

MEDICINAL PLANTS WITH ANTIFERTILITY POTENTIAL OF SINDANG KELINGI ILIR TRIBE

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ABSTRACT

This study aims to identify plants that have potential as antifertility in the Sindang Kelingi Ilir tribe. The method used in this research is exploration with data collection techniques in the form of field observations and interviews with tribal chiefs, traditional birth attendants, and the people of Sindang Kelingi Ilir. The results of this exploration found 19 species that have antifertility potential, namely: bandotan, cepokak, kate mas leaves, guava, jotang, meniran, patikan kebo, putri malu, knob grass, sintrong, dragon scale spikes, broken bones, noni, bitter melon, star fruit, sawo, makasar fruit, mondokaki, and mulberry. It is concluded that there are still plants that have potential as antifertility, which have minimal side effects.

Keywords: *Medicinal Plants, Antifertilization*

INTRODUCTION

Contraception is a tool that can be used to delay or prevent pregnancy, either permanently or temporarily. The installation of contraceptives requires assistance from medical personnel, both doctors and midwives who have been trained (Ramanian, 2020). Contraceptives are contraceptives that work hormonally. The types of contraceptives include oral contraception (OC) pills, birth control patches, implants, and birth control injections (Bakri, 2020). The results of the analysis showed that the majority of WUS used hormonal contraceptives (72.8%) while those who chose non-hormonal contraceptives were only a minority (27.2%) (Jaksa, et al., 2023). However, the use of contraceptives also has disadvantages, such as the high cost of contraceptive use, menstrual cycle disorders, weight changes, nausea / vomiting, dizziness / headaches, acne, spotting, and amenorrhea (Evitasari, et al., 2019; Monaya, E.R., et al., 2020; Hariati, et al., 2020; Sagita, et al., 2022). Therefore, one way to still prevent birth in a safe way is to utilize plants as medicine. One of the tribes that still utilize medicinal plants as contraceptives is the Sindang Kelingi Ilir tribe.

Traditional treatment efforts with traditional medicines are a form of community participation in supporting health. This is supported by the Ministry of Health's policy on traditional medicine as stated in Law No. 23 of 1992 article 47 on traditional medicine and in Kepmenkes No. 1076/SK/VII/2003 on the implementation of traditional medicine using traditional medicinal plants. The use of medicinal plants can be an alternative to minimize the long-term impact of using chemical drugs (Lestari and Ivoni, 2020).

Based on observations and interviews with the customary chief of the Sindang Kelingi Ilir tribe, it is known that the people of this tribe still utilize medicinal plants as contraceptives, such as hibiscus, papaya seeds, turmeric, and pepper. However, the many medicinal plants that have the potential as antifertility in this tribe have not been well documented, so that over time it will cause the loss of traditions from generation to generation. However, the use of medicinal plants is limited to the transmission from parents to children and / or grandchildren from

generation to generation in the family, so it is feared that in the midst of the current development of cultural modernization, local wisdom can be slowly eroded by habits that can lead to the extinction of traditional knowledge owned by the community. Knowledge that is passed down from generation to generation also causes some medicinal plants to be known and utilized by only part of the population (Pujihastuti, et al., 2020). Therefore, the team conducted research with the aim of obtaining information related to medicinal plants that have potential as antifertility.

METHODS

This type of research is descriptive qualitative conducted in natural conditions. Descriptive research is a research strategy in which researchers investigate events, phenomena of individual lives and ask a person or group of individuals to tell their lives. This information is then retold by the researcher in a descriptive chronology (Adhi and Ahmad, 2019).

There are two types of data collected, including primary and secondary source data. According to Sugiyono (2012: 308), primary source data is data that is directly provided to data collectors while secondary data sources are data that is not directly provided to data collectors, for example obtained from documents, photographs, video recordings, audio recordings, or other sources that can enrich primary data.

RESULTS AND DISCUSSION

Based on research conducted in the field, 27 plant species were found to have antifertilizing potential in the Sindang Kelingi Ilir Tribe (Table 1).

Table 1. Results of Plants with Antifertility Potential

No		Species name / regional name	Processing method and parts used
1.		Bandotan	Boiled (All parts)
2.		Cepokak (tehang)	Boiled and pounded (fruit)
3.		Daun kate mas	Boiled (leaves and flowers)

4.		Jambu biji	Boiled and brewed (leaves)
5.		Jotang	Boiled and squeezed (all parts)
6.		Meniran	Boiled and ground (all parts)
7.		Patikan kebo	Boiled (all parts)
8.		Putri malu (amba jir)	Boiled (leaves)
9.		Rumput kenop	Boiled (all parts)

10.		Sintrong	Boiled (all parts of the plant)
11.		Paku sisik naga	Boiled and pounded (leaves)
12		Patah Tulang	Boiled, pounded (roots and twigs)
13.		Mengkudu	Boiled (leaves)
14.		Pare (Piye)	Boiled (leaves and fruit)
15.		Belimbing (belembeng)	Leaves (boiled)

16.		Sawo (hawo)	Leaves (boiled)
17.		Buah makasar (Madu beruang)	Pounded, brewed and boiled (root and fruit)
18.		Mondokaki	Pounded (stem bark) is applied topically.
19.		Murbei	Boiled (leaves)

DISCUSSION

This research was conducted by exploring along the route, as well as through interviews with tribal chiefs, traditional birth attendants, and the Sindang Kelingi Ilir tribe. The results of interviews and observations that have been carried out, found 19 types of plants that have antifertility potential, namely: bandotan, cepokak, kate mas leaves, guava, jotang, meniran, patikan kebo, putri malu, knob grass, sintrong, dragon scale spikes, broken bones, noni, bitter melon, star fruit, sawo, makasar fruit, mondokaki, and mulberry. Medicinal plants are important sources that are easily accessible for use as health care for rural communities. Plants with medicinal value and traditional medicine compounds have received much attention from researchers. Plants can have medicinal properties due to the content of secondary metabolites (Ridwan and La, 2022). Low public participation in contraceptive use is one of the factors that cause high population density in Indonesia. Indonesia is known as a paradise for medicinal plants, many herbs have the potential to be developed into contraceptives (Fatah, et al., 2024). Known as a paradise for medicinal plants, many plants in Indonesia have potential as natural antifertility (Jannah & Safnowandi, 2018; Susetyarini et al., 2020).

Compounds of the saponin, tannin, flavonoid, terpenoid, alkaloid, sterol, and triterpenoid groups can suppress fertility by disrupting ovarian, uterine or vaginal function (Setyowati et al., 2015). According to Kumar (2017), flavonoids and saponins cause an increase in estrogen and antifertility activity. Giving ethanol extract of dragon tail leaves (*Epipremium pinnatum* (L.) Engl.) has no antifertility effect on female white mice (Oktavia, et al., 2020). The active compounds include tannins, saponins and flavonoids, so it is hoped that this plant can become an alternative male contraceptive material (Tjiphanata, et al., 2017). alkaloid, flavonoid, saponin, and tannin compounds are thought to have antifertility effects (Dewanti, et al., 2020).

There are two ways of working antifertility compounds, namely by having a cytotoxic or cytostatic effect. Drugs that have a cytotoxic effect have the potential to kill cells so that drugs that have anticancer activity have the potential to have an antifertility effect that can cause interference with the fertilization process (Pradjatmo, 2015). The flavonoid compound group, namely Quercetin, can inhibit the activity of the enzyme hyaluronidase, which is an enzyme that helps the movement of sperm towards the egg, with the presence of this quercetin resulting in spermatozoa unable to penetrate the cumulus (membrane / ovum layer) before fertilization. In addition, quercetin also inhibits the enzyme cytochrome P-450 III A in the process of hydroxylation of estradiol 17 β to estrone and then to estriol (Tarigan, 2016). Quercetin is a flavonoid compound that is commonly found in plants. Quercetin has been shown to have antifertility activity in mice because it can inhibit the enzyme hyaluronidase (Nurfaizah, et al., 2021).

CONCLUSIONS

Based on the research and the results found, it is concluded that there are still potential antifertility plants in the Sindang Kelingi Ilir Tribe as an effort to minimize the side effects of synthetic drugs and can be reached by any group.

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