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33  
) 43 22 ( )  
(Enoxaparin) : ( 28.4  
17 :  
16 :  
( )

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:

**(Enoxaparin)**

( p= 0.30286) 5.5%

( P=0.03934)12.5%

## **Fractionated and Unfractionated Heparin During Pregnancy**

**Hussam Shibli**<sup>\*</sup>

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### **Abstract**

**Backgrounds:** Clinicians are occasionally faced with the dilemma of managing pregnant patients who require ongoing anticoagulation. Examples include women with mechanical heart valves, venous thromboembolism, and chronic atrial fibrillation.

**Methods :** A prospective study randomly assigned 33 pregnant women aged between 22 and 43 years (average; 28.4); to receive either fractionated heparin: Enoxaparin (The 1<sup>st</sup> group, n = 17) or unfractionated heparin (The second group, n=16).

**In both groups,** patients were given heparin (fractionated or unfractionated) during the 1<sup>st</sup> trimester and last month of pregnancy, and took warfarin between the 4<sup>th</sup> and 8<sup>th</sup> month.

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<sup>\*</sup> Ass. Prof. Dep. of Internal Medicine. Damascus University.

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**Results :**There were no bleeding or thrombotic complications in the first (Enoxaparin) group during pregnancy. However, in the unfractionated heparin group, bleeding and thrombosis have been seen in 12.5%, P=0.03934 and 5.5%, p= 0.30286 respectively. All patients, specially the first group, have smoothly accepted the treatment protocol. No teratogenic effects have been noticed in any patient.

**Conclusion:** During pregnancy, it is safe to use fractionated heparin as an anticoagulant with no complications.

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) : -1

(

Enoxaparin

(3-1) sodium Heparin

6500 4000

( )

(3-1) 30,000 : -2

: (1-2

Xa

Xa

(2)

.(1)

(11-8-7)Enoxaparin

Enoxaparin

4500

IIa

180

) Xa

Xa

( /

45

IIa

( /

-4)

Xa

(6

4

IIa

.(8-7)

antithrombotic

(1) anticoagulant

.(9)

30000 5000

(11-10-7-5)

Xa

.(12)

IIa

(2-2

antithrombotic

:

.(1)

IIa

10,8,7

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fibrinolysis

: (3-2)

(3231) k ( ) (4-2)  
:

4

.(16-1)

, :

•

•

: -3

•

33

•

, )

7

•

22

(

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( 28.4 ) 43

:(1)

(1)

3	4	7	19	
%9.1	%12.12	%21.21	% 57.57	

(% 35- 30 )

International Normalized ) INR

:(2)

.3 - 2.5 (Ratio

(2)

% 51.51	17	
% 48.49	16	

:

17 :

16 :



5 - 3 ( )

500 - 300 )

24/ /

8

( Enoxaparin

Partial Thromboplastin ) PTT

(Time

) ( 12 )

.( 32 - 28

P value			
0.03934	%12.5	%0	
0.30286	%5.5	%0	
0.001995	%18,75	%0	
0.85575	%18.47	%17.47	

(Enoxaparin ) : -4

•

( %12.5)

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( % 5.5)

.PTT

-

-

( % 18.75 ) :

-

(% 18.75 )

-

: -5

(%82.35 14 )

-

( % 17.47 )

Enoxaparin

-6

:

:

)

(%12.5:

sodium Heparin

Enoxaparin

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