



# Risk of Cardiovascular Events During Pregnancy: A prospective Observational Study



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## Introduction

Cardiovascular diseases (CVD) are among the foremost causes of deterioration in the quality of life. It is increasingly recognized that women experiencing medical conditions such as hypertension (HT) and diabetes mellitus (DM) are at increased risk of future CVD. Several studies have reported an association of pregnancy-related medical conditions with a long-term increase of cardiovascular risks such as hyperlipidemia, vascular dysfunction, insulin resistance and DM.

## Aim of the study

To investigate the possible risk of the occurrence of cardiovascular events among pregnant women.

## Methods

A prospective observational study was conducted on 92 pregnant women at different gestational periods admitted at a gynecological clinic in a certain sector of Baghdad Governorate between February and May 2017. Records were gathered for each patient for the demographic and gestational data and health records regarding cardiovascular risk assessment were also collected by the clinical pharmacist.

## Main outcome measures

Assessment of the risk of cardiovascular events via 10-year CVD Framingham Risk Score and certain biochemical assays.

## Results

- The mean age of participants was 28.26±6.2 years.
- A 60% of patients were suffering from concomitant hypertension with DM. A 39% of patients were using low-dose aspirin tablets, and 50% of them were using methyldopa tablets.
- Participants with pregnancy-related medical conditions showed an increase in systolic blood pressure ( $p=0.0001$ ) compared to normal participants.
- There was a significant increase in systolic blood pressure 125 mmHg at a gestational age (25-37 weeks) compared to 111.33mmHg for those at (1-13 weeks) ( $p=0.051$ ).
- There was a significant correlation between Framingham Risk Score and patients with hypertension alone ( $p=0.0284$ ); patients with DM alone ( $p=0.008$ ); and patients having concomitant hypertension with DM ( $p=0.0001$ ). Half of the patients that suffer from concomitant hypertension with DM were at Framingham Risk of 1% and 10% of patients were at Framingham Risk of 3%.

## Conclusions

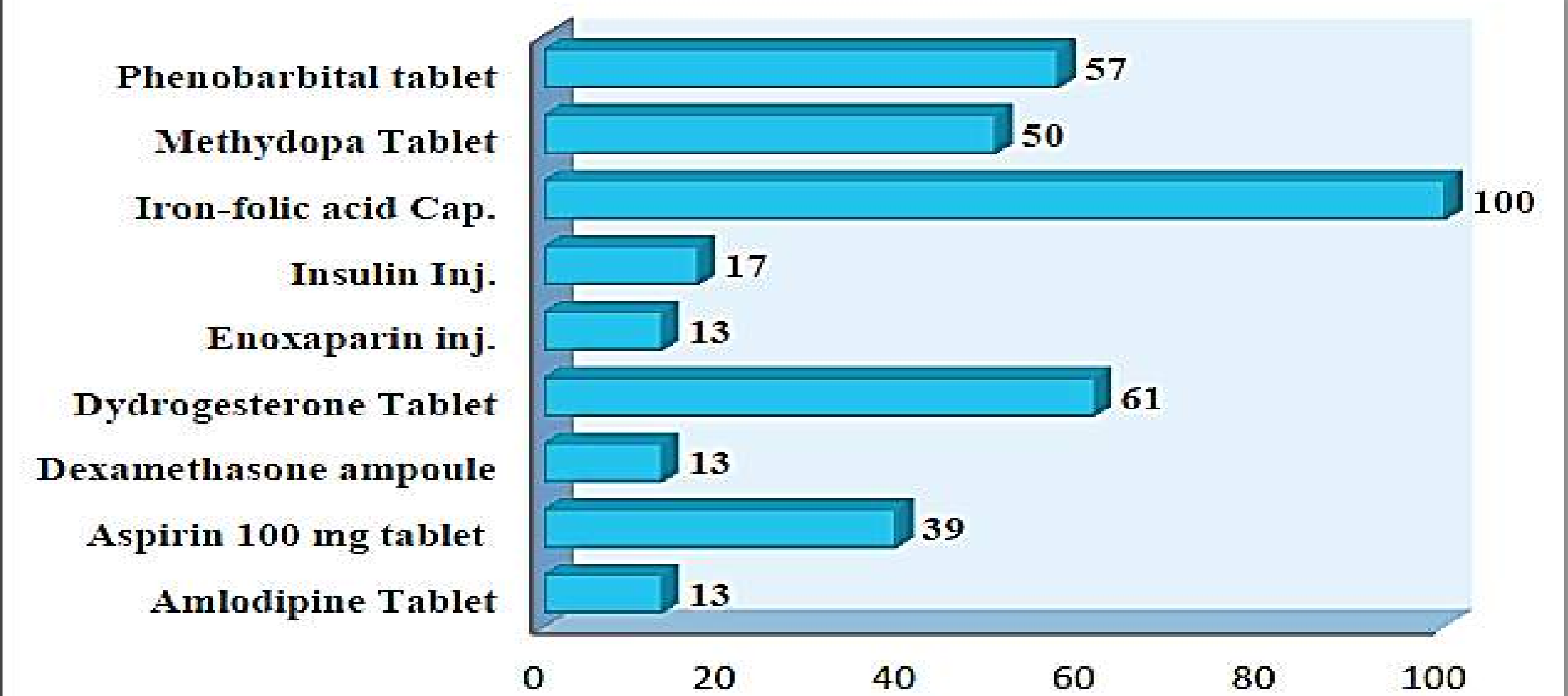
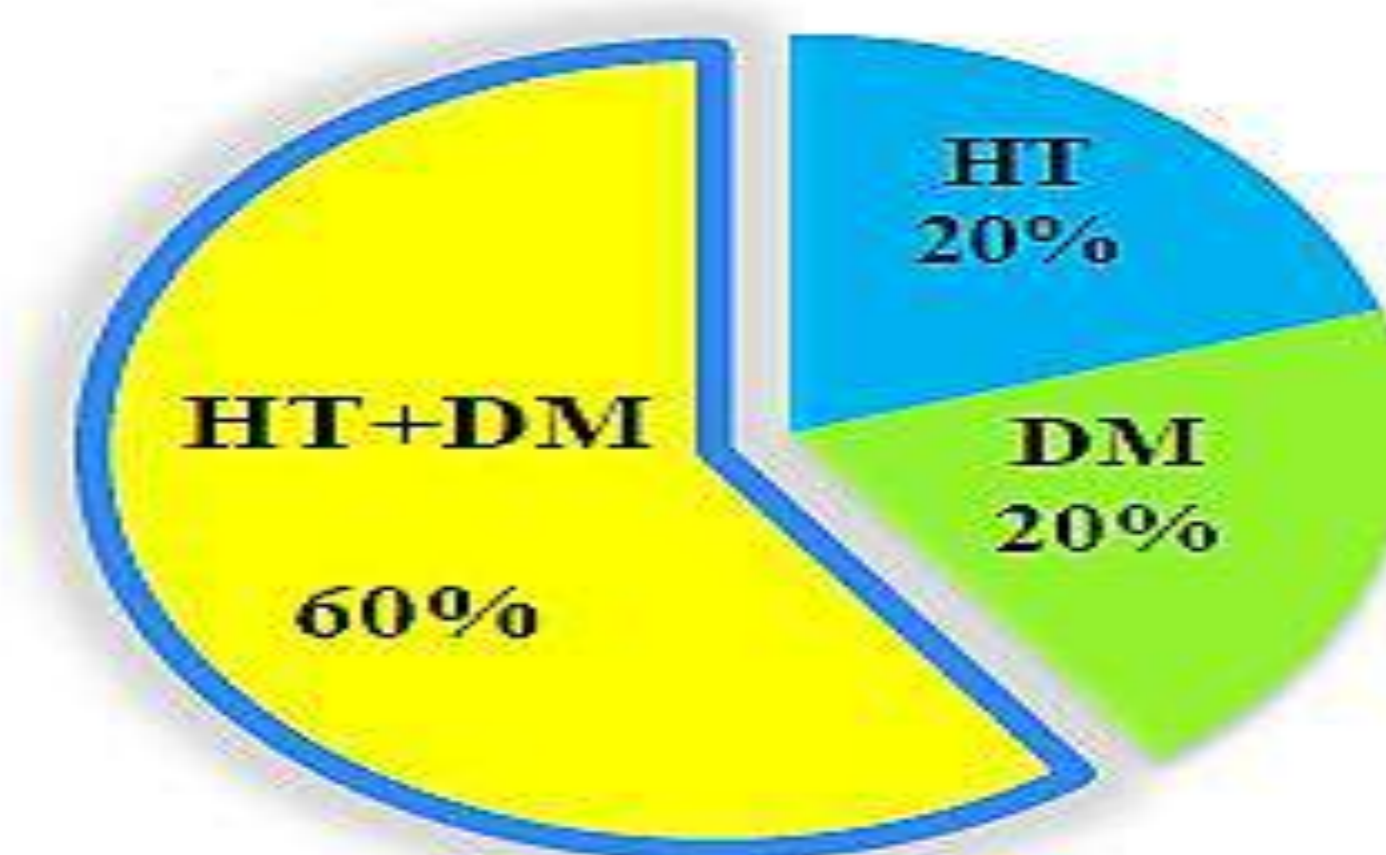
Pregnant women with medical conditions as hypertension and DM have abnormal cardiovascular panels that burden them for further long-term CVD risk. Framingham Risk was considered low in the majority of patients due to lower age of the participants and usage of antihypertensive and antidiabetic drugs. These results spotlight more pharmacy care by the clinical pharmacist during the gestational period.

## Acknowledgement

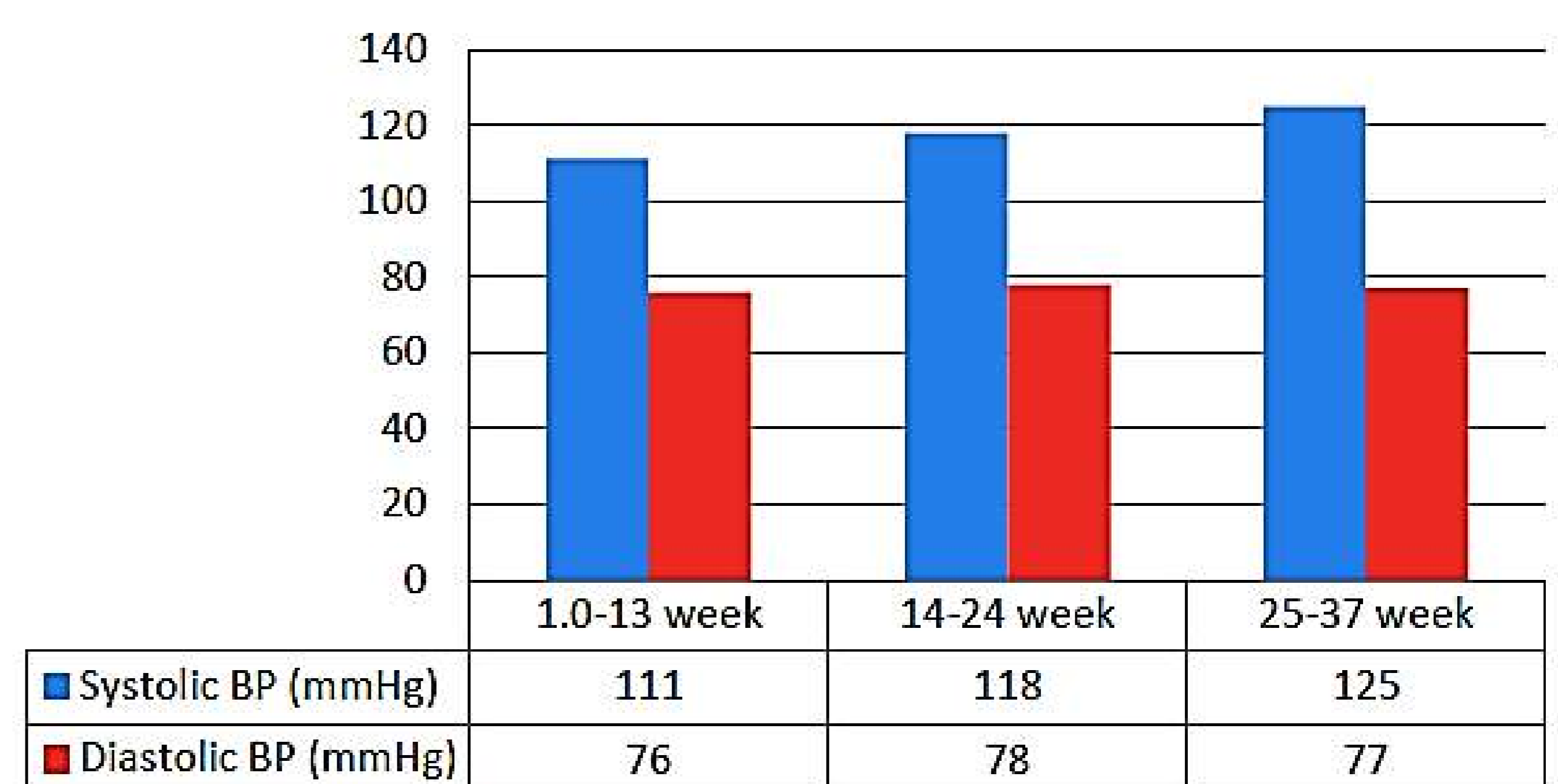
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Gestational Comorbid Conditions among Study Patients  
HT=Hypertension  
DM=Diabetes Mellitus



Blood Pressure Readings During Gestational Weeks



Framingham Risk Score among Patients with Pregnancy-related medical Conditions

