

Gonorrhea in Adolescents: Risk Factors and Prevention

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Abstract

Background. Gonorrhea is one of the most common sexually transmitted infections (STIs), especially in developing countries like Indonesia. Adolescents are vulnerable to this disease, mainly due to risk factors involving biological, social, and behavioral aspects. This study aims to explore the risk factors of gonorrhea in adolescents and the prevention efforts that have been and can be done.

Methods. Through a literature review of 10 articles in the last five years, it was found that young age, number of sexual partners, use of psychotropic drugs, and low socioeconomic and educational levels are the main causes of high gonorrhea cases.

Discussion. In addition, globalization and changing social norms also contribute to the increase in risky behavior among adolescents. Gonorrhea prevention efforts can be done through comprehensive sex education, consistent condom use, and empowerment of adolescents through intervention programs such as ABC (Abstinence, Be Faithful, Use a Condom).

Conclusion. By increasing access to reproductive health services and reducing stigma towards STIs, it is hoped that the prevalence of gonorrhea in adolescents can be reduced.

Keywords. Gonorrhea, Adolescents, Risk Factors, Prevention, Sexual Education

Introduction

Sexually transmitted infections (STIs) are the most common diseases transmitted through sexual intercourse. More than 30 different types of germs are known to be transmitted through sexual contact. Gonorrhoea, chlamydia, trichomoniasis, genital herpes, human papilloma virus (HPV) infection, hepatitis B, and syphilis are the most common infections ¹

Among STIs, gonorrhoea is the most common disease. It occurs worldwide, but is more common in developing countries such as Indonesia. Gonorrhoea (GO) bacterial infection is caused by the germ *Neisseria gonorrhoea*, a gram-negative diplococcus. In most cases, the infection is transmitted through genito-genital sexual activity, but can also occur through oro-genital and ano-genital sexual contact ²

With around 200 million new cases reported annually in the 20th century, gonorrhoea is the second most common STI worldwide. As of 2008, the number of female sufferers was 1.34 per 100,000 population, and the number of male patients is 1.03 per 100,000 population ³. Female adolescents aged 15-19 years and male adolescents aged 20-24 years are most likely to experience gonorrhoea. In women, almost 80% of infections are asymptomatic, and in men, only 10% ³. The number of cases of gonorrhoea in adult males in Indonesia is about 5.6 cases per year about 100,000 people. This figure shows that Indonesia is in second place in Southeast Asia, after Thailand ⁴

Women have fewer or no symptoms of gonorrhoea infection than men, even no symptoms at all. However, this does not eliminate the possibility of gonorrhoea infection in women having blood, which can be indicated by discharge from the vagina, dysuria or pain during urination, dyspareunia, meaning pain during sex, pain in the abdomen and/or rectum, and abnormal uterine bleeding.

In women, sufferers usually do not complain of any indications, this is the reason that the percentage of each complaint in women can be said to be small compared to men. Inflammation in women initially affects only the cervix uteri, sometimes causing pain at the pelvic floor. Symptoms that are very often seen are increased vaginal discharge, dysuria, bleeding between menstrual phases and menorrhagia. Symptoms in men are usually discharge of pus during micturition, dysuria, sometimes accompanied by fever, sometimes asymptomatic ³

The results of the symptoms of respondents with gonorrhoea have a history of experiencing symptoms of gonorrhoea (12.5%), yellowish discharge and odor (21.87%), growing a kind of cockscomb in the skin (3.12%), warts or cauliflower-like growths on the genitals (6.25%), pain when urinating (12.5%) and other symptoms such as bleeding after sex (15.62%) ²

Gonorrhoea not only causes physical health problems, but also leaves a deep mark on the psychology of adolescents. A diagnosis of gonorrhoea often triggers feelings of anxiety, depression and low self-esteem. The social stigma attached to sexually transmitted diseases can isolate them from their social environment and damage interpersonal relationships. This can impact adolescents' self-image and impair their overall psychological development.

Factors that can influence the increase in gonorrhoea infection include knowledge and high-risk sexual relations such as having multiple sexual partners, in addition there are several internal factors such as education, occupation, and age. External factors that can influence are environmental, social, and cultural factors.

Methods

This type of research is a *literature review*. Literature review research is a process or activity carried out in research, such as locating, obtaining, reading, and evaluating related research literature ⁵. In this research, the researcher conducted an article review by analyzing 10 articles that discussed factors and prevention of gonorrhoea with a limitation of the last 5 years.

Discussion

Prevention of adolescent gonorrhoea is a major challenge in the field of reproductive health. Despite various efforts, the prevalence of this disease is still high. Existing research suggests that risk factors for adolescent gonorrhoea are multifactorial, involving biological, social and behavioral aspects. Understanding these risk factors is essential for designing effective prevention interventions. In addition, evaluation of the various prevention programs that have been implemented is also needed to identify the most effective strategies in reducing the incidence of gonorrhoea in adolescents.

Risk factors for gonorrhoea are broadly divided into 3 factors:

1. Individual factors according to, ⁶

Age and number of sex partners are some of the risk factors for developing gonorrhoea. People under 25 years of age who have had active sex increase their risk of developing *Neisseria gonorrhoeae*. People who have sex at an early age have a higher risk of developing sexually transmitted infections (STIs) compared to people who have sex at an older age. Poor economic status, very early sex, and changing sex partners are other risk factors associated with gonorrhoea. Consistent condom use can lower the risk of developing gonorrhoea. Continued condom use can also lower the risk of other sexually transmitted diseases, such as human papilloma virus infection and HIV.

Risk factors for gonorrhea incidence include young age, unmarried status, multiple partners, commercial sex work (CSW), drug, psychotropic, and addictive substance (NAPZA) abuse, low socioeconomic and educational levels, and inconsistent condom use ⁷. As reinfection is very common, a history of previous gonococcal infection is critical to the risk of acquiring a new gonococcal infection ⁸ The main factor causing gonorrhea cases in developing countries is female sex workers who have low socioeconomic status.⁶

2. External Factors

External factors such as environmental, social, and cultural factors can influence the increase in gonorrhea infection ³. External factors that influence are environmental and socio-cultural factors. ⁹

The inevitability of globalization is one example of the external factors mentioned. People's lives have been changed by globalization without us even realizing it. This dynamic has both good and bad effects. One of the negative effects is the influx of western culture, which has led to changes in the lifestyle of our society. One of the negative impacts of globalization that is highly discussed by society is the entry and formation of the LGBT (Lesbian, Gay, Bisexual, and Transgender) community in the territory of Indonesia. ¹⁰

If adolescents have positive knowledge related to reproductive health, the actions taken will be more sustainable in the long term compared to adolescents who do not have sufficient knowledge. In addition, adolescents who have good knowledge are also expected to have the ability to control their sexual behavior ¹¹.

This condition places the patient as an intermediate population, where the patient also spreads the pathogen to her two female friends as the general population.⁸

Risk factors for gonorrhea include multiple partners, young age, unmarried status, commercial sex workers (PSK), abuse of narcotics, psychotropic and addictive substances (NAPZA), low socioeconomic level and education, inconsistent condom use, and previous STI infection. ⁸

3. Biological Factors

A. Genetic Factor

Internal factors such as genetics, hormones, health and the immune system ¹². These factors may influence an individual's susceptibility to sexually transmitted infections, although further research is needed to understand these mechanisms in depth.

B. Certain Medical Conditions that Increase the Risk of Infection

The STIs with the greatest impact on HIV viral shedding are those that produce genital ulcers and vaginal body discharge such as syphilis, chancroid, gonorrhea, chlamydiosis, genital herpes, trichomoniasis, and bacterial vaginosis ¹³

Prevention of Gonorrhea in Adolescents

Adolescents are vulnerable to STIs, including gonorrhea. Comprehensive sex education and accessibility to reproductive health services are essential to prevent the spread of this disease among adolescents. There are 2 levels of gonorrhea prevention: ¹⁴

1) Primary prevention

Primary prevention is the only way to combat untreatable viral infections. The goal of primary prevention is to prevent disease transmission. This can be achieved by encouraging:

- 1) Safer sexual behavior
- 2) Condom use during sexual intercourse involving penetration

2) Secondary prevention

Secondary prevention requires a specialized approach to treating and caring for individuals who are already infected and suffering from STIs. Activities that can be undertaken include:

- 1) Increase health awareness by examining one's habits and behaviors, not only those who are already STI positive, but also those who have a high risk of contracting STIs.
- 2) Provide affordable, acceptable and effective health services, and offer effective diagnosis and treatment for symptomatic and asymptomatic STIs and their sexual partners.
- 3) Provide support and counseling to STI patients.

STI prevention consists of three levels: primary, secondary, and tertiary. Primary prevention includes avoiding sexual contact with STI patients, using condoms, keeping sexual organs clean, and going to the doctor immediately if STI symptoms appear. Secondary prevention includes providing training or Tertiary prevention includes rehabilitation for STI survivors who are in high-risk groups such as FSWs (Female Sex Workers) and government regulations prohibiting prostitution. ¹⁵

Different types of youth empowerment have been shown to help prevent sexually transmitted infections, such as ABC (abstinence, be faithful, use a condom), prevention of early exposure (PrEP), personal electronic health record (PHR), peers, mass media, and information. Clinicians and allied health professionals may be most influential in how young people use the

patient portal to demonstrate STIs as a health behavior. One strategy to address racial disparities is PHRs; sex partners and family can also be useful interpersonal communication tools to support different applications of STI PHRs. In addition, modules that address testing with sex partners are available on the portal. Interventions such as these aim to reduce STI stigma among adolescents, sex partners, and health care providers.⁵

The importance of understanding sexually transmitted diseases, especially gonorrhea, and their prevention among adolescents is a key factor in reducing the spread of gonorrhea infection, both in Indonesia and globally. Education about the concept of health and illness in Indonesia is still very limited, so many people, including students, have low knowledge about health, especially related to sexually transmitted diseases.

The lack of educational efforts about health, especially about STIs, has led to low public awareness about diseases such as gonorrhea. Therefore, education about sexually transmitted diseases, especially gonorrhea, is very important to prevent risky sexual behavior, so that students can avoid unsafe sexual intercourse with better knowledge.

Conclusions

Prevention of gonorrhea in adolescents is a complex challenge as it is influenced by various individual, social and biological risk factors. Factors such as young age, number of sexual partners, previous history of infection, drug use, and low socioeconomic and educational levels play a major role in the high incidence of gonorrhea. On the other hand, external factors such as globalization and changing social norms also exacerbate risky behaviors among adolescents.

To address this issue, comprehensive prevention efforts are needed, including proper sex education, consistent condom use, and intervention programs such as ABC (Abstinence, Be Faithful, Use a Condom). Youth empowerment and increased access to reproductive health services should also be improved, by reducing the social stigma attached to sexually transmitted diseases. Early prevention and appropriate treatment can help reduce the spread of gonorrhea and other sexually transmitted infections among adolescents.

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