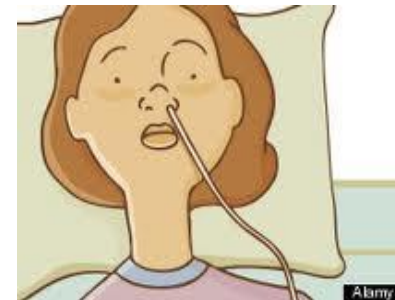
Dietary treatment

Date	Diet	Calories (Kcal)	Protein (g)
13.6.2013	Diabetic Soft diet	150	6
14.6.2013	Diabetic soft diet	300	12
	SLURRED SPEECH		
15.6.2013	Diabetic soft diet	350	14
16.6.2013	Diabetic soft diet	250	10

Intake was poor , Refusing to take any solids

Patient was stable. There was no ataxia seen but he complained of Diplopia, Dysarthria, Dysphagia and choking sensation especially liquids. MRI Revealed Acute Infarct in thalamus. Swallow Test was positive.

Date	Diet	Calories (Kcal)	Protein (g)
17.6.2013	Diabetic RT feeds @200ml 2 nd hrly	990	44
18.6.2013	Diabetic RT feeds @200ml 2 nd hrly	1782	79



Time	Feeding Information	Volume (ml)
6am	3.5 scoops of Standard DM formula + 165ml water	200
8am	3.5 scoops of Standard DM formula + 165ml water	200
10am	3.5 scoops of Standard DM formula + 165ml water	200
12pm	3.5 scoops of Standard DM formula + 165ml water	200
2pm	3.5 scoops of Standard DM formula + 165ml water	200
4pm	3.5 scoops of Standard DM formula + 165ml water	200
6pm	3.5 scoops of Standard DM formula + 165ml water	200
8pm	3.5 scoops of Standard DM formula + 165ml water	200
10pm	3.5 scoops of Standard DM formula + 165ml water	200

Total volume : 1800ml
 Total Calories :1782 kcal
 Total protein: 79g



Date	Diet	Calories (kcal)	Protein (g)
19.6.2013 – 27.6.2013 (9 days)	Diabetic RT feeds + Oral Thick liquids	1302	55

Thick liquids: Thick milk , Buttermilk, Suji Milk , Cream Based Soups , Porridges
Recommended : Any Smooth, homogenous beverages without lumps, chunks, or pulp.

Avoid : Any beverage without lumps, chunks , seeds , pulp etc.



Importance of Thickened Liquids

What Makes Regular Liquid Dangerous?

Thin liquid is the most difficult substance to control in the mouth. Especially for patients who are experiencing weakness, it can quickly and unexpectedly fall into the back of the throat before a swallow has started. Thin liquids also tend to break into several pieces in the throat instead of staying in one solid form.

What Does That Mean for Patient Safety?

Regular liquid puts a patient at risk for fluid entering the trachea (tube to the lungs) rather than esophagus (tube to the stomach). The buildup of food and drink in the lungs can cause lung infection and inflammation, and puts one at risk for developing aspiration pneumonia



How Do Thickened Liquids Help to Prevent Pneumonia?

Thick liquids move more slowly down the throat, allowing more time to close and protect the airway.

Thick liquids are easier to keep together in one piece, which helps to ensure that they travel down only one tube –the esophagus.

Time	Feeding Information	Volume (ml)
6am	3.5 scoops of Standard DM Formula+ 165ml water	200
8am	Thick Suji milk (diab) / Ragi porridge (diab)	200
10am	3.5 scoops of Standard DM Formula+ 165ml water	200
12pm	Coconut water (FLUSH)	200
2pm	3.5 scoops of Standard DM Formula+ 165ml water	200
4pm	Thick buttermilk / Thick soup	200
6pm	3.5 scoops of Standard DM Formula+ 165ml water	200
8pm	Coconut water (FLUSH)	200
10pm	Thick Diab milk	200

Total volume : 1800ml
Total Calories:1302 kcal
Total protein: 55g



Level 1 : Pureed Diet

Dysphagia Pureed diet includes foods that are pureed, homogenous and cohesive. Foods that are “Puoding like”

Avoid: Any beverages/dry cereal/ cooked cereal with lumps, chunks, seeds, pulp etc. Whole fruits(fresh, frozen, dried or canned),Whole ground meats, fish or poultry. Vegetables that have not been pureed.

Examples: Thick soups, Blended cereals, Smooth puddings, custards , Yoghurt Pureed desserts , fruits and vegetables.

Before



Roast Dinner

After



Puree Dinner



Plan of care:

Date	Diet	Calories (kcal)	Protein (g)
28.6.2013 – 2.7.2013 (5 days)	Diabetic RT feeds + Pureed Diet	1592	61



Sample Menu :

Time	Feeding Information	Volume
6am	3.5 scoops of Standard DM Formula+ 165ml water	200
8am	Soft upma No chilli thick sambar Pureed papaya	1K 1K 1K
10am	3.5 scoops of Standard DM Formula+ 165ml water	200
12-1pm	Thick chicken egg drop soup Blended Khichidi Plain custard (no sugar)	1K 1K 1K



3pm	3.5 scoops of Standard DM Formula+ 165ml water	200
5pm	Breadpudding (no sugar)	1K
8pm	Thick tomato soup Pureed spinach / pureed vegetables Blended khichidi	1K 1K 1K
10pm	3.5 scoops of Standard DM Formula+ 165ml water	200

Total Calories : 1592 Kcal
Total protein: 61g



Level 2 : Mechanically Altered Diet

Dysphagia Mechanically altered includes foods that are moist, soft textured and easily formed into a bolus (ball of food to be swallowed together)

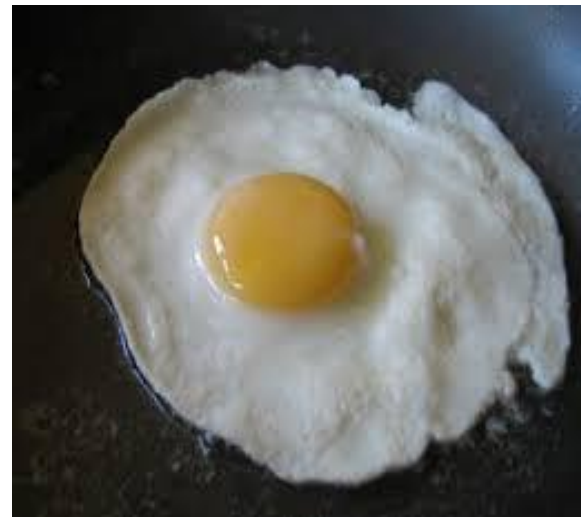
Avoid: Very coarse cooked or dry cereals that contain dried fruits, nuts, seeds coconut. All fats with coarse or chunky additives. Whole fruits, Pizza, Dry meats, Cooked corn and peas. Non tender , rubbery or fibrous cooked vegetables n chewy candies.

Examples: Any beverages with small amounts of texture or pulp. Milk, juices , coffee, tea, soft pancakes, cooked cereals with little texture including oatmeal
Cornflakes, baked beans, boiled / mashed potatoes , well cooked noodles and pasta, soft cooked vegetables with <math><1/2</math> inch



Plan of care:

Date	Diet	Calories (kcal)	Protein (gms)
3.7.2013- 6.7.2013 (4 days)	Ryles Tube removed + Mechanically Altered Diet	1600	60



Sample Menu :

Time	Feeding Information	Volume
7am	Thick diab milk	200
8am	Baked beans with soft bread (edges cut) / grinded cornflakes with milk Mashed papaya	1K + 4pcs 1K
10am	Thick diab Ragi porridge	200
12-1pm	Thick chicken soup	1 bowl
2pm	Mashed khichidi Very soft vegetables cut into small pieces easily mashable with fork	1K 1K



4pm	Apple (peeled) custard (no sugar)	1K
6pm	Nepro drink (watermelon/apple)	200ml
8pm	Well cooked pasta Poached fish with cream sauce Thick spinach soup	1K 1K 1 bowl
10pm	Thick diab milk	200ml

Total Calories : 1600kcal
Total protein: 60g



Level 3 : Dysphagia Advanced Diet

Dysphagia Advanced diet includes food that is nearly regular textures with the exception of very hard, sticky or crunchy foods.

Avoid: Dry bread , Dry cakes, toast, crackers , nuts, seeds , dry fruits, coconut , pineapple , tough dry meats or poultry , cookies that are chewy or very dry . Coarse or dry cereals such as All bran. Non tender or rubbery cooked vegetables. Cooked corn.

Examples: All beverages thickened to appropriate consistency. Nutritional supplements, milk, tea, coffee, well moistened cereals, soft peeled fresh fruits, cooked tender vegetables.



Plan of care:

Date	Diet	Calories (kcal)	Protein (g)
7.7.2013 – 10.7.2013 (4 days)	Dysphagia advanced diet	1650	65



Sample Menu :

Time	Feeding Information	Volume
7am	Tea + Biscuits	1 cup + 2pcs
8am	Idli (3)/ Uttapam(2)/ Veg upma (1 ½ cup) Sambar , chutney Papaya cut	1K 1K
10am	Nepro drink (Apple/ watermelon)	200
12pm	Mix veg soup / chicken soup	1 bowl



2pm	Soft Rotis Tender cooked vegetables Thick dal Curd	2 1K 1K 1K
4pm	Egg white sandwich	2
5pm	Barley water	200ml
7pm	Tomato soup with croutons (toasted into small pieces)	1 bowl
8pm	Same as lunch	
10pm	Thick diab milk	200ml



Date	Diet	Calories (kcal)	Protein (g)
11.7.2013 – 13.7.2013	Diabetic low fat low salt diet	1650	65



To sum up:

81y old male admitted with ACS . He complained of diplopia and developed dysarthria. With choking more for liquids during eating.MRI showed acute infarct in right thalamus. Patient was treated with antiplatelets. He was started on RT feeds and later as the swallowing movements improved oral thick liquids were given. There was a gradual transition in his diet from liquids to pureed to Mechanically altered and then dysphagia advanced diet. He improved with diet and physiotherapy. Diabetic low fat low cholesterol low salt diet was prescribed at the time of discharge.



Thank You

