



Review Article

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UNDERSTANDING SANDHIMUKTA IN AYURVEDA WITH SPECIAL EXPLANATION OF SHOULDER JOINT DISLOCATION: A REVIEW

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ABSTRACT

Dislocation is defined as the total loss of contact between two ends of bones in a joint which are clinical emergencies that require prompt reduction and early treatment. Any delay in reduction may result in potential damage to the joints which are devoid of synovial fluid. Ayurvedic classics have enlisted the traumatic consequences of an individual under Kandabhagna and Sandhimukta which are of 12 and 6 varieties respectively. Owing to the severity in agony of the patient and impairment in motor functions which calls for an accurate diagnosis and immediate reduction, a humble effort is put forward in understanding the classical view of Sandhimukta along with the explanation of Shoulder joint Dislocation.

Keywords: Dislocation, Kandabhagna, Sandhimukta

INTRODUCTION

Dislocation is defined as the total loss of contact between two ends of bones in a joint¹. The condition where the articular surfaces are partly displaced but retain some contact with one another is termed as Subluxation². Dislocations are clinical emergencies unlike fractures and require prompt reduction and early treatment, since a delay in reduction may cause potential damage to joint which are deprived of synovial fluid³. The patient may present with agonizing pain which may not be relieved due to the persistent capsular stretch caused by the dislocation, which is precipitated by the nerve endings in the capsule. Dislocations often presents with less swelling and more restricted movements than fractures. Commonly affected sites are shoulder, elbow, knee, ankle and hip and inter phalangeal joints of fingers.

Classics of Ayurveda have broadly divided the traumatic consequences of an individual under two main headings such as Kandabhagna (traumatic fractures) and Sandhimukta (Dislocations). Kandabhagna enumerated as 12 varieties deals with the traumatic fractures of long bones. Sandhimukta or Sandhichyuti refers to dislocation of joints which are subdivided into 6 varieties⁴. Injuries ranging from minor abrasions to life threatening ones are commonly met with in day to day practice. Sandhimukta or dislocation of joint is taken up as the point of discussion owing to its severity in agony and impairment in motor functions which calls for the prompt and accurate diagnosis and reduction to restore the normal physical structure and functions of the affected joints. Hence a humble effort is put forward to throw light on clear understanding of classical description of Sandhimukta along with the explanation of the contemporary science on Shoulder joint dislocation.

The causes of joint injuries are explained as any fall, compression, violent blows to the joint, stretching or throwing actions, attack or bite of animals' etc⁵. Acharyas have quoted the features of

Sandhimukta as inability in carrying out various movements like Prasarana, Akunchana, Vivartana and Akshepana, presented with acute pain and tenderness⁶.

The 6 sub types of Sandhimukta are described in detail;

Utpishta

This variety of Sandhimukta is marked with swelling around both the sides of the joint and patient presents with different kinds of pain especially at night⁷.

The basic cause for such a dislocation is abhighata or trauma which causes the prakopa or derangement of vata dosha. The cause of different kinds of pain that is experienced at night hours could be interpreted as the salient feature of deranged vatadosha since no pain is attributed without vata and moreover night is regarded as the time period when vata dosha gets more predominant. As there is injury to the joints the bones as well as ligaments get affected, which increases the vata dosha. As the patient sleeps at night these ligaments and muscles which were taut as a result of injury get relaxed and there might be slight movement possible within the joint which triggers the nerve endings and it senses the pain. As the explanation says there is enormous swelling and it could be interpreted as Fracture dislocation. Different types of pains, namely tearing, pricking or compression types may be brought about by the friction of different fragments of bones involved, pull of injured ligaments or due to inflammation.

Vishlishta

This variety is characterized by mild swelling, slight pain and derangement of joint with an abnormal depression in the middle. The features found are suggestive of subluxation of the joint. Since it does not involve any fracture of the bones, it presents with

mild swelling. As there is derangement of bones and they remain in an abnormal contact, the ligaments and other soft tissues attached to them remain stretched all the time and hence continuous pain is experienced by the patient.

Vivartita

In this variety there is medial or lateral displacement of bones with unevenness of the joint and presence of pain. This is correlated as dislocation with displacement. It may also be interpreted as a subluxation with displacement owing to its marked feature of acute pain.

Avakshipta

Acharyas have quoted it as dislocation of the joint with downward displacement associated with acute pain. This denotes complete dislocation of the joint causing excessive tension or tear of the ligaments which gives way for immense pain.

Atikshipta

This variety quotes the displacement of bones one over the other or may be correlated to dislocation with overriding.

Tiryakshipta

This is the variety of Sandhimukta which quotes the oblique displacement of one of the bones with acute pain. This may be correlated to dislocation with oblique displacement. Such dislocations may occur at hip joint where head of femur may displace from acetabular cavity and gets lodged posteriorly which accounts for 65% of hip dislocations as a result of motor vehicle collisions, fall from height or sports injuries.

Treatment

After diagnosing the condition, the literatures of Ayurveda has mentioned

- Rest to the patient
- Usage of sheeta Jala or cold water for parisheka
- Alepana with mud
- Bandaging by making use of splints or kusha⁸

The method of reduction is mentioned clearly as to elevate the depressed bone, depress the elevated one, with traction the laterally displaced bone is to be centralized and the bone which is displaced inferiorly has to be corrected. Immediately after the reduction, a cloth soaked in Ghrita has to be placed in position and immobilized using required splints. Different combinations of drugs are mentioned for Alepana like Manjishtha, Shatadhouta ghrita, Seka with Nyagrodhadi kashaya mixed with Ksheera, Chakra taila etc are also mentioned⁹.

Brief anatomy of Shoulder joint

Shoulder joint is the commonest joint in the body to dislocate which is more common in adults than children¹⁰. It is a synovial joint of ball and socket variety formed by the articulation of the glenoid cavity of scapula and head of humerus and hence termed as Glenohumeral joint. Owing to its structure, the joint is considered a weak one, due to small and shallow glenoid cavity holding 4 times larger head of humerus in place. In spite of this, the joint allows a wide range of movements. The stability of the joint is maintained by

- a) Coraco acromial arch which forms the secondary socket for the head of the humerus
- b) Musculotendinous cuff of the shoulder
- c) Glenoid labrum which helps in deepening of the fossa
- d) Atmospheric pressure
- e) The capsular ligament, Coracohumeral ligament and transverse humeral ligament also aids the strength of the joint¹¹.

The shoulder joint is supplied by Anterior and posterior circumflex humeral vessels, Suprascapular and subscapular vessels. Axillary nerve, musculo cutaneous nerve and subscapular nerve forms the nerve supply of the joint. Shoulder dislocation may be classified as,

Anterior dislocation

It is the most common type of dislocation accounting up to 95% which results from a fall onto outstretched arm or to the shoulder itself. Due to the impact, the humeral head gets displaced to infra clavicular fossa just below Coracoid process through the rent in the capsule, hence this variety is also called Subcoracoid dislocation. The patient presents with acute pain and usually will be unwilling to attempt any movement of the shoulder joint. The contour of the shoulder appears flattened.

On examination the tip of the acromion appears the most lateral point and there will be noticeable prominence of the humeral head in infraclavicular fossa. Radiographs reveal the non-congruence of humeral articular surface with articular surface of glenoid fossa.

Posterior dislocation

This type is not very striking in its presentation and its most often overlooked. The patient presents with a fixed medial rotation of arm, which can't be rotated outwards or even to the neutral position. Flattening is noted anteriorly. Radiographs should be requested from multiple projections lest it may be overlooked or remain undiagnosed. This variety is reduced by rotating the arm laterally with a longitudinal traction on the arm with a direct forward pressure on displaced humeral head.

Radiographs may be taken from two plane perpendicular to each other before and after the reduction to exclude the possibility of the avulsion fractures. Clinical tests are carried out to test the damages caused to arteries and nerves.

Luxatio erecta

This is the rarest variety where head of Humerus lies in the subglenoid position.¹²

Treatment

The general treatment includes spontaneous reduction of the shoulder and immobilization using a chest arm bandage for 21 days followed by shoulder strengthening exercises. Reduction is facilitated by applying Kocher's manoeuvre developed by Theodor Kocher, a renowned Swiss surgeon and anatomist. There is also an alternate method of pulling firmly the semi abducted arm against the counter traction in axilla named as Hippocrates manoeuvre¹³.

Complications

There are various complications enlisted even after proper reduction of the dislocated joint.

- Infections in case of open dislocation
- Soft tissue injury
- Avascular necrosis of articulating bones due to damage of vessels supplying it
- Persistent inability of the joint resulting in recurrent dislocations
- Joint stiffness like post traumatic ossification
- Early onset of osteoarthritis
- Injury to Axillary nerve accounts for 5-30%.
- Paralysis of Deltoid
- Brachial plexus injury
- Axillary artery damage
- Fracture of greater tuberosity

Examination

Visualize and go through range of motion of all joints and document the lacerations, abrasions and contusions. Physical examination of all orthopedic injuries includes inspection for deformity, colour changes, palpation for tenderness and range of motion and assessment of neurovascular status. Delayed reduction may lead to Avascular necrosis or other complication and hence advisable to reduce the fracture and dislocations with neurovascular compromise before transferring the patient.

DISCUSSION

Dislocations are medical emergencies met with in day to day practice. The importance of dislocations unlike fractures arises due to the acute suffering of the patient which calls for a spontaneous diagnosis and treatment which may prevent further complications. Ayurvedic classics have enumerated the condition into 6 different varieties depending upon the various differences in their presentation. Shoulder joint being the most unstable joint in the body and the most frequent one to get dislocated, is being taken up for the discussion. Even after reduction there are increased chances of complications. Hence understanding the condition right from the presentation up to complications is deemed necessary in treating a case.

CONCLUSION

Acharya Sushruta has described the traumatic injuries under two headings namely Kandabhagna and Sandhimukta. The 6 varieties of Sandhimukta require special attention as they are medical emergencies and are often overlooked. Along with the classical view Shoulder joint dislocations are also requires special mention due to its increased chances of the joint getting dislocated. The knowledge of classical references of Acharyas along with the contemporary views helps in identifying the condition as well as providing the right treatment at the right time.

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REFERENCES

1. Ebnezar, J. Traumatology. In: Ebnezar, J (ed.) 4th, Textbook of Orthopedics. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2010. p. 28.
2. Hamblen, D.L. Joint Injuries. In: Conn, F (ed.) 12th, Adams's Outline of Fractures. Toronto: Churchill Livingstone Elsevier; 2007. p. 87.
3. Ebnezar, J. Traumatology. In: Ebnezar, J (ed.) 4th, Textbook of Orthopedics. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2010. p. 28.
4. Sharma, P.V. Bhagna nidana. In: Sharma P.V (ed.) Reprint 2010, Sushruta Samhita. Varanasi: Chaukhambha Vishvabharati; 2010. p. 99.
5. Sharma P.V. Bhagna nidana. In: Sharma P.V (ed.) Reprint 2010, Sushruta Samhita. Varanasi: Chaukhambha Vishvabharati; 2010. p. 99.
6. Sharma P.V. Bhagna nidana. In: Sharma P.V (ed.) Reprint 2010, Sushruta Samhita. Varanasi: Chaukhambha Vishvabharati; 2010. p. 100.
7. Sharma P.V. Bhagna Chikitsa. In: Sharma P.V (ed.) Reprint 2010, Sushruta Samhita. Varanasi: Chaukhambha Vishvabharati; 2010. p. 294.
8. Sharma P.V. Bhagna Chikitsa. In: Sharma P.V (ed.) Reprint 2010, Sushruta Samhita. Varanasi: Chaukhambha Vishvabharati; 2010. p. 292.
9. Maheshwari J. Injuries around the shoulder. In: Wallace W.A (ed.) 4th, Essential Orthopedics. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2011. p. 86.
10. Maheshwari J. Injuries around the shoulder. In: Wallace W.A (ed.) 4th, Essential Orthopedics. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2011. p. 84.
11. Maheshwari J. Injuries around the shoulder. In: Wallace W.A (ed.) 4th, Essential Orthopedics. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2011. p. 87.
12. Maheshwari J. Injuries around the shoulder. In: Wallace W.A (ed.) 4th, Essential Orthopedics. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2011. p. 86.
13. Maheshwari J. Injuries around the shoulder. In: Wallace W.A (ed.) 4th, Essential Orthopedics. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2011. p. 86.

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