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Syphilis Screening (*Treponema pallidum* bacteria) in Pregnant Women at Health Center Dosay Papua

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Abstract

Pregnant women are people who are in the process of fertilization to continue offspring. In the body of a pregnant woman, there is a fetus that grows in the womb. Pregnancy is an important period of life. A pregnant woman must prepare herself well so as not to cause problems with the health of the mother, baby, and during the birth process. The purpose of this study was to determine the results of syphilis examination in pregnant women at the Dosay Health Center. This type of research is a laboratory test with Rapid TP. The population used in this study were all pregnant women patients who came to check themselves at the Dosay Health Center. The number of samples in this study was 34 patients. The method of examining Syphilis in pregnant women at the Dosay Health Center is the Immunochromatographic method. the research time took place from June 14 to June 30, 2022, with the research location at the Dosay Health Center Laboratory. Based on the results of analysis and discussion, it can be concluded that of the 34 pregnant women respondents (100%) there were 4 respondents (11.8%) infected with syphilis (*Treponema pallidum* bacteria).

Keywords: *Syphilis, Treponema pallidum bacteria, Pregnant women, Immunochromatographic method*

Abstrak

Ibu hamil adalah orang yang sedang dalam proses pembuahan untuk melanjutkan keturunan. Di dalam tubuh seorang wanita hamil terdapat janin yang tumbuh di dalam rahim. Kehamilan merupakan masa kehidupan yang penting. Seorang ibu hamil harus mempersiapkan diri sebaik- baiknya agar tidak menimbulkan permasalahan pada kesehatan ibu, bayi, dan saat proses kelahiran. Tujuan penelitian ini adalah untuk mengetahui hasil pemeriksaan sifilis pada ibu hamil di Puskesmas Dosay. Jenis penelitian ini adalah uji laboratorium dengan TP Rapid. Populasi yang digunakan dalam penelitian ini adalah semua pasien ibu hamil yang datang memeriksakan diri di Puskesmas Dosay. Jumlah sampel dalam penelitian ini adalah 34 pasien. Metode pemeriksaan Sifilis pada ibu hamil di Puskesmas Dosay adalah metode *Immunokromatografi*. waktu penelitian berlangsung dari tanggal 14 Juni sampai dengan 30 Juni 2022 dengan lokasi penelitian di Laboratorium Puskesmas Dosay. Berdasarkan hasil analisis dan pembahasan maka dapat disimpulkan bahwa dari 34 responden ibu hamil (100%) terdapat 4 responden (11,8%) terinfeksi sifilis (bakteri *Treponema pallidum*).

Kata Kunci: *Sifilis, bakteri Treponema pallidum, ibu hamil, immunokromatografi*

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INTRODUCTION

Pregnant women are people who are in the process of continuing offspring. In the body of a pregnant woman, a fetus is growing in the womb. Pregnancy is an important period of life. A pregnant woman must prepare herself as well as possible so as not to cause problems with the health of the mother, baby, and during the birth process. The normal length of pregnancy is 280 days or (40 weeks or 9 months and 7 days) (Waryana, 2010).

In pregnant women, there are often infections that accompany pregnancy and childbirth such as syphilis infection. this infection has a risk to pregnancy and childbirth. if pregnant women are infected with syphilis, *Treponema pallidum* enters through fetal circulation and spreads throughout the tissue. then multiply and cause a cellular inflammatory response that will damage the fetus, it can be transmitted to the baby through the placenta and at the time of delivery can cause stillbirth, congenital syphilis in infants, and low birth weight (LBW). Screening pregnant women at the primary visit (KI) can overcome the problem of syphilis in pregnant women, especially against the negative impacts that arise in the future (Ahmad, 2009).

Syphilis is a type of sexually transmitted disease (STD) caused by the bacterium *Treponema pallidum* and can be transmitted. In general, the spread of syphilis is through sexual intercourse with infected people. The bacteria that cause syphilis can also spread through the body fluids of the sufferer, namely blood apart from intercourse. Syphilis is transmitted to the fetus in the womb through the placenta during pregnancy or through contact with the wound during the birth process (Abrori and Qurbaniah, 2017). This disease if detected early will be easier to cure and will not cause permanent damage (Kent and Romanelli, 2008).

According to data from the Jayapura district health office in 2017 on STD

services in Jayapura district as many as 2043 who screened for STDs, and 609 cases of STD patients were found (28%). of the 609 STD patients, 153 cases (25%) were found through a syndromic approach and 456 cases (75%) were found through a laboratory approach. in pregnant women who screened for syphilis, 64 cases (6%) were positive.

Puskesmas Dosay data shows that the number of patients of pregnant women who checked for syphilis in 2021 was around 100 patients. out of 100 patients, there were 9 patients of pregnant women infected with syphilis, this number is predicted to increase along with behavior patterns in the community and population growth. judging from the number of pregnant women infected with syphilis who come for examination at the dosay health center, it can be concluded that the number of sufferers of this disease may increase, especially in the Jayapura district area, primary data from the Dosay Health Center (2022).

Based on the background description, the researcher is interested in conducting research with the title "Syphilis Screening (*Treponema pallidum* bacteria) in Pregnant Women at the Dosay Health Center" Jayapura district.

METHOD

This study was conducted with a descriptive method with a laboratory test approach which aims to conduct a syphilis examination in pregnant women at the Dosay health center. This research was conducted for 3 months, namely from April 2022 to June 2022. The place of this research was carried out at the Dosay Health Center Laboratory, Jayapura Regency. The population in this study were all pregnant women patients who came to do syphilis testing at the Dosay Health Center Laboratory, Jayapura Regency. The sample of this study was the venous blood serum of pregnant women who examined

themselves during the study. the number of samples taken was 34 samples.

After taking venous blood, then the blood was centrifuged for 10 minutes to get the serum. Serum was pipetted using a 10µl micropipette into the hole of the *Treponema Pallidum* Rapid Test and drop 4 drops of buffer and read the results were 5-20 minutes.

RESULT AND DISCUSSION

Sampling in this study was carried out on pregnant women and the examination was carried out at the Dosay Health Center Laboratory, 34 samples were obtained, the results of the examination can be seen in the table below:

Table 1 Results of Syphilis Testing in Pregnant Women at the Dosay Health Center

No	TP. Rapid	Number of samples	%	Description
1	Reactive	4	11,8%	Formed 2 lines in the control (C) and test (T) areas
2	Non Reactive	30	88,2%	Formed 1 line in the control area (C)
Total		34	100%	-

Source: Primary data 2022



Figure 1. Non Reactive



Figure 2. Reactive

Table 1 shows the data of syphilis examination results in pregnant women at the Dosay Health Center, where the results of syphilis examination obtained 4 pregnant women (11.8%) reactive infected with *Treponema pallidum* and 30 samples of pregnant women (88.2%) obtained Non Reactive results.

Based on Table 1, the results of the examination of syphilis in pregnant women with the immunochromatographic method

using the TP Rapid Test on 34 sera of pregnant women obtained reactive examination results totaling 4 samples (11.8%), namely the formation of red lines in the control and test areas on the rapid test indicating that in the patient's serum, there are treponema antibodies.

Pregnant women infected with syphilis, if not treated immediately, will cause 67% of pregnancies to end in abortion, stillbirth, or infection of the

neonate infection (Ministry of Health RI, 2013). Syphilis can be transmitted to the baby through the placenta during pregnancy or through contact with wounds during the birth process.

The effect of syphilis on pregnancy is very large because it causes premature labor, fetal death in utero, or babies born with disabilities. Therefore every pregnant woman is strongly encouraged to check the health of her unborn child. All pregnant women are recommended to be tested for syphilis infection at the first prenatal visit and re-tested at delivery. Preventive measures are best taken early in pregnancy. To support this, the active role of pregnant women and their awareness that checking for syphilis infection is indeed important.

Reactive patients will get syphilis treatment. Treatment of syphilis is generally done by administering penicillin, and for patients who are allergic to penicillin, the administration is carried out by desensitization (Ahmad 2009).

In the Rapid TP examination shown in Table 1 non-reactive pregnant women as many as 30 samples (88.2%) where this non-reactive sample formed a red line only in the control area. In this study, it was found that pregnant women infected with *Treponema pallidum* at the Dosay Health Center were still relatively low. The results of this study are supported by research (Damayanti and Winarsih, 2010) which states that there is a relationship between the level of knowledge of pregnant women about the high risk of pregnancy and compliance with Antenatal care visits in pregnant women. further research (Mongan and Sinaga, 2019) says that the results of the Rapid Tp examination are low at the puskesmas Kota Raja because pregnant women have done health checks at the beginning of pregnancy, conduct health promotion or counseling about syphilis disease, and maintain hygiene and a healthy lifestyle.

To prevent the transmission of syphilis from pregnant women to their babies, it is important to detect the disease

as early as possible. If syphilis has been detected, it will be treated immediately and given the right treatment, so that the mother and baby born will be healthy and free from syphilis.

Pregnant women who go to the health center or hospital can play many important roles when receiving health services. These roles include helping to find an accurate diagnosis, deciding on the chosen treatment, ensuring monitoring and adherence to treatment, identifying side effects, and taking immediate action. of treatment, as well as identifying side effects and taking immediate and appropriate action when side effects occur (Utarini, 2018).

From research conducted on June 14 to June 30, 2022, conducted at the Dosay Health Center laboratory on 34 serum samples of pregnant women who came to visit for the syphilis examination, there were 4 (11.2%) reactive samples. the prevalence of syphilis infection in pregnant women at the Dosay health center is still relatively low, so prevention can still be done for the spread of syphilis infection in pregnant women.

Syphilis is transmitted through sexual contact either vaginally, anal, or orally other less frequent methods of transmission are kissing and sharing unsafe needles. *Treponema pallidum* can enter through intact mucous membranes or skin with lesions and then enter the blood circulation and all organs of the body (Ahmad, 2009).

The Ministry of Health (2013) states that to protect the fetus in the womb, it is necessary to screen and treat syphilis in pregnant women. Internationally, targets have been set to eliminate congenital syphilis. Some of the ways that are done include: Integration of sexually transmitted infection services (especially syphilis screening), Screening all pregnant women for syphilis, Screening birth mothers for syphilis, especially those who have not been screened before. Treat all syphilis-positive pregnant women promptly, Conduct

education, active counseling, and condom promotion to prevent re-infection.

Syphilis prevention is needed to reduce the transmission of syphilis infection and inhibit the development of transmission and complications caused by syphilis (Kemenkes RI, 2013). Thus it is hoped that there will be no more pregnant women infected with syphilis so as not to transmit it to the fetus.

CONCLUSION

From the results of research conducted on 34 pregnant women respondents at the Dosay Health Center, it can be concluded that the results of syphilis serological test results with the Immunochromatography (ICT) method showed 4 (11.2%) reactive respondents.

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