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Directorate General of Khoula Hospital
Obstetric and Gynecology Department

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Contents Table:

Acronyms:

ABG	Arterial Blood Gasses
NVP	Nausea and Vomiting of pregnancy
CBC	Complete blood count
HG	Hyperemesis Gravidarum
LFT	Liver Function Test
RFT	Renal Function test
TFT	Thyroid Function test
MDT	Multidisciplinary Team
DGKH	Directorate General of Khoula Hospital
MOH	Ministry of Health
IV	Intravenous
KCL	Potassium Chloride
CBC	Complete Blood Count
RBC	Red Blood Count
RFT	Renal Function Test
LFT	Liver Function Test
TFT	Thyroid Function Test
ABG	Arterial Blood Gas

Guideline for Management of Hyperemesis Gravidarum

1. Introduction:

Hyperemesis Graviderum is a condition where there is protracted nausea and vomiting with more than 5% pre pregnancy weight loss, dehydration and electrolyte imbalance which usually manifests at 4-9 weeks of gestational age and resolves by 20th weeks.

2. Scope:

This is policy of Directorate General of Khoula Hospital applies to all doctors and nurses working in Obstetrics and Gynecology Department for the effective management of Hyperemesis Gravidarum

3. Purpose:

Primary aim of this guideline is to treat Hyperemesis effectively thereby avoiding morbidity and mortality to the pregnant patients.

4. Definition:

Hyperemesis: is defined as excessive and persistent vomiting in early pregnancy that may lead to dehydration and malnutrition.

5. Policy:

It is the policy of Directorate General of Khoula Hospital to treat all patients with Hyperemesis Gravidarum either as outpatient or in patient depending on the severity of the condition . Further to that:

5.1 Diagnosis of the condition is mandatory before management .

5.2 Diagnosis is based on the history of excessive nausea and vomiting with the triad of more than 5% pre pregnancy weight loss ,dehydration and electrolyte imbalance occurring at 4-9 wks of pregnancy and resolving by the 20th week.

5.3 Detailed history should be taken which includes previous history of NVP/ HG , Abdominal pain, Urinary symptoms, bowel symptoms, ,Infection, Drug history and Chronic *Helicobacter pylori infection*.

5.4 The examination should include Vital signs assessment**,** Oxygen saturation, Weight , Signs of dehydration, muscle wasting ,Systemic and Abdominal examination.

5.5 Following investigations and diagnostic procedures are mandatory depending on the clinical condition of the patient:

5.5.1 Urine for Protein,Sugar ,Ketones , Microscopy and culture

5.5.2 Blood Sample:

A. CBC,RBS,RFT, Electrolytes ,LFT and TFT

B. ABG, Serum Amylase and Helicobacter antibodies (if clinically indicated)

5.5.3 Radiological

A. Obstetric Ultrasound scan: Scan is done to confirm Viable intrauterine pregnancy, Rule out multiple pregnancy and Trophoblastic disease

B. Abdominal ultrasound (to rule out any associated pathology if clinically indicated)

C. Others Oesophageal gastroduodenoscopy (if clinically indicated)

5.6 Differential Diagnosis of Hyperemesis Gravidarum includes the following conditions**:** Urinary tract infection , Cholecystitis, Gastroenteritis, Hepatitis Pancreatitis , Peptic ulcer , Pyelonephritis, Certain Metabolic conditions, Neurological conditions ,Drug-induced Nausea and vomiting and *Helicobacter pylori* infection

5.7 Mild cases of HG are managed as outpatients, moderate and severe cases are admitted in the hospital

5.8 Treatment includes Dietary modifications, Complimentary therapies, Drug therapies ,Intravenous fluids , Electrolyte and Vitamin supplementation

5.8.1 Diet

A. Small frequent meals are encouraged with high carbohydrate and low fat

B. Advised to eat beforefeeling hungry to avoid empty stomach.

C. Encouraged to eat palatable food

D. Ginger preparations and Ginger biscuits may help

E. Dietician reference and advise may be sought whenever necessary

5.8.2 Drug Therapy: Drugs used in the treatment of hyperemesis include the following:

A. Dopamine antagonist

i. Metaclopromide 10 mg orally 8hrly (maximum 5 days) may be given for mild Cases and Intramuscular 10 mg 8hrly in moderate or severe cases

ii. The drug can be given also Intravenously in doses of 10 mg 8th hourly over 3 minutes slowly

iii. Be aware of the side effects of Phenothiazines and metoclopramide Extrapyramidal symptoms and Oculogyric crisis

iv. It is to be noted that Pyridoxine is not recommended treatment of HG and Iron containing preparations are to be stopped

B. Antihistamines:

i. Promethazine can be administered orally, in doses of 12.5-25 mg 6hrly or

ii. Intramuscularly 25 mg 8hrly depending on the severity of the case

C. H2Recepor blocker :

i. Ranitidine orally 150mg twice daily or 50 mg Intramuscularly /intravenously 8hrly may be administered depending on the severity of the condition

D. Proton pump inhibitors:

i. Omeperazole20 mg orally can also be given in cases not responding to the above measures

E. HT3-R-Antagonist: Ondensetron

i. Ondensetron is rarely used in cases of hyperemesis as limited data,are available about the safety of use in first trimester. Consultant opinion to be considered if needed

F. Parenteral Thiamine: Is indicated in moderate and severe cases.

i. Intravenous high potency injection containing 250 mg of Thiamine Hydrochloride is given once a week to prevent Wernicke's encephalopathy .

ii. The drug may be changed to oral 50 mg 12 hrly when tolerated.

G. Corticosteroids: Used when other therapies fail

i. Hydrocortisone 100 mg twice daily intravenously may be given and changed over to oral predinsolone once shows improvement .

ii. Initial oral dose of 40-50 mg can be gradually tapered to the lowest maintenance dose and finally stopped.

5.8.3 Inpatient Management:

A. Indications

i. Continued nausea and vomiting in spite of oral antiemetics

ii. Continued nausea and vomiting associated with ketonuria and/or weight loss (greater than 5% of body weight), despite oral antiemetics

iii. Comorbidity: Urinary tract infection and inability to tolerate oral drugs

B. For patient needing intravenous therapy

i. Urea and serum electrolyte levels should be checked daily.

ii. Avoid Dextrose-containing solution as they Precipitate Wernicke's encephalopathy in thiamine-deficient women

iii. For initial resuscitation**:** Bolus dose of 500 ml of 0.9% of Sodium chloride (normal saline) should be given over less than 15 minutes.

iv. For Maintenance: 25-30 ml/kg/day I-V Normal saline with 1 mmol/kg/day of KCl (20 mmol KCl in each 500 ml). For 60 kg patient 1800 ml normal saline with 60 mmol of KCl in 24 hours in divided doses

C. Thromboprophylaxis:

i. For all patients admitted with HG should receive good hydration, TED stockings and Low molecular weight heparin according to the local guidelines.

D. Complementary therapies

ii. Ginger preparations

iii. Acustimulations : Acupuncture and acupressure are considered to be safe in pregnancy.

5.9 Severe cases need management by multidisciplinary team consisting of Midwives, Nurses, Dieticians, Pharmacists, Endocrinologists, Nutritionists , gastroenterologists, and Mental health team, including a psychiatrist.

5.10 Discharge and follow-up plan:

5.10.1 Regular antenatal check up

5.10.2 Anomaly scan at 20-22 wks

5.10.3 Growth scan to rule out growth restriction at 32 wks and further follow up according to the guidelines

5.11 Postpartum Management

5.11.1 Counsel regarding risk of recurrence in future pregnancies

5.11.1 Counsel regarding early use of lifestyle/dietary modifications and antiemetics that were found to be useful,can be used in future pregnancy

6. Responsibilities:

6.1 Superintendent of Obstetric and Gynecology Department shall

6.1.1 Ensure that all doctors are aware of Policy

6.1.2 All doctors follow the policy correctly when treating the patients with Hyperemesis Gravidarum.

6.2 Superintendent of Nursing Staff shall

6.2.1 Ensure that all Nursing Staff are aware of the policy

6.2.2 Nursing staff shall adhere to the policy guidelines when managing above cases.

7. Document History and Version Control

Document History and Version Control			
Version	**Description of Amendment**	**Author**	**Review Date**
01	Initial Release	Dr. Tasleem Tariq Dr. A.R Vijayakshmy	2020
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15. References:

Title of book/ journal/ articles/ Website	Author	Year of publication	Page
NICE Guideline No (174) on intravenous fluid therapy		2013	
Green top guideline number 69		JUNE 2016	