TRINH TIEN DAT

M.D., Ph.D.

Deputy Head of Delivery Department

Tu Du Hospital

Vietnam

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CONFERENCE ON OBSTETRICS AND GYNECOLOGY
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DENGUE INFECTIONS DURING PREGNANCY

TRINH TIEN DAT, DIEN DUC THIEN MINH, LE QUANG THANH

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Introduction

- Dengue is the most infection disease in Vietnam.
- There are 82,000 case Dengue infections, leading to 25 deaths in 2015.
- Dengue infection in pregnancy carries the risk of hemorrhage for both the mother and the newborn. Other risks include premature, fetal death, and vertical transmission.

- Diagnosis of dengue infection affects management options and decisions of the obstetricians, particularly the mode of delivery due to the potential risk of hemorrhage secondary to thrombocytopenia.
- Elevated liver enzymes, hemolysis and low platelet counts may be confused with the diagnosis of HELLP syndrome.
- In 2015, Tu Du Hospital have 69,652 deliveries, Obstetricians in Delivery Room focused on patients have Dengue infection for management delivery and obstetric complications as premature labor, post-partum hemorrhage.

- In literature, there are few case reports on Dengue infections during pregnancy have been published from South Asian and Africa.
- Systematic analysis of data from many case reports will help establish evidence-based management recommendations for treatment of dengue in pregnancy in the future.
- Therefore, we performed case report study for present clinical and laboratoty findings nad outcomes in pregnant women hospitalized with dengue infection during pregnancy at Tu Du Hospital in 2015.

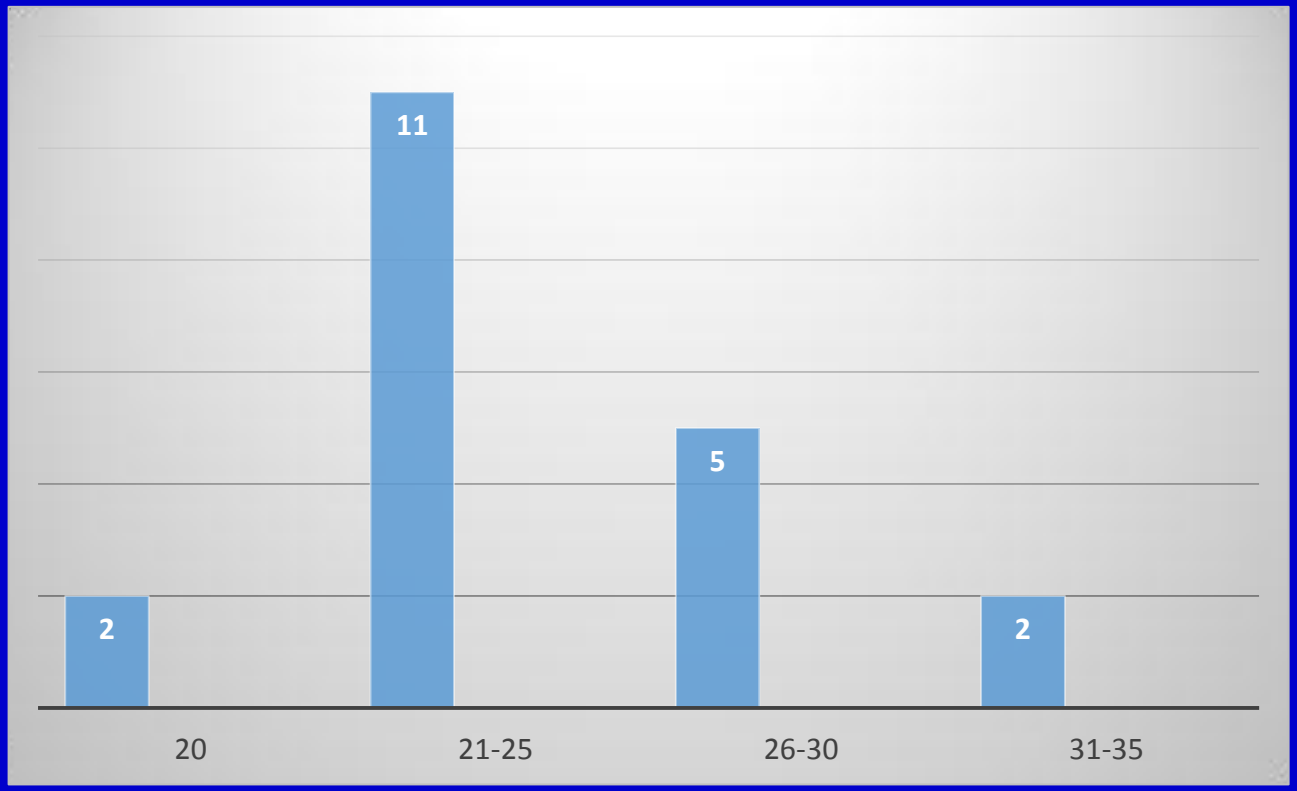
Methodology

- We studied all serologically diagnosed pregnant women treated for dengue from 1 January 2015 to 31 December 2015 at Tu Du Hospital.
- Demographic data, clinical and laboratory findings, and maternal and fetal outcomes were documented prospectively during the hospital stay.
- Dengue viral specific antigen and antibodies were detected by using SD Violife, Korea.

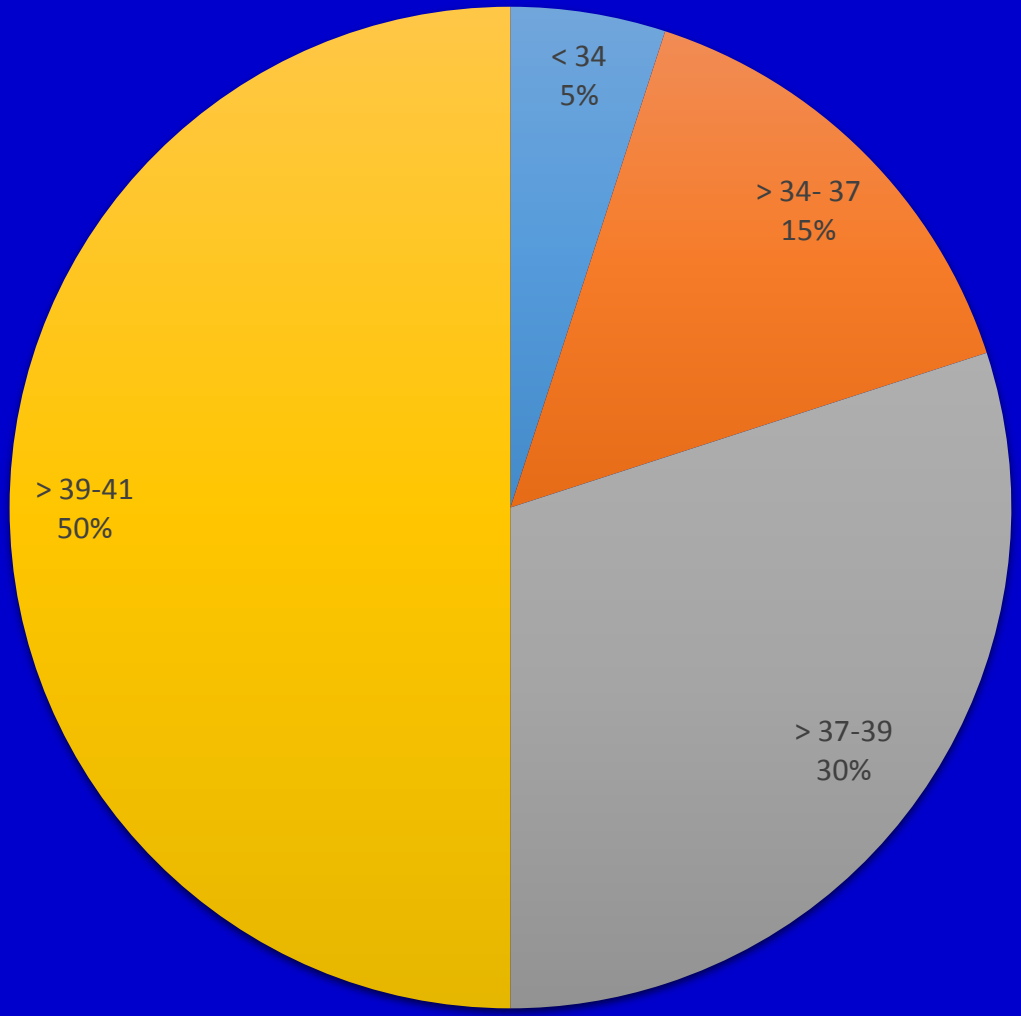
- Primary infection: only IgM (+)
- Secondary infection: both IgM (+) and IgG (+)
- The elements of the complete blood cell counts were analyzed with a Sysmex KX-21N (Sysmex Corporation, Kobe, Japan).
- Quantitative determination of activity of serum aspartate and alanine aminotransferases AST and ALT were performed with the Beckmen counter, USA.

Results

1. 20 seropositive dengue infected pregnant women were diagnosed in the period.
2. Age of patient: 20-33



3. Age of gestation: 3rd trimester



4. 18 patients had only IgM dengue-specific antibodies (primary dengue infection) and 2 had both IgM and IgG dengue-specific antibodies.

5. Low platelet counts were seen in both primary and secondary infections.

6. All 20 patients in 3rd trimester of pregnancy.

+ 1st and 2nd trimester: Physicians

+ Investigation all patients in labor: Management.

Pt	Age	Age Ges	Deng	Pla	Hct	AST/ALT	He mor	+ Pla	Mother	MOD	Fetal	Deng
1	23	34	P	374	32.5					VD	Prema	30 w
2	30	39	P	140	29.5					VD		D2/ D2
3	22	37	S	72	38.8					VD		D7/ D7
4	20	38	P	40	39.7	11526/934		12	Nặng	CS Dispropor		D5/ D5
5	25	39	P	80	39.6					VD		D3/ D3
6	22	39	P	145	30.1					VD		D2/ D2
7	26	39	S	39	42	117/49	P			VD(Complet)		D6/ D6
8	21	39	P	184	42.5					CS SFA		D3/ D4
9	28	38	P	145	41.6		P			VD		D6/ D6
10	22	37	P	68	41.7					VD		D6/ D7
11	23	39	P	114	36.2					VD	IUD	D3/ D5
12	24	38	P	12	39	90/34	P, B	12	1300 mL	VD		D5/ D5
13	31	33	P	36	37.8		P	6		VD	Prema	D4/ D4
14	28	39	P	37	39		P	12		VD		D2/ D3
15	20	36	P	90	40.1		P			CS Dispropor	Prema	D9/ D10
16	24	36	P	19	39		P	12		VD	Prema	D7/ D10
17	25	38	P	100	41.3					CS Dispropor		D9/ D9
18	33	40	P	52	41.1					VD		D3 /D5
19	22	39	P	120	33.6					VD		D3/ D3
20	27	39	P	57	30	53/11		12	1400 mL	VD		D3/ D3

Discussion

1. Similar to the results published in other papers: 3rd trimester.
2. Primary infections were more common than secondary. This pattern is not similar to that of non-pregnant adults (Malavige, 2006).
3. In general, the most common symptoms include fever, fluid leakage: 14/20 (WHO 2009). In addition, the physiologic hemo-dilution of normal pregnancy can mask the classic criteria of hemo-concentration in DHF: US Scan.
4. Elevated liver enzymes in severe case: # Waduge, 2006 and Sampathn, 2010.

5. Differentiation from HELLP syndrome: Evidence of Hemolysis and Serology.

6. Premature labor 20%: Cause? The result published that is 55%: Carles, 2008, Pháp.

7. IUD (1): 39w, D3/D5, Primary infection. No other cause. Carles, 2000, Guiana & Basurko, 2009, French

8. PPH (2): 1300mL & 1400 mL by Thrombocytopenia 12K/mm3 & 40K/mm3, SI 0.92 & 1.16. Treatment: Platelet transfusion, Balloon.

9. Platelet transfusion: 1 – 2 cup before delivery. Platelet < 50K/mm3 (5) on D3-D7 of disease (4 on D3-D5).

10. WHO 2009: Hydration and supportive care (antipyretics, platelet transfusion), and management in an ICU reduce the mortality rate.

11. The precis incidence of dengue infections during pregnancy is unknown.

12. Diagnosis: The capture ELISA test are comparatively more sensitive 95% and specific 100%.

13. Patients were diagnosed acute Dengue virus infection, not serotyping.

14. Ostronoff, 2003 suggested a therapeutic benefit of gamma globulins in severe thrombocytopenia in DHF. This was not evaluated in pregnant women.

Conclusion

1. Dengue in pregnancy is associated required early diagnosis and treatment.
2. Healthcare providers should consider dengue in the differential diagnosis of pregnant women have clinical presentation.
3. In the absence associated feto-maternal complications, infection by itself does not appear to be an indication for obstetrics interference.
4. Systemic reviews: evidence-based data, database, and formulation of guidelines.

5. In clinical practice:

- Follow-up
- BCC, liver enzymes, DIC test
- Keep platelet > 50,000/ mm3
- Keep Hct > 30%
- PPH prevention
- PPH: Low platelet? Uterine atony? Genital tract injury?
- PPH: Procedure? Surgery?
- Attention: HELLP syndrome

Thank you for your attention