



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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Use of power Doppler in the management of molar pregnancy and gestational trophoblastic neoplasia

THESIS

Submitted for partial fulfillment of MD degree in
Obstetrics and Gynecology

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List of Abbreviations

3D	: Three-dimensional
3D-CPD	: Three dimensional color power Doppler
AVM	: Arteriovenous malformation
CBC	: Complete blood count
CC	: Choriocarcinoma
CHM	: Complete hydatidiform mole
CT	: Computed tomography
CW	: Continuous wave
DNA	: Deoxyribonucleic acid
ETT	: Epithelioid trophoblastic tumor
FI	: Flow index
FIGO	: International Federation of Gynecology and Obstetrics
FSH	: Follicle stimulating hormone
GTD	: Gestational trophoblastic disease
GTN	: Gestational trophoblastic neoplasia
hCG	: human chorionic gonadotropin
HM	: Hydatidiform mole
IM	: Invasive mole
MRI	: Magnetic resonance imaging
mRNA	: Messenger Ribonucleic acid
MTX	: Methotrexate
OA	: Ovarian artery
PCR	: Polymerase chain reaction
PHM	: Partial hydatidiform mole
PI	: Pulsatility index
PPC	: Primary pulmonary choriocarcinoma
PSTT	: Placental site trophoblastic tumor
Pw	: Pulsed wave
RI	: Resistance index
S: D ratio	: Systolic diastolic ratio
TSH	: Thyroid stimulating hormone
UtA	: Uterine artery
VFI	: Vascularization flow index
VI	: Vascularization index
VOCAL	: Virtual organ computer-aided analysis
WHO	: World Health Organization
β -hCG	: β -Human chorionic gonadotrophin

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Introduction

Molar gestation is a complication of pregnancy and occurs due to abnormal fertilization process (**Jauniaux and Nicolaides ,1997**) .

Gestational trophoblastic neoplasia is a wide spectrum of entities characterized by abnormal proliferation of pregnancy-related trophoblasts with variable malignant potential:

1. Non-invasive hydatidiform mole [complete or partial],
2. Invasive mole,
3. Choriocarcinoma,
4. Placental site trophoblastic tumor [PSTT] and
5. Epithelioid trophoblastic tumor [a newer entity]

(**Jauniaux and Nicolaides ,1997**) .

The incidence rate of hydatidiform mole in the United States is approximately 0.5-1/1,000 pregnancies and the incidence rate is increased in women of Asian descent (**Atrash et al., 1986**).

Hydatidiform mole transformation into trophoblastic neoplasia about 16 to 20 % of patients with complete mole and 0.5% of patients with partial mole (**Fu et al.,2012**).

Additionally, risk factors for GTN include increased maternal age , previous molar pregnancy , previous abortions and smoking (**Freedman et al.,1996**).

Gestational trophoblastic neoplasia is suspected clinically in patients with vaginal bleeding and rapid uterine enlargement who also have markedly elevated serum human chorionic gonadotropin (hCG) levels (**Green et al. ,1996**).

Diagnosis is confirmed by sonography in the setting of a markedly elevated serum hCG level (**Dobkin et al. ,1991**).

The cancer committee of the international federation of gynecologists and obstetricians (FIGO) has established the following guidelines for the diagnosis of postmolar gestational trophoblastic neoplasia (GTN):

1. Four values or more of beta-hCG plateaued over at least 3 weeks
2. An increase in hCG of 10% or greater for 3 or more values over at least 2 weeks
3. The histologic diagnosis of choriocarcinoma
4. Persistence of hCG 6 months after molar evacuation.

(**Goldstein et al., 2012**).