



## Review Article

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### A REVIEW ON APASTAMBHA MARMA

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#### ABSTRACT

The MarmaVijnana (Science of vital points) has been dealt in Shareera Sthana of Ayurvedic texts like Sushruta Samhita (Text book), Astanga Samgraha (Text book) and Astanga Hridaya (Text book). The references related to Marma are also available in Charaka Samhita. Almost all the texts of Ayurveda have mentioned the total number of Marma as 107. Out of these Apastambha Marma is considered under the Urogata Marma (vital points of the chest region). The concept of Marma is important in the clinical and surgical point of view. In this article an attempt is made to study the Apastambha Marma and its Viddha Lakshana (Traumatic effect) by considering the related literature.

**Key words:** Shalya Tantra, Apastambha Marma, Dhamani, Manubrium sterni, Vatanadi

#### INTRODUCTION

Marma point (Vital point) is defined as the site where there is confluence of structures like Mamsa (Muscular component), Sira (Vascular component), Snayu (Neuroconnective tissue component), Asthi (Sclerous component) and Sandhi (Articular component) and Prana (Life force) resides making it as its specific place. Knowledge of the Marma is described as half the knowledge of Shalyatantra (Science of surgery), as persons injured in the vital spot die immediately or suffer from unforeseen ailment which is life threatening; if anyone survives by the efficiency of the physician, is sure to suffer from deformities.<sup>1</sup> Injury to the Marma, though slight, will produce severe pain; similarly, the disorders localized in the Marma Sthana. Hence they should be treated with great care and effort.<sup>2</sup>

Most of the ancient texts of Ayurveda had given importance to Marma and explained 107 Marma in a separate chapter.

The Apastambha Marma is one among the Urogata (Chest region) Marma where two Vata Nadi (channel that purvey vata, (The life force) are situated. It is noted that in the Urogata Marma, Marana (Death) has been mentioned as ultimate injury effect; hence this Marma is important in the clinical point of view. In one of the study Marma is considered in three ways like localized death of the tissues due to ischemia or death of the person due to thrombus which gets dislodged from the site of the marma causing pulmonary embolism and also due to excessive loss of blood causing similar to Marana Sadrushya Dukha.<sup>3</sup> (Severe shock or severe pain due to Grievous effect of injury).

#### Descriptions of Apastambha Marma<sup>1,4</sup>

Classification	Details
Shadanganusara (Gross division of body in to six regions)	UrogataMarma (Vital point of Chest region)
Sankhyataha (Based on Number)	Two in number
Pramanataha (Based on measure )	½ Angula (1/2 inch)
Rachanataha (Based on structure)	Sira Marma according to Susruta Samhita and Dhamani Marma according to Astanga Hridaya. <sup>4</sup>
Parinamataha (Based on prognosis)	Kalantara Pranahara (Delayed effect of injury )
Viddha Lakshana (Based on traumatic effect)	Vatapurnakostatayakasasvasabhyamchamaranam (due to the accumulation of air in the chest leads to cough, dyspnoea and death)
Gunataha (Based on qualitative attribute)	Saumyagneya

The location of the Apastambha Marma is mentioned as on the two sides of the chest, which purvey air. In Astanga Hridaya, Viddha Lakshana of the Apastambha Marma is mentioned as the Raktana Purna Kosta<sup>2</sup> (accumulation of blood in the chest) instead of Vata Purna Kosta<sup>1</sup> as mentioned in Susruta Samhita.

## DISCUSSION

The probable structures related with Apastambha Marma based on five structural entities are listed as :-<sup>5,6</sup>

Mamsa (Muscular component) - Smooth muscles of bronchioles, muscles of the thoracic cage and pectoral muscles.

Sira (Vascular component) - two pulmonary arteries, four pulmonary veins, arch of aorta, bronchial artery and bronchial vein.

Snayu (Neuroconnective tissue component) - Elastic connective tissue helping in recoiling of lungs, pleura and endothoracic fascia, vagus nerve, phrenic nerve, pulmonary plexus

Asthi (Sclerous component) - Ribs, costal cartilages, incomplete or semicircular cartilaginous plates of bronchial tree.

Sandhi (Articular component) -Joint between the tracheo-bronchial cartilaginous rings at the level of 4<sup>th</sup> thoracic vertebrae, region of carina, junction between the manubrium sterni and body of sternum, sternocostal joint.

The location of Apastambha Marma is considered as in the chest bilaterally. The number of Marma mentioned are two and that which conduct Vayu (air). Hence this description goes in favour of principle bronchus carrying the respiratory air to the lungs. The trachea cannot be considered because the number of trachea is only one.

The Vata Nadi needs consideration in other ways pulmonary arteries and veins as they carry deoxygenated and oxygenated blood towards and from the lungs respectively, as the Apastambha Marmas considered structurally under Sira/damani Marma. Here the Sira/damani has been considered commonly as blood vessel.

As the Marma includes many structures the above mentioned structures are to be considered. The Viddha Lakshana of the Apastambha Marma is mentioned as VataPurna Kosta (Pneumothorax) in Susruta Samhita and as Rakta Purna Kosta (Haemothorax) in Astanga Hridaya. But the symptoms like Kasa (Cough), Swasa (Breathlessness) and Marana (Death) are similar in both the texts. These injury effects can be proved by considering case reports and literary review.

As per one of the case report on traumatic bronchial rupture of a patient who met with the RTA, a Computed Tomography (CT) of the chest was done, which showed right-sided tension Vata Purna Kosta (Pneumothorax), a large tear in the right main bronchus, multiple traumatic contusions of the left lung and multiple rib fractures. It is mentioned that patient was very dyspnoeic and his oxygen saturation was 80% on non-rebreathing mask. The article also opines that tracheal or bronchial rupture is a life-threatening lesion with non-specific presenting symptoms. Hence, it is frequently unnoticed during the initial trauma assessment. The incidence of airway injury is about 1–3% of all blunt chest injuries. Approximately 75% of the injuries occur within 2 cm from the carina which goes in favour of ardhangulapramana of that particular part. The signs and symptoms are non-specific which includes dyspnoea, desaturation, hyper-resonance on percussion, decreased/absent

breath sounds, hypotension, tracheal shift and distended neck veins.<sup>7</sup> This proves the Vata Purna Kosta (Pneumothorax) and secondarily affecting the difficulty in respiration in the form of Swasa (Breathlessness).

When there is rupture of the main bronchus, mediastinal and neck emphysema dominates the clinical picture. There is often pneumothorax. Bleeding may be evidenced by haemoptysis, and dyspnoea and cyanosis follow aspiration. By this we can come to know that there is involvement of vessels in the injury. This shows that injury to the point of Apastambha Marma has led to entry of foreign substances leading to irritation, cough reflex and dyspnoeic changes with rupture of blood vessels in the wall of bronchus that which is responsible for symptoms of Shonita Purna Kosta (Haemothorax), Kasa (Cough reflex) and Swasa (Breathlessness).<sup>8</sup>

There may be chance of rupture of bronchus during surgical, clinical or diagnostic interventions. In a case report on accidental bronchial rupture due to intubation with left-sided double-lumen endotracheal tube, Chi-Kun Kuo *et al* mentions that bronchial rupture by intubation with a DLT is a rare but life-threatening complication. The symptoms which may be seen after bronchial rupture are mediastinal and subcutaneous emphysema, tension pneumothorax usually disclosed during surgery, mediastinitis and sepsis which can occur later.<sup>9</sup> There is a chance of injury to the bronchus by the introduction of double lumen endotracheal tube or mediastinoscope. This highlights the importance of Apastambha Marma and Marma as a whole as said by Acharya Sushruta ages before, which lead to the new era of understanding and care of most vital areas of the body while manipulating for surgical interventions, extraction of foreign bodies or application of clinical treatment procedures.

## CONCLUSION

Considering the literature related to Apastambha Marma and different case reports, the area about 2 cm lateral to carina which is the common site of injury in the bronchus can be taken as location of the Marma. As it is a Sira/Dhamani Marma the part of the bronchus alone cannot be considered and it is better to include the pulmonary vessels under the Marma responsible for maintaining the patency of Vata Nadi. The area of Apastambha Marma is important in the clinical point of view because there may be chance of injury to the Marma during the introduction of endotracheal tube or mediastinoscope.

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