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MEDIC STRAPPING PAD

HEALTH TECHNOLOGY ASSESSMENT UNIT MEDICAL DEVELOPMENT DIVISION MINISTRY OF HEALTH MALAYSIA 004/08

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EXECUTIVE SUMMARY

Medic Strapping Pad (MSP) is a local product based on innovation of group of medical staffs from Emergency Department, Segamat Hospital. It is used to cover cuts and wounds, prevent contamination and reduce bleeding by applying pressure to the affected area.

MSP is marketed in a single sterile pack. It is made from absorbent soft pad in the inner layer and non-adherent material in the outer layer. It is attached with a Velcro tape and can be reapplied several times.

This review found that there were insufficient evidence on the safety, effectiveness and cost effectiveness of MSP. Hence, more clinical research is warranted.

1. INTRODUCTION

Medic Strapping Pad (MSP) is an innovation product of a group of health staffs from Emergency Department of Segamat Hospital. This is based on their experience handling patients with cuts, abrasions, fracture, hemorrhage and other trauma at the Emergency Department of the hospital. MSP won the first place at "Kumpulan Meningkatkan Mutu Kerja (KMK)" National Convention in 2003 and has been patented under Intellectual Property Corporation of Malaysia. It is currently being commercialized and manufactured by HOSPART.

MPS is basically used to cover cuts and wounds, prevent contamination and helps to reduce bleeding by applying pressure to the affected area.

This technology review was requested by the Senior Personal Secretary to the Deputy Minister of Health following an application to market the product to government hospitals and community.

2. OBJECTIVES

To determine the safety, effectiveness and cost-effectiveness of MSP to reduce bleeding in emergency cases.

3. TECHNICAL FEATURES

MSP is a surgical pad made from absorbent soft pad in the inner layer and non-adherent material in the outer layer. The non-adherent material is attached at one end with two elastic bands which are attached to Velcro tape. This Velcro tape can be attached to the non-absorbent cloth. MSP is 8 cm width and 60 cm length and it came in a single sterile pack.



According to the manufacturer, the advantages of MSP are;

- The single sterile pack reduce risk of infection
- It is easy and fast to apply
- Less allergic reaction
- Longer shelf life 5 years
- It has multi-function
- It is made from water resistant material which is non-stick to the skin
- It is cheap and can be reapply several times
- Light weight, and
- Highly absorbent

MSP can be reapplied several times thus it reduced the usage of gauze and bandage after each inspection.

4. METHODOLOGY

4.1 SEARCH METHODS

Literature were searched through electronic databases, which included Pubmed, OVID, Proquest, Ebscohost, EBM Reviews for controlled trials, Cochrane database on systematic review, Cochrane Clinical Trial Registry, Science Direct, Springer Link, INAHTA databases and general databases such as Google and Yahoo.

The search strategy used the terms, which are either used singly or in various combinations: "Medic strapping pad" OR MSP, effectiveness OR efficacy, safety OR safe OR "adverse effect*" OR "harm* effect*" OR toxicity, "cost effectiveness" OR "cost analysis" OR econom*. There were no limitations in the search.

4.2 SELECTION OF STUDIES INCLUDED/EXCLUDED

All primary papers, systematic reviews or meta analysis pertaining to safety, effectiveness and cost effectiveness of MSP were included in this study.

A critical appraisal of all relevant literature was performed and the evidence level graded according to the US/Canadian Preventive Services Task Force (Harris 2001).

5. RESULTS AND DISCUSSION

There were no published papers on MSP retrieved. Therefore, the results and discussion will be based on the papers provided by the distributor. There were no journal articles or research findings provided but only anecdotal claims.

5.1 SAFETY

There was no evidence retrieved on the safety aspects of MSP. MSP is produced in a single sterile pack, thus reduce the risk of infection. Other safety aspects highlighted by the Senior

Medical Assistant of Tangkak Hospital in his letter was regarding prolonged tight application of MSP may compromise blood circulation thus caution must be taken.

5.2 EFFICACY/EFFECTIVENESS

There was no evidence retrieved on the effectiveness of MSP. However based on the experience of Emergency Department, Muar Hospital, using MSP took 30 seconds to 1 minute to be applied to the wound site compared to three minutes with normal gamgee and bandage. This was very useful for emergency situation. Tangkak Hospital has experienced using MSP for large wounds at upper and lower limbs, fractures of humerus and clavicles and also useful for wound dressing in emergency situation. It was not suitable for wounds on small area such as fingers due to the size of MSP.

5.3 COST-EFFECTIVENESS

There was no evidence retrieved on the cost-effectiveness of MSP. However the cost of MSP is RM4.00 per pack. Usually in managing open wound, 3 crepe bandages will be used in a treatment and the cost is RM6.00 each.

6. CONCLUSION

There were insufficient evidence regarding the safety, effectiveness and cost-effectiveness of MSP.

7. RECOMMENDATION

Although there were insufficient evidence on the safety, effectiveness and cost-effectiveness of MSP, it has potential for emergency management of wounds and bleeding. It is recommended that further research be conducted to evaluate this product.

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8. REFERENCES

1. Hospart. Medic Strapping Pad. (Booklet provided by the manufacturer)