



Local Solution To Bleeding During Injuries

Munira Abdallah and Imran Yusuf

35. Macechu



Introduction:

Many people in our society; especially children, lose large amount of blood when they get injuries. But, bleeding is likely to become a bigger problem especially in rural areas whereby medical facilities and Dispensaries are unreachable from the habitats. In some societies, it is difficult to stop bleeding during injuries because antiseptic such as 'Iodine Tincture' are expensive to buy. Furthermore, they contain chemicals which cause pain when they are applied on fresh injured parts. Instead of these chemical antiseptics, there is a local (natural) antiseptic which can be used to hold bleeding during injuries.

This local antiseptic is known as '**Manjano (Tumeric)**'; it is an ancient root obtained from rhizome of a plant of ginger family. It is yellow in colour when it is cut and it is usually mixed with other substances like 'Uzile' for colouring and flavouring foods. Economically **Manjano** is cheap, reachable, and natural.



Method:

This project was conducted by experiment and observation methods. There are some materials and apparatus that need to be prepared in this project so as to conduct an experiment safely in extreme caution. These include the following:-

A dissecting kit, a dissecting dish, masks, water, pieces of cotton wool, **Manjano**, mortar and pestle and gloves and **two small mammals like mice were used because it is allowed in our country and in school environment.**

Procedure

(i) Both mice were cut by a razor blade and they got a small cut on their body for bleeding.

(ii) **Manjano mixture (Crushed Manjano mixed with 1cm³ of water)** was applied by using cotton wool on the bleeding part of one mouse. As a comparison target, another mouse was not applied with **Manjano mixture**.

(iii) Two chronographers timed immediately at the same time in order to count how long it takes to stop blood on two mice.

Commonly people in our society use the following antiseptics:-

(i) **Iodine tincture**; causes the killing of body cells and causes severe pain when it applied on injured part.

(ii) **Methylated spirit**; contains alcohol which is not good for human body because it causes irritation in mucous membrane, breathing difficult for those who have respiratory problems, blackened skin due to death of tissues and it is dangerous because is highly flammable. Children fear on these antiseptics because they cause severe pain to them when applied on the body.



Results:

The time was recorded after each 30 seconds as shown in the table below for both mouse.

Time taken(sec) for the mouse with applied Manjano mixture	30	60	90	120	140
Rate of blood stopping (1/t)	0.0333	0.0167	0.0111	0.0083	0.0071

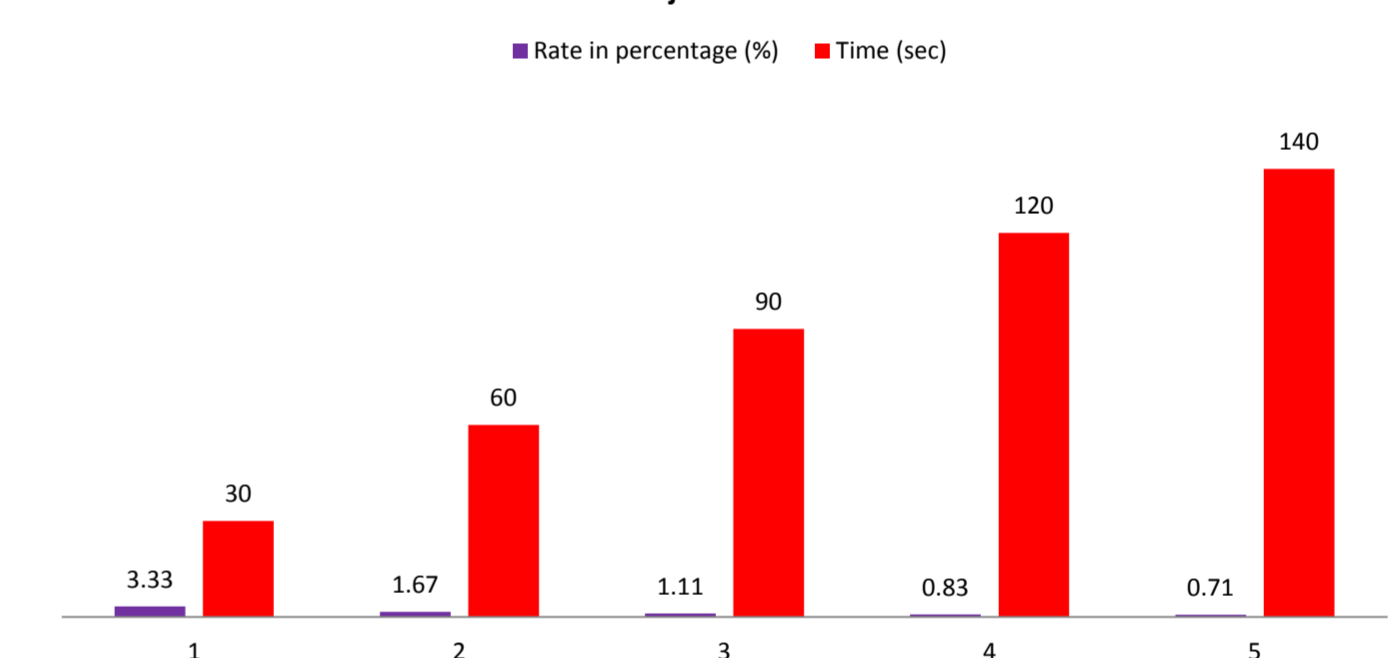
Time taken(sec) for the mouse with no manjano mixture	30	60	90	120	150	180	210	240	270	300	330	360	390	410
Rate of blood stopping (1/t)	33	60	101	83	0.01	56	48	42	37	30	28	26	24	0.00

From the experiment, we have investigated that,

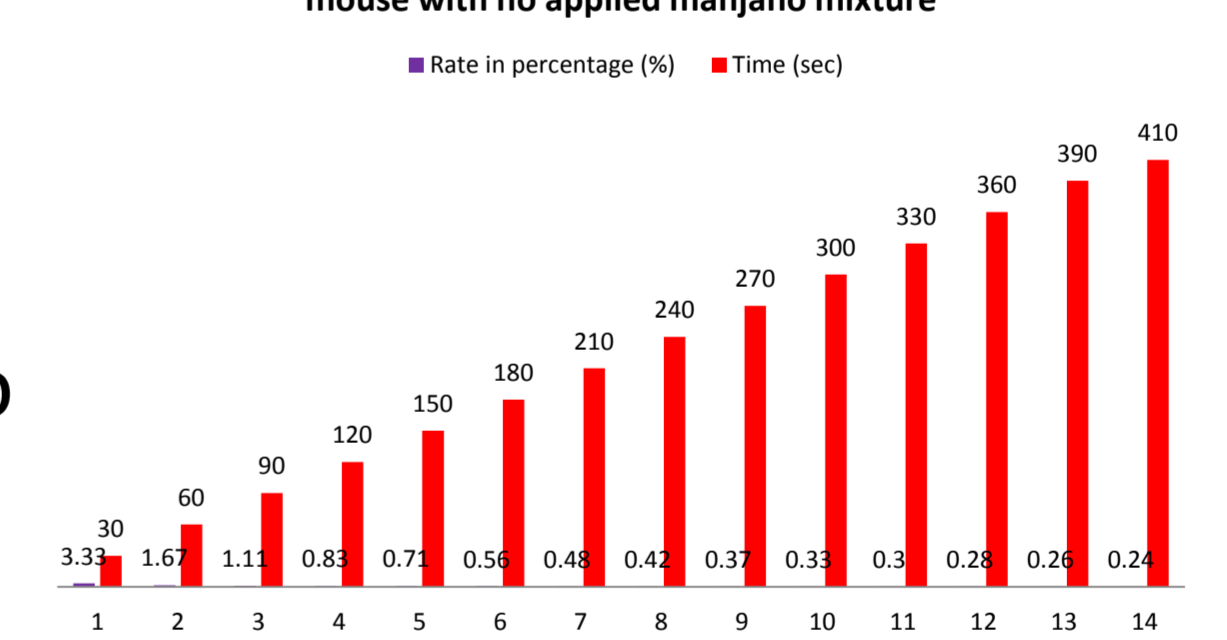
For the mouse with applied **Manjano mixture**, it took around one minute and twenty seconds to stop bleeding. This shows that the rate of blood stopping increased by applying **Manjano mixture**.

For the mouse with no applied **Manjano mixture**, it took around seven minutes and nineteen seconds to stop bleeding. This shows that, the rate of blood stopping decreased when **Manjano mixture** was not applied.

The graph of Rate of blood stopping against time(sec) for mouse with applied manjano mixture



The graph of Rate in percentage against time (sec) for mouse with no applied manjano mixture



Conclusions

A mouse which was applied with **Manjano mixture** on its cut, blood was stopped comparably faster than that which was not applied with **Manjano mixture**. Therefore, **Manjano** can also be used as a natural antiseptic for stopping blood loss during injuries and through this experiment proved that **Manjano** is effective to stop bleeding during injuries.

Recommendations

(i) The chemical antiseptics are not good for human health examples below;

Iodine tincture; which causes the killing of body cells and causes severe pain when applied on injured part especially for children

Methylated spirit; contains alcohol and gentian violet which is not good for human body because it causes irritation in mucous membrane and necrotic skin reaction (blackened skin due to death of tissues) example used as **after shave** and should be kept away from children due to flammable property. Now our day the society have to abandon the use of the chemical antiseptics and have to use **Manjano** to stop bleeding during injuries.

(ii) To advice the society to use **Manjano mixture** because it is affordable available and it does not cause pain when it is applied on injured parts.

(iii) To encourage the society to plant **Manjano** around the houses, schools, collages, hospitals and other living places

References

Williams, D.M. (1967). *Health Science 1*: J.B

Lippincott Co: New York

<http://dermnetnz.mobify.me/treatment/gentian-violet.html/14-05-2016>

<http://webmd.com/vitamins/ai/ingredient-mono-662/tumeric/06-05-2016>

Acknowledgments

We are grateful to a number of people who made this work possible. In particular, we would like to acknowledge the following:-

Firstly, to all teachers in our school for their contribution on our project including Head master of Macechu Secondary School (**MR.S.MJEMA**) and our Science Teacher and Project Master **Mr. MAULIDI OMARI** for his assistance