



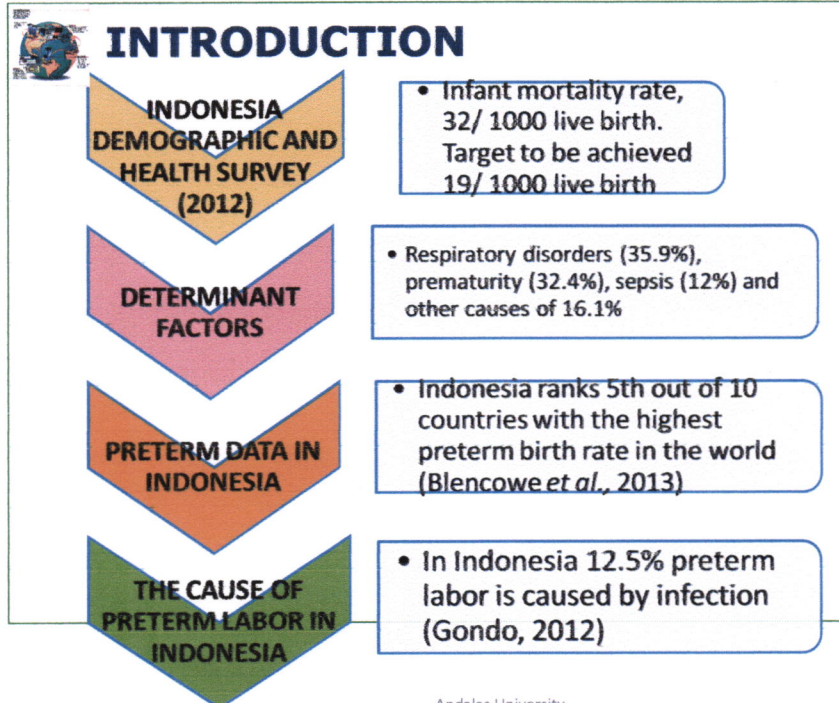
THE DIFFERENCE LEVEL OF INTERLEUKIN 1 β AND INTERLEUKIN 10 BETWEEN PRETERM LABOR AND NORMAL PREGNANCY

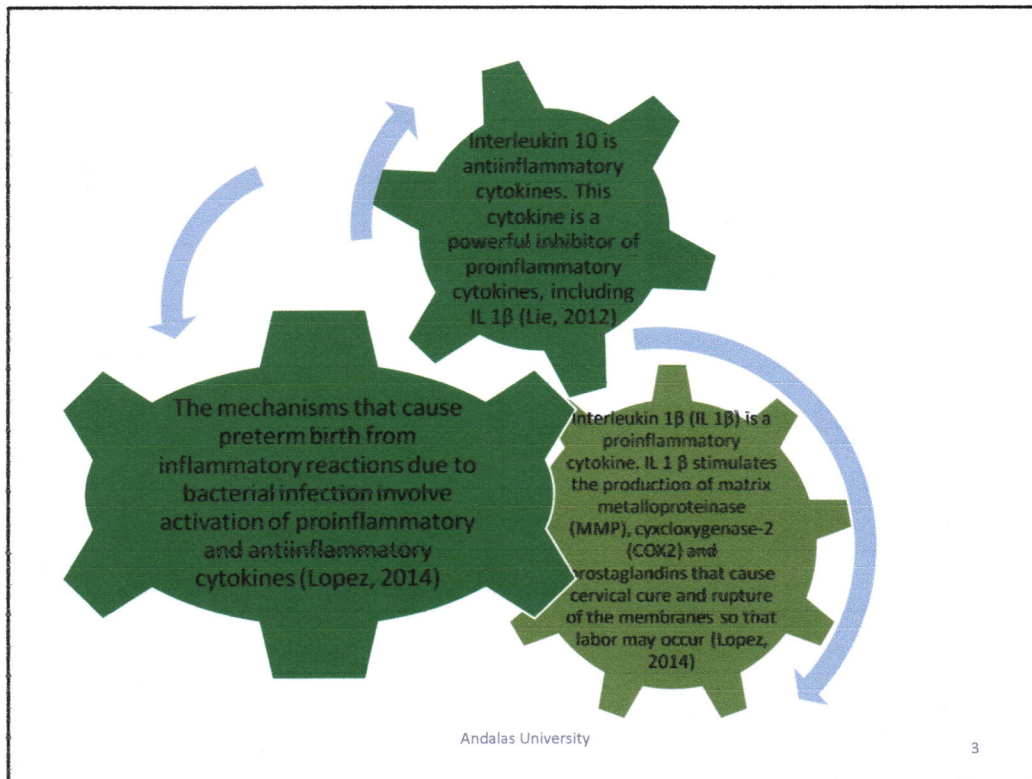
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METHOD

Research Design

- *Cross sectional comparative study*

Research Site

- This research was conducted at Dr. M. Djamil General Hospital and Dr. Rasidin Regional Hospital Padang to take the blood of pregnant women and for the assessment of serum levels of IL 1 β and IL 10 was done in Biomedical laboratory of Faculty of Medicine Universitas Andalas (UNAND) Padang for four months

Sample Research

- The number of samples were 40 pregnant women with 20-34 weeks' gestation selected by consecutive sampling, divided into 2 groups, 20 preterm births and 20 respondents of normal pregnancy

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METHOD

Data Collection

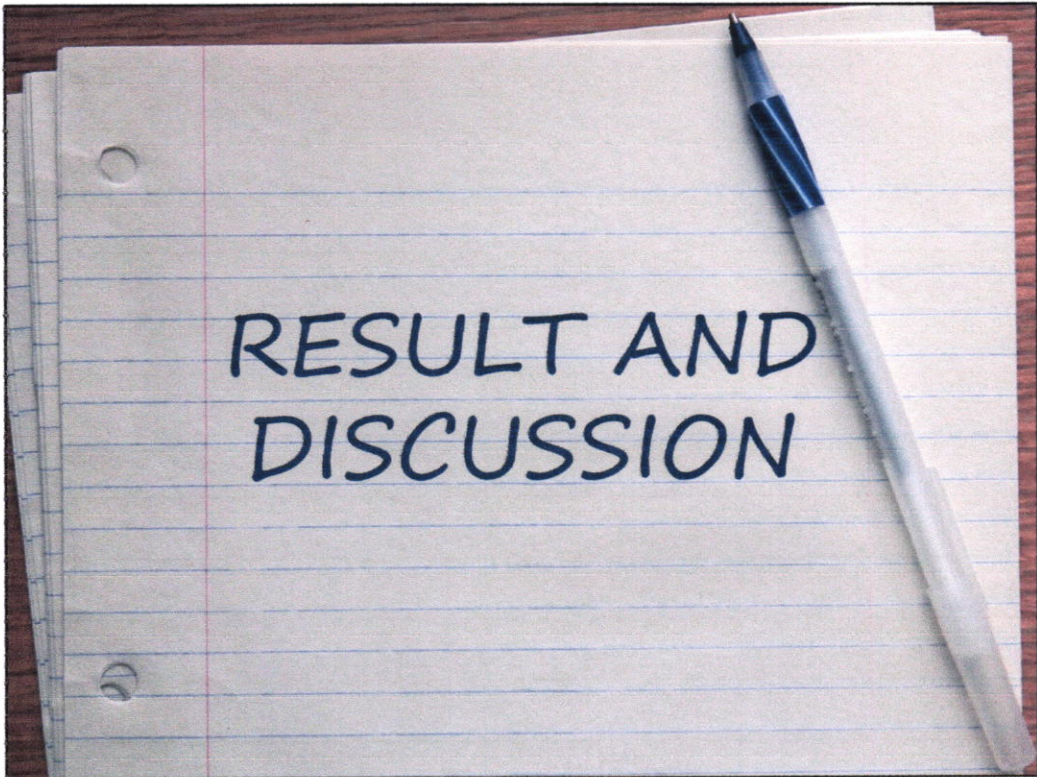
- Blood sampling was performed when pregnant women had not received 2 ml of antibiotics using a syringe in the antecubital vein area

Data Processing

- Examination of IL 1 β and IL 10 levels using the ELISA (Enzyme-Linked Immunosorbent Assay) method conducted in Biomedical Laboratory of Faculty of Medicine Unand

Data Analysis

- Mann Whitney test



RESULT AND
DISCUSSION

CHARACTERISTICS OF RESPONDENTS



Variable	Group						
	Preterm Labor			Normal Pregnancy			p value
	n	Mean±SD	Median (Min-Max)	n	Mean±SD	Median (Min-Max)	
Age (years)	20	27,95 ±7,88		20	29,95± 6,30		0,381
Gravida	20		1,00 (1,00-6,00)	20		2,50 (1,00-6,00)	0,104
Leukocyte Levels (cell /mm ³)	20		15.500 (15.100-21.250)	20		8.250 (5.100-11.400)	<0,001



THE DIFFERENCE LEVEL OF INTERLEUKIN 1β BETWEEN PRETERM LABOR AND NORMAL PREGNANCY

Variable	Group				p value
	Preterm Labor		Normal Pregnancy		
	n	Median (min-max)	N	Median (min-max)	
IL 1β Level (pg/ml)	20	914,24 (785,78-8684,07)	20	790,08 (496,78-1016,64)	<0,001

Median results in IL 1β were higher in the preterm labor group than in the normal pregnancy group. The median preterm labor group was 914.24 (785.78-8684.07) pg / ml and the median of normal pregnancy group was 790.08 (496,78-1016.64) pg / ml. There were statistically significant differences between the two groups.



DISCUSSION



- In this study median preterm labor group was higher than normal pregnancy group. Interleukin 1 β in pregnancy is produced as an important part of the inflammatory response of the body in the fight against infection (Giraldo, 2008). At the end of IL 1 β pregnancy will suppress allopregnanolone and endogenous opioids that stimulate oxytocin neurons that eventually trigger labor (Yilmaz et al., 2012).
- Heng et al., (2014) examined the levels of IL 1 α , IL 1 β , and IL 1ra in cervicovaginal fluid of pregnant women with 24-35 weeks' gestation (n = 65) and pregnant women \geq 36 weeks (n = 88) the results of IL 1 β and IL 1ra levels remained unchanged between 24 to 35 weeks' gestation, but late in pregnancy IL 1 α and β levels increased especially on days 4 to 14 before onset of labor, while IL 1ra levels decreased. The results explain that IL 1 α and β levels remain constant in normal pregnancies but at the end of pregnancy the term is increased for the preparation of the labor mechanism.



THE DIFFERENCE LEVEL OF INTERLEUKIN 10 BETWEEN PRETERM LABOR AND NORMAL PREGNANCY

Variable	Group		N	Median (min-max)	p value
	Preterm Labor n	Normal Pregnancy			
IL 10 Level (pg/ml)	20	158,39 (140,39- 1268,13)	20	129,88 (101,85- 155,11)	<0,001

Median levels of IL 10 were higher in the preterm labor group than in the normal pregnancy group. The median preterm labor group was 158.39 (140.39-1268.13) pg/ ml and median normal gestation group 129.88 (101.85-155,11) pg/ ml. There were statistically significant differences between the two groups.



DISCUSSION



- Dubicke et al., (2010) showed higher protein IL 10 levels in female cervix with preterm delivery ($p < 0.05$). Gotsch et al., (2008) showed median levels of IL 10 in preterm delivery with amniotic fluid infection were 301.3 (68.6-504.8) pg / ml higher than the median levels of IL 10 in normal pregnancy without infection of amniotic fluid 10.4 (3.5-19.5) pg / ml
- The results of this study showed that median levels of IL 10 in the preterm labor group were higher than the median group of normal pregnancies. This is because the normal pregnancy group does not have an infection indicated by normal leukocyte levels. Leukocytes are an intermediary that can activate a series of inflammatory processes due to the occurrence of intrauterine infection during pregnancy. High levels of leukocytes can trigger uterine activity such as the release of proinflammatory cytokines that will stimulate prostaglandins and matrix degrading enzymes that ultimately trigger uterine contractions and rupture of the membranes causing preterm labor (Alamrani et al., 2015; Goldenberg et al., 2008)



CONCLUSION

- In conclusion, levels of IL 1β and IL 10 was higher in preterm labor than a normal pregnancy group





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