INTRODUCTION

Medicinal plants besides therapeutic agents are also a big source of information for a wide variety of chemical constituents which could be developed as drugs with precise selectivity. These are the reservoirs of potentially useful chemical compounds which could serve as newer leads and clues for modern drug design. The most important of these bioactive constituents of plants are alkaloids, tannins, flavonoids, phenol, saponins, steroids, cardiac glycosides and alkaloids were respectively. The presence of these phytochemicals can be correlated with medicinal potential of these plants. Further studies are needed with these plants to evaluate their pharmacological potentials, isolate, characterize and elucidate the structures of the bioactive compounds responsible for their activities and other medicinal values.

Plants have been used as a substitute medicine to promote human health and endurance in many regions of the world since prehistoric times. Plants are the great sources of medicines, especially in traditional system of medicine, which are useful in the treatment of various diseases. Plants are made up of secondary metabolites which are formed as products of primary metabolism and produced for defense against predators. Secondary metabolites are generally not important for the growth and reproduction of organisms, but they play an important role in pharmaceutical field. Preliminary screening of phytochemicals is a valuable step, in the detection of the bioactive principles present in medicinal plants and subsequently may lead to drug discovery and development (Susanto et al., 2018). The aim of the present study was to investigate the presence of phytochemicals of the selected thirty medicinal plants were carried out.

MATERIALS AND METHODS

Collection of plant materials

Fresh leaves of thirty selected medicinal plants of Cardiospermum halicababum, Chrysopogon zizanioides, Boerhavia diffusa, Piper longum, Ocimum basilicum, Gymnema sylvestre, Costus igneus, Cocculus hirsutus, Mentha piperita, Rhinacanthus nasutus, Bryophyllum pinnatum.

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Preparation of sample

The collected samples were shade dried under room temperature for 7 days and then milled into coarse powder by a mechanical grinder. Taken 2g dried powder samples in 20ml of distilled water and then filtered used for their further analysis.

The preliminary phytochemical analysis of some selected medicinal plants

The Preliminary phytochemical analysis selected medicinal plants was carried out as per standard methods described by Harbone and Kokate, (1998).

**Detection of Alkaloids**

**Mayer’s test**

The extract was treated with Mayer’s reagent. Formation of a yellow cream precipitate indicates the presence of alkaloids.

**Wagner’s test**

The extract was treated with Wagner’s reagent. Formation of brown/reddish brown precipitate indicates the presence of alkaloids.

**Detection of Flavonoids**

**Lead acetate test**

Extracts were treated with few drops of lead acetate solution. Formation of yellow color precipitate indicates the presence of flavonoids.

**Sulphuric acid test**

Extracts were treated with few drops of H2SO4. Formation of orange colour indicates the presence of flavonoids.

**Detection of Steroids**

Two ml of acetic anhydride was added to five ml of the extract and then added each with two ml of H2SO4. The color was changed from violet to blue or green indicates the presence of steroids.

**Detection of Terpenoids**

**Salkowski’s Test**

Five ml of the extract mixed with two ml of chloroform and then added carefully the 3 ml of concentrated H2SO4 to form a layer. An appearance of reddish brown colour in the inner face indicates the presence of terpenoids.

**Detection of Phenols**

**Ferric chloride test**

10ml of the extract was treated with few drops of ferric chloride solution. Formation of bluish black colour indicates the presence of phenol.

**Lead acetate test**

10 ml of the extract was treated with few drops of lead acetate solution. Formation of yellow colour precipitate indicates the presence of phenol.

**Detection of Saponins**

About 0.5ml of the extracts was shaken with five ml of distilled water. Formation of frothing (appearance of creamy of small bubbles) shows the presence of saponins.

**Detection of Tannins**

A small quantity of extract was mixed with water and heated on a water bath. The mixture was filtered and ferric chloride was added to the filtrate. A dark green colour was formed. It indicates the presence of tannins.

**Detection of Glycosides**

Test for Cardiac Glycosides 0.2 g of extract was dissolved in 1 ml of glacial acetic acid containing 1 drop of ferric chloride solution. This was then under layered with 1ml of concentrated sulphuric acid. A brown ring obtained at the interface indicated the presence of cardiac glycosides.

**RESULTS AND DISCUSSION**

The present study was carried out on the selected plant samples revealed the presence of medicinally important bioactive compounds. The Table 1 showed the Preliminary phytochemical analysis of selected thirty medicinal plants.

The aqueous extract of Cardiospermum halicababum leaves showed that the presence of flavonoids, tannins, terpenoids, phenol and glycosides and the absence of alkaloids, steroids and saponins. The aqueous extract of Chrysopogon zizanioides leaves revealed that the presence of alkaloids, flavonoids, tannins, saponins and phenolic compounds and the absence of steroids. The aqueous extract of Boerhavia diffusa leaves indicated the presence of the presence of alkaloids, flavonoids, saponins, steroids and phenolic compounds an absence of tannins. The aqueous extract of Piper longum leaves shows the presence of flavonoids, tannins, terpenoids, phenol, alkaloids, steroids and glycosides and the absence of saponins.

The aqueous extract of Ocimum basilicum leaves reported that the presence of alkaloids and terpenoids and the absence of flavonoids, tannins, phenol, steroids, glycosides and saponins. The aqueous extract of Gymnema sylvestre leaves showed that the presence of flavonoids, tannins, phenol, saponins, alkaloids and glycosides and the absence of steroids and terpenoids. The aqueous extract of Costus igneus leaves showed presence of flavonoid, saponins, steroids and terpenoids and the absence of alkaloids, tannins, phenols and glycosides.

The aqueous extract of Cocculus hirsutus leaves revealed that the presence of alkaloids, flavonoids, saponins, terpenoids, phenol and glycosides and absence of steroids and tannins. The aqueous extract of Mentha piperita, Acorus calamus, Curcuma longa, Morinda citrifolia, Centella asiatica, Tinospora cordifolia, Acmeila oleracea, Piper betle and Ocimum tenuiflorum leaves indicated that the presence of all phytochemicals such as alkaloids, flavonoids, saponins, steroids, tannins, terpenoids, phenols and glycosides.
The phytochemical analysis of aqueous extract of *Rhinacanthus nasutus* leaves reported that the presence of alkaloids, flavonoids, saponins, steroids, tannins and terpenoids and the absence of phenols and glycosides. The aqueous extract of *Bryophyllum pinnatum* leaves indicated that the presence of alkaloids, flavonoids, saponins, steroids, tannins, phenols and terpenoids and the absence of glycosides. The aqueous extract of *Justicia adhatoda* leaves of phytochemical constituents such as alkaloids, flavonoids, steroids, tannins, terpenoids and glycosides and the absence of saponins and phenols.

The aqueous extract of *Alpinia galanga* and *Solomon nigrum* leaves extract revealed that the presence of phytonutrients such as alkaloids, flavonoids, terpenoids and phenols and the absence of saponins, steroids, tannins and glycosides. The aqueous extract of *Vitex negundo* and *Leucas aspera* leaves showed that the presence of flavonoids, tannins, terpenoids, phenols and glycosides. The aqueous extract of *Cucumis sativus*, *Clitoria ternatea*, *Orthosiphon stamineus*, *Andrographis paniculata*, *Catharanthus roseus* and *Eclipta prostrata* leaves showed that the presence of alkaloids, steroids, saponins, tannins, terpenoids and glycosides and the absence of flavonoids and phenols were respectively.

Phytochemical analysis conducted on the plant extracts revealed the presence of constituents which are known to exhibit medicinal as well as physiological activities. Analysis of the plant extracts revealed the presence of phytochemicals such as phenols, tannins, flavonoids, saponins, glycosides, steroids, terpenoids, and alkaloids (Deb et al., 2016). Natural antioxidant mainly come from plants in the form of phenolic compounds such as flavonoid, phenolic acids and tocopherols. Tannins bind to proline rich protein and interfere with protein synthesis.

Flavonoids are hydroxylated phenolic substances known to be synthesized by plants in response to microbial infection and they have been found to be antimicrobial substances against wide array of microorganisms in vitro. Their activity is probably due to their ability to complex with extracellular and soluble proteins and to complex with bacterial cell wall. They also are effective antioxidant and show strong anticancer activities. The plant extracts were also revealed to contain saponins which are known to produce inhibitory effect on inflammation. Saponins has the property of precipitating and coagulating red blood cells. Some of the characteristics of saponins include formation of foams in aqueous solutions, hemolytic activity, cholesterol binding properties and bitterness. Steroids have been reported to have antibacterial properties and they are very important compounds especially due to their relationship with compounds such as sex hormones. Alkaloids have been associated with medicinal uses for centuries and one of their common biological properties is their cytotoxicity (Praveen Garg and Rajesh Garg, 2019).

**CONCLUSION**

It can be concluded that the results showed the presence of medicinally important constituents in the plants. Many evidences gathered in earlier studies which confirmed the identified phytochemicals to be bioactive. Several studies confirmed the presence of these phytochemicals contribute medicinal as well as physiological properties to the plants studied in the treatment of different ailments. Therefore, extracts from these plants could be seen as a good source for useful drugs. The traditional medicine practice is recommended strongly for these plants as well as it is suggested that further work should be carried out to isolate, purify, and characterize the active constituents responsible for the activity of these.
plants. Further studies are needed with these plants to evaluate their pharmacological potentials, isolate, characterize and elucidate the structures of the bioactive compounds.

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