Review

PHYTOCHEMICAL AND PHARMACOLOGICAL SELECTION OF *RANUNCULUS MURICATUS* AS MEDICINAL WEED FROM DISTRICT LAHORE, PAKISTAN.

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Submitted on: 09.09.2014 Revised On: 24.08.2014 Accepted on: 10.10.2014

ABSTRACT

Wheat is one of the most important cultivated crops in Pakistan. The present studies report the weed flora of medicinal importance associated with Wheat in district Lahore. A total of 22 angiospermic species belonging to 15 families were found growing in association with Wheat. Maximum number of species (6) belonged to family Asteraceae. After completing interviews and literature survey of different medicinal weed of wheat field, Ranunculus muricatus was selected to determine its phytochemical and pharmacological activity. It was selected on the basis of previous phytochemical and pharmacological work done and the easily availability of the weed.

KEYWORDS

Ethnomedicinal Survey; Folk medicine; Medicinal plants

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Indian Research Journal of Pharmacy and Science; 1(3);(2014) 19-22;
Journal home page: https://www.irjps.in

1. INTRODUCTION

The historical use of folk medicinal plants by Homo sapiens to cure various illnesses goes back to thousands of years ago [1]. Low-income black Americans had a history of using folk medical system as described from an ethnographic study of a black neighborhood in Tucson, Arizona. This belief was also among Mexican-Americans, Puerto-Rican Americans, and Southern whites, which was then traced, primarily from published sources [2]. It was evaluate that up to 80% of the world's populations in underdeveloped countries mainly depend on local flora for their basic healthcare, since western pharmaceuticals are often costly, unreachable or inapt [3]. Almost 25 per cent of the medical drugs are centered on plants and their derivatives especially in developed countries [4]. The use of indigenous culture and traditional medical was not only useful for preservation of cultural ethnicities and biodiversity but also beneficial for drug development in current and future prospectives [5]. Pakistan had an excellent potential of medicinal plants due to its mixed climatic and edaphic factors, which reflect diversity and valuable medicinal plant heritage [6]. Almost 6,000 species of different flowering plants have been recorded from Pakistan and Kashmir [7]. About 2,000 of plants were reported as medicinal plants with few of them were commercially exploited [8]. Current study was organized to document a survey on Ethnomedicinal tibb along with ethnomedicinal knowledge about the wild plants of District Lahore-Pakistan.

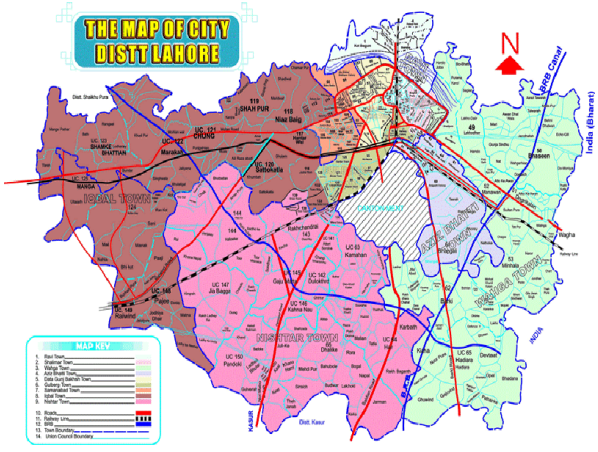

Fig 1 Map of Site of survey

2. METHOD

Site Description:

Lahore is located at longitude 74-20' E and at latitude 31-34' N and at a height of 210.8 m from the sea level. The weather of Lahore is extreme during the months of May and June when the temperatures soar to 45–50 °C which is the hottest time of the year. The city of Lahore receives highest precipitation during monsoon season during the months of July and August. December to February is the coldest months when temperatures can drop to −1 degree °C [9]

Field Survey:

Field surveys of different Wheat growing areas in district Lahore were conducted during the growing season of 2011-2012. Eight localities including Punjab University Quaid-e-Azam Campus, Dina Nath, Mehmood Booti, Bund Road, Manga Mandi, Raiwind Road, Jallo Forest and Nain Sukh were selected for study of weed distribution. A questionnaire method was implemented for documentation of ethnomedicinal knowledge. The interviews were conducted from local community to document local name and ethnomedicinal application .The plants were collected, dried, preserved and identified with the help of available literature [10]. Map of complete site of survey was as shown as above [11].

3. RESULTS

1. Amaranthaceae : *Amaranthus viridis L.*
Common Names: Chanlai, Dhindo
Parts used: leaves
Ethnomedicinal uses: Emollient, scorpion sting, snake bite.

2. Asteraceae: *Cirsium arvense (Linn.) Scope*
Common Names: Leh
Parts used: Leaves
Ethnomedicinal uses: The juice of the leaves, locally applied, heals wounds.

3. Asteraceae: *Ageratum conyzoides L.*
Parts used: leaves
Ethnomedicinal uses: Five to ten leaves are squeezed between the palms
of hands and juice is dropped on the cuts or wounds to stop bleeding.

4. Asteraceae: *Xanthium strumarium* Linn.
Common Name: Chhota Dhatura, Cocklebur
Parts used: Roots, fruit & Seeds

Ethnomedicinal uses: Stomach diseases, demulcent, smallpox and dysentery.

5. Asteraceae: *Sonchus asper*
Common Name: Asgandh, dodak
Parts used: Whole plant
Ethnomedicinal uses: Whole plant is ground and powder is applied on burns

6. Asteraceae: *Parthenium hysterophorous* L.
Common Names: Kainch Mainch, Nightshade
Parts used: Leaf
Ethnomedicinal uses: Abnormal and painful secretions from ears.

7. Asteraceae: *Eclipta alba L.*
Part used: leaves
Ethnomedicinal uses: Diabetic

8. Brassicaceae: *Coronopus didymus (Linn.) Smith*
Common Names: Jangli Halon
Part used: Whole Plant
Ethnomedicinal uses: Used as cooling and refrigerant. The plant is used as fumigants for insect repellent.

9. Caryophyllaceae: *Stellaria media L.*
Common Names: Bathu
Parts used: Whole Plant
Ethnomedicinal uses: Jaunduce

10. Chenopodiaceae: *Chenopodium album* L.
Common Names: Bathu, Goose Foot
Parts used: Whole Plant
Ethnomedicinal uses: Jaundice

11. Convolvulaceae: *Convolvulus arvensis* L.
Common Names: Vahri, Bind Weed
Parts used: Whole Plant
Ethnomedicinal uses: Constipation, control dandruff.

12. Euphorbiaceae: *Euphorbia helioscopia* Linn.
Common Name: Chattri dodak, Lun spurge
Parts used: Whole plant
Ethnomedicinal uses: Cathoratic, Antihelminthic, Purgative.

13. Fumariaceae: *Fumaria indica*
Common Names: Papra
Parts used: Whole plant
Ethnomedicinal uses: Diuretic, diaphoretic and recommended in leprosy

14. Malvaceae : Malva parviflora L.
Common Name: Sonchal
Parts used: Whole plant
Ethnomedicinal uses: Plant is boiled in water to make decoction which is used to cure cough flue and fever.

15. Oxalidaeae: *Oxalis Corniculata* Linn.
Common Name: Khuti booti, Yellow oxalis
Parts used: Leaves
Ethnomedicinal uses: Diarrhoea & dysentry.

16. Papillionaceae: Lathyrus aphaca Linn.
Common Name: Jangli Matar
Parts used: Whole plant
Ethnomedicinal uses: Whole plant is ground and powder is applied on burns

17. Papillionaceae: Vicia sativa L.
Common Name: Rewari, Ankra
Parts used: Entire plant
Ethnomedicinal uses: Anti poisonous

18. Poaceae: Cynodon dactylon
Common Name: Khabbal Ghass
Parts used: Whole Plant
Ethnomedicinal uses: It is used as Diuretic. Infusion of roots for stopping bleeding from piles. Juice of plant is used in wound infection. Blood purifier.

19. Poaceae: Imperata cylinderica (L.) Beauv
Common Name: Wakha
Parts used: Shoot, dry rhizome
Ethnomedicinal uses: Dry rhizome used as diuretic, febrifuge and antipyretic

20. Primulaceae: Anagallis arvensis L.
Common Names: Dahber booti
Parts used: Whole plant
Ethnomedicinal uses: Lowers fever, diuretic and Expectorant

21. Ranunculaceae: Ranunculus muricatus L
Common Names: Latokari, Kor gandal.
Parts used: whole part
Ethnomedicinal uses: Slightly poisonous. A decoction of the plant is used for asthma, periodic fever and as purgative for goats. This herb is very effective in plague. Plant is vesicant and rubefacient. When crushed plant is applied on skin it raises blisters. Fresh plant is ground and applied on abscess and tumors of plague.

22. Solanaceae: *Solanum nigrum* L.
Common Names: Kainch Mainch, Nightshade
Parts used: Leaf
Ethnomedicinal uses: Abnormal and painful secretions from ears.

4. DISCUSSION

Among all weeds, *Ranunculus muricatus* was purely selected to the basis of its phytopharmacological potential. Selection of Ranunculus muricatus was based upon following points

- To determine its Anti-microbial, Anti-oxidant and Cytotoxic potential.
- The Mechanism behind the use of Ranunculus *muricatus* for asthma, plague, periodic fever and as purgative for goats was not identified yet.

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Conflict of Interest Reported: Nil; Source of Funding: None Reported