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Ethnopharmacognosis Study Of Plants As Bone Fracture Medicine In Fenun Village, South Amanatun Sub-District, South Timor Tengan District

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ABSTRAK

Masyarakat Desa Fenun, Kecamatan Amanatun Selatan, Kabupaten Timor Tengah Selatan masih mengandalkan tumbuh-tumbuhan untuk mengobati patah tulang karena tidak mampu untuk melakukan pengobatan di rumah sakit dan pengobatan dengan mengandalkan tumbuh-tumbuhan sudah dilakukan sejak zaman dahulu hingga saat ini. Penelitian ini bertujuan untuk mengetahui jenis-jenis tumbuhan yang digunakan sebagai obat patah tulang, organ atau bagian tumbuhan yang digunakan, cara pengolahan dan penggunaanya, lama waktu yang dibutuhkan dan frekuensi pengobatan serta jenis-jenis tumbuhan yang dibudidayakan dan yang tidak dibudidayakan oleh masyarakat Desa Fenun, Kecamatan Amanatun Selatan, Kabupaten Timor Tengan Selatan. Penelitian ini menggunakan motode deskriptif kualitatif, teknik pengumpulan data dilakukan dengan cara wawancara semi-terstruktur. Lokasi penelitian yaitu di Desa Fenun, Kecamatan Amanatun Selatan, Kabupaten Timor Tengah Selatan dan penelitian ini dilakukan pada bulan april 2023. Hasil penelitian studi etnofarmakognosis tumbuhan sebagai obat patah tulang di Desa Fenun, Kecamatan Amanatun Selatan, Kabupaten Timor Tengah Selatan terdapat 10 jenis tumbuhan yaitu krokot (*Portulaca oleracea L.*), paliasa (*Kleinhovia hospita L.*), pandan duri (*Pandanus urophyllus Hance*.), bayaman (*Asystasia gengetica L.*), benalu (*Loranthus europaeu L.*), kemiri (*Aleurites moluccana L.*), kunyit (*Curcuma domestica Val.*), maja/dila (*Aegle marmelos L. Correa*), johar (*Cassia siamea L.*) dan jagung kuning (*Zea mays L.*)..

Kata Kunci : Etnofarmakognosis, tumbuhan, patah tulang

ABSTRACT

The people of Fenun Village, South Amanatun Subdistrict, South Central Timor District still rely on plants to treat bone fractures because they cannot afford to do treatment in hospitals and treatment by relying on plants has been done since ancient times until now. This study aims to determine the types of plants used as fracture medicine, organs or parts of plants used, how to process and use them, the length of time needed and the frequency of treatment as well as the types of plants that are cultivated and not cultivated by the people of Fenun Village, South Amanatun District, South Central Timor Regency. This research used descriptive qualitative methods, data collection techniques were carried out by means of semi-structured interviews. The research location is in Fenun Village, South Amanatun District, South Central Timor Regency and this research was conducted in April 2023. The results of the ethnopharmacognosis study of plants as a medicine for bone fractures in Fenun Village, South Amanatun District, South Central Timor Regency, there are 10 types of plants, namely purslane (*Portulaca oleracea L.*), paliasa (*Kleinhovia hospita L.*), pandan duri (*Pandan duri L.*), and pandan duri (*Pandan duri L.*), pandan duri (*Pandanus urophyllus Hance.*), bayaman (*Asystasia gengetica L.*), benalu (*Loranthus europaeu L.*), candlenut (*Aleurites moluccana L.*), turmeric (*Curcuma domestica Val*.), maja/dila (*Aegle marmelos L. Correa*), johar (*Cassia siamea L.*) and yellow corn (*Zea mays L.*).

Keywords: Ethnopharmacognosis, plants, bone fracture

I. INTRODUCTION

1. Background

Indonesia is one of the archipelagic countries that is rich in plants with ± 30,000 species of 40,000 species of plants in the world(Akbarini et al., 2017). Indonesia reported that an estimated 30,000 species of plants are found in the tropical forests of Indonesia (RAHMAWATY et al., 2019). Of the 30,000 species of plants, 1,260 species are medicinal. However, only about 180 plant species are used as traditional medicine(Vaou et al., 2021). Traditional medicine is medicine derived from plant species that are known and believed by the community to have properties to cure various diseases(Kabir et al., 2014). Traditional medicine is a treatment that refers to the experience passed down by ancestors or ancestors for generations, so that it becomes a habit that until now has survived in traditional communities, especially those far from urban areas or people living in areas where health services are still very limited (Az-Zahra et al., 2021). Knowledge about the utilization of medicinal plants has existed since ancient times(Hosseinzadeh et al., 2015a). This knowledge is owned by only a few parents so it must be passed on to the next generation. Bodeker (2000) says that traditional knowledge owned by each tribe or ethnicity needs to be passed down from generation to generation(Reddy et al., 2023). For example, plants used as medicine to cure various diseases(Jamshidi-Kia et al., 2017). One of the health problems suffered by humans is bone fracture or fracture because the bone receives pressure or impact whose strength is greater than the strength of the bone(Bigham-Sadegh & Oryan, 2015)Fractures can occur in any part of the body but are more common in the foot bones, hand bones, hip bones, ribs and collarbones caused by accidents, falls, fights, repeated pounding during sports, and others(Maz, 2016). The current known methods of fracture treatment in the medical world are amputation and surgery to connect the broken bones using pens, plates and screws(Hannigan et al., 2015). These are very expensive and most people cannot afford these treatments. Since ancient times with the knowledge they have and makeshift equipment, people have processed various types of plants to treat broken bones, because they cannot afford treatment at the hospital (Kidane et al., 2018). The treatment method succeeded in making the broken bones return to normal as usual. About four to five parents in South Central Timor District (TTS), South Amanatun Sub-District, Fenun Village, know about this treatment method. This method is carried out by combining various types of plants that are efficacious to heal broken bones. The current reality shows that there is a lot of knowledge about traditional medicine from every community, but this knowledge is still limited to certain people and is not yet known by many people(Aziz et al., 2018). Therefore, the researcher endeavors to collect data on traditional medicine, specifically on bone fractures and then publish it so that it can be known by many people. For this purpose, the researcher is interested in conducting research with the title "Ethnopharmacognosis Study of Plants as Bone Fracture Medicine in Fenun Village, South Amanatun District, South Central Timor Regency.

2. Problem Formulation

Based on the background described previously, the formulation of the problem in this study is how research on Ethnopharmacognosis Study Of Plants As Bone Fracture Medicine In Fenun Village, South Amanatun Sub-District, South Timor Tengan District.

3. Research Objectives

The purpose of this study is to obtain research results on Ethnopharmacognosis Study Of Plants As Bone Fracture Medicine In Fenun Village, South Amanatun Sub-District, South Timor Tengan District.

4. Benefits Of Research

The benefits of this study are to obtain results and benefits that can be applied from research on Ethnopharmacognosis Study Of Plants As Bone Fracture Medicine In Fenun Village, South Amanatun Sub-District, South Timor Tengan District..

II. METHOD

This research used descriptive qualitative methods, data collection techniques were carried out by means of semi-structured interviews. The research location is Fenun Village, South Amanatun Subdistrict, South Central Timor District and this research was conducted in April 2023. Respondents who are prepared are both experts in treating fractures and patients or people who have been treated and the information is obtained through key informants or key information. Informants obtained by key informants or key information need to meet criteria such as; Having sufficient knowledge about medicinal plants that are efficacious as fracture medicine, sources as experts in fracture treatment aged 35 years and over, permanent residence in the Fenun Village area 10 years and over and have sufficient experience in treating patients, especially in fractures. The aim was to collect data related to plants that are efficacious as fracture medicine in Fenun Village, South Amanatun Sub-District, South Central Timor District. The instrument prepared is an interview sheet containing a list of questions that can be used as an interview guide(Kallio et al., 2016). Researchers using the interview method interviewed sources to get the data needed, namely the types of plants, organs or parts of plants, how to treat them to cure fractures, treatment time and frequency and to find out whether these types of plants are cultivated. Exploration to obtain data on the types of plants and places of growth by exploring the places where plants that are efficacious as fracture medicines grow with the help of respondents. Documenting the types of plants with medicinal properties for bone fractures found in the growing area and also documenting the research process. Giving or determining the scientific name of plants that are not yet known by using references from the internet and books related to medicinal plants. The research data were analyzed descriptively and the data were presented in the form of tables and pictures/photos of the types of plants that are efficacious as medicine for bone fractures found in Fenun Village, South Amanatun Sub-District, South Central Timor District.

III. RESULT AND DISCUSSION

Based on the results of research conducted in Fenun Village, South Amanatun District, South Central Timor Regency, there are 10 types of plants used as bone fracture medicine known by the people of Fenun Village and can be seen in the table below. Based on the table below, there are 10 types of plants used as bone fracture medicine spread in 10 families including *Portulaceae, Sterculiaceae, Pandanaceae, Achanthaceae, Loranthanceae, Euphorbiaceae, Zungiberaceae, Rutaceae, Fabaceae and Poaceae*. Table Plant species with medicinal properties for bone fractures in Fenun Village, Amanatun Selatan Subdistrict, South Central Timor District.

Table 1. plants species as bone fracture medicine in fenun village, south amanatun sub-district, south timor tengan district

No	Plant Name			Family	Figure
	Local	Indonesia	Science		
1	Pena Kleo	Krokot	*Portulaca oleracea* L.	Portulaceae	 Purslane is a plant that grows up to 50 cm. The stem is purplish in color, fat and thick. The single

					green leaf is round, thick, fleshy, with sulfur yellow flowers and a blunt base.
2	Fau	Paliasa	*Kleinhovia hospita* L.	Sterculiaceae	 Paliasa has a size of 5-20 m. It has gray bark, gray-green twigs, stalked leaves, broad leaflets, bony base, and flowers gathered at the end of the twigs.
3	Ek Fui	Pandan Duri	*Pandanus urophyllus* Hance.	Pandanaceae	 Pandan duri is an elongated leafy plant, its roots are large and filamentous and it is 3-7 m tall. It has many branches, and its leaves are green
4	O Bu'u	Bayaman	*Asystasia gengetica* L.	Achanthaceae	 Bayaman is a taproot plant, the stem is rectangular and purplish green, the leaves are green with pointed tips, the flowers have green petals with a pale purple crown, the fruit is capsule-shaped and the seeds are black.
5	Laep	Benalu	*Loranthus europaeus* L.	Loranthanceae	 Benalu is a parasitic plant that attaches to the host, benalu can be found easily on large trees and the seeds of this plant produce a

					sticky sap that can be used as glue.
6	Fenu	Kemiri	*Aleurites moluccana* L.	Euphorbiaceae	 Candlenut is a plant that reaches a height of 20 m., its branches are winding and irregular. The bark is gray-brown, the leaves are white when easy and dark green when old, the flowers are greenish-white and the fruit is green to brownish.
7	Huki	Kunyit	*Curcuma domestica* Val.	Zungiberaceae	 Turmeric is a plant whose green round stem, rhizome is composed of leaf midribs that are slightly soft. The skin of the rhizome is brownish orange and the flesh is yellowish red.

Types of Bone Fracture Medicinal Plants

Based on the results of the ethnopharmacological study of plant species as medicine for bone fractures in Fenun Village, South Amanatun Subdistrict, South Central Timor District, there are 10 plant species consisting of purslane (*Portulaca oleracea L.*), paliasa (*Kleinhovia hospita L.*), pandan duri (*Pandanus urophyllus Hance*.), amaranth (*Asystasia gengetica L.*), benalu (*Loranthus europaeus L.*), turmeric (*Curcuma domestica Val*.), turmeric (*Aleurites moluccana L.*), and turmeric (*Curcuma domestica Val*.).), benalu (*Loranthus europaeus L.*), candlenut (*Aleurites moluccana L.*), turmeric (*Curcuma domestica Val*.), maja/dila (*Aegle marmelos L. Correa*), johar (*Cassia siamea L.*), and yellow corn (*Zea mays L.*) which are distributed in 10 families among others.) which are spread in 10 families including Portulaceae, Sterculiaceae, Pandanaceae, Achanthaceae, Loranthanceae, Euphorbiaceae, Zungiberaceae, Rutaceae, Fabaceae, Poaceae. The 10 types of plants that are used as medicine for bone fractures both those that grow wild in the forest or garden and those in the yard are very easy to find and as revealed that these plants contain active compounds (Apel et al., 2023). Furthermore, said that a plant species is considered efficacious as a medicine because the plant contains secondary metabolites(Jain et al., 2019).

Plant Organs, Processing Methods and Use of Medicinal Plant Types of Bone Fractures.

Based on table 2 it can be seen that of the 10 types of medicinal plants used to treat bone fractures with organs or parts of plants used are roots (radix), stems (caulis), leaves (folium), flowers (flos), fruit (fructus) and seeds (semen) (Leisha, 2017). The utilization of plants that are efficacious as traditional medicine can be taken in whole or in part of their organs to be mixed as plants with traditional medicinal properties(Hosseinzadeh et al., 2015b).

IV. CONCLUSION

Berdasarkan hasil kegiatan yang dilakukan bahwa :

Based on the results of research on the ethnopharmacological study of plants as medicine for bone fractures in Fenun Village, South Amanatun Subdistrict, South Central Timor District, it can be concluded as follows. There are 10 types of plants used as medicine for bone fractures, including purslane (*Portulaca oleracea L.*), paliasa (*Kleinhovia hospita L.*), pandan duri (*Pandanus urophyllus Hance*.), amaranth (*Asystasia gengetica L.*), benalu (*Loranthus europaea L.*).), benalu (*Loranthus europaeus L.)*, candlenut (*Aleurites moluccana L.*), turmeric (*Curcuma domestica Val*.), maja/dila (*Aegle marmelos L. Correa*), johar (*Cassia siamea L.*), yellow corn (*Zea mays L.*). Organs or parts of plants used as bone fracture medicine are roots, stems, leaves, flowers, fruits and seeds. How to process and use these types of plants as fracture medicine is by combining and mashing several types of plants and then mixing them with native coconut oil or boiling / warm water; or cold water then applied or affixed or mendendambagian broken bones. The length of time required and the frequency of treatment carried out in treating fractures, from the results of interviews there were 9 patients interviewed with the length of time required varied greatly, ranging from 6 months, 3 months, 3 weeks, 6 days and some 3 days while the frequency of treatment also varied, ranging from 4 × a day and 3 × a day. The types of medicinal plants for bone fractures that are cultivated are candlenut (*Aleurites moluccana L.*), turmeric (*Curcuma domestica Val.*), yellow corn (*Zea mays L.*) while those that are not cultivated include purslane (*Portulaca oleracea L.*), paliasa (*Kleinasa L.*), paliasa (*Kleinhovia hospita L.*), pandan duri (*Pandanus urophyllus Hance.*), bayaman (*Asystasia gengetica L.*), benalu (*Loranthus europaeus L.*), maja/dila (*Aegle marmelos L. Correa*) and johar (*Cassia siamea L.*).

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