

# Cupping therapy for modulation the thymus function in macrophage activation syndrome

## Abstract

Macrophage activation syndrome (MAS) is one of the most common causes of morbidity and mortality worldwide. The occurrence of this syndrome in the neonatal period is a life threatening problem. In this syndrome the overwhelming infection is widespread in the all body system. The progress of the disease mostly is fulminant and deterioration of the general condition is happening. This is due to a mismatch between the amount of immunological response of the body and the load of infection. The role of cupping therapy is to enhance the immune response by an extra amount of immunological substances that will be excreted in the blood. The use of any type of cupping will have the same effect in stimulation of the immunological reaction. There are specific sites at which cups will be applied, by which immunological reaction is improved. The cupping therapy is used for many diseases and a great improvement in the body function is detected. For example, cupping is used for immunomodulation in cases of rheumatoid arthritis and cases diagnosed with systemic lupus erythematosus.

Cupping therapy is established for improvement of pediatrics medical illness, even in neonates the cupping therapy is used for treatment of jaundice and in this study much drop of unconjugated bilirubin is dropped and there was no need for blood exchange. The cupping therapy is also used in the improvement of blood disease as thalassemia and acts as a chelating agent for accumulating iron in the blood. Another example is Kawasaki disease. In this disease the affected vessels show changes in the histological aspect. By cupping therapy the drop in inflammatory markers shows return of histology to normal aspects. The incidence of recurrence of Kawasaki disease will be dropped. In cases with juvenile rheumatoid arthritis the immunological reaction is modulated and much improved without disability or joint affection.

The diagnosis of MAS is challenging as the symptom and sign of the disease is not clear. The presentation of the MAS shows overlap of many symptoms and signs and needs a high index of suspicion for diagnosis. The line of treatment is different from one patient to the other, the scoring system was applied to detect the best line of treatment. But, if cupping therapy started from the start, maybe the first line of treatment is enough. From the financial aspect, no need for upgrading of line of treatment as cupping therapy started. Another aspect for discussion is the duration of action of the drugs to be effective and start to eliminate the patient's condition is difficult. This means the elimination by Immunotherapy drugs may take time to start the best action. Unfortunately, no improvement and more complications happen regarding the side effects of the usage of multidrug therapy. The expectancy from direct stimulation of the thymus by cupping therapy is more potent and active than immunosuppressant medication.

**Keywords:** Cupping therapy, macrophage activation syndrome, thymus gland, immunity.

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## Introduction

Neonatal lupus erythematosus (SLE) is an autoimmune disease.<sup>1</sup> Maternal antibodies are transferred to the baby and many symptoms and signs are seen. In neonatal period complete heart block may be the first symptom and diagnosis is completed by detection of maternal antibodies. There is an association between MAS and SLE. The association between them is due to deregulated immune response. The mechanism of occurrence of MAS is due to inability of catalytic lymphocytes to lyse the infected antigen presenting cell (APC), which subsequently results in a prolonged cell-to-cell interaction.<sup>2,3</sup> The importance of detection and early intervention is to prevent the cascade of hyper-inflammation and all body organ inflammatory activation.<sup>4-7</sup> In the neonatal period, the body load of antibodies is regulated mainly by the thymus gland. The comparison between the amount of loaded infection and the loaded antibodies is not matched.

Therefore, the needed amounts of antibodies can be taken from the benefit of cupping therapy. The mechanism and site that is used in these cases will be explained regarding the site and the prognosis of the disease.

## Discussion

The thymus gland plays an important role in immune response. The role of the thymus in the development and function of T- cells a highly regulated process within the tissue; specific differentiation and events occur in cortical and medullary regions.<sup>8</sup> Cupping therapy have special sites and places to applied on it. According to Chinese traditional medicine there are many points and meridians that have special maps on the human bodies. These points are used for either treatment of local or systemic diseases. One of the important points for immunomodulation is Ren 16. Ren 16 can be outlined in Figure 1.



**Figure 1** The arrow is pointing to the xiphisternal point (Ren 16). The junction between the midline and the transverse line in fifth intercostal space.

### Location Ren 16

On the midline of the chest, on the level of the 5th intercostal space.

On the sternocostal angle, where the two lower borders of the rib cage meet.

### How to locate

Palpate upward along the lower borders of the ribcage with one hand on either side until the palpating fingers meet at the sternocostal angle. Locate Ren-16 in a shallow depression between the sternum and the xiphoid process. The other point is on the back of the patient that is found between the two respiratory windows (Figure 2). The special site is used for a specific function. The anterior point is related to the site of activation of the thymus gland. This means if a cup put in this area and use the smallest cup and light suction is used, the underlying structure is the thymus, by this the excretion of antibodies is enhanced, the mechanism for this may be explained as a stress situation for the thymus is happened and reflex activation and excretion of antibodies in the blood will be happened. As a sequence for this both T and B lymphocytes are secreted and much improvement in the immune response of the body happens. This is one of the lines of treatment and prevention of overwhelming infection. The net result is prevention of the occurrence of MAS. The posterior point has an important role of blood detoxification and elimination of toxins and more activation of the lymphatic drainage system. Cupping therapy assists the human immune system by working on the mononuclear phagocytic or reticuloendothelial system by helping it to work against the attacking microbes.



**Figure 2** The cup on the posterior aspect is put where the arrow is pointed. It is easily detected at a point between the two respiratory windows (blue circles).

## Methods

The set for Hijama (Figure 3) consists of cups and vacuum for suctioning used on the valve of the cups by which pressure is induced, and the pressure that stimulates the stem cells is done, then all process for activation of different types of stem cells are done.



**Figure 3** Hijama set contains cups of different size and vacuum by which pressure on valves of cups done.

There are different types for cupping therapy.

Either dry, wet or moving cupping.

The dry cupping means no scarification, no blood.

The wet cupping means scarification is done and blood is seen in the cups.

Moving cupping: Apply an oil or lotion to reduce the resistance of dragging then apply the cup to the desired area, move the cup along the area. Continue on other areas if desired.

## Conclusion

The benefit of Ren 16 cupping therapy in a case of a neonate diagnosed as SLE is highly recommended. More research and laboratory investigation is required.

## Acknowledgements

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## Conflicts of interest

The author declares there is no conflict of interest.

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