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Anatomy Of Kurpara Sandhi W.S.R. To Elbow Joint: An Ayurveda Overview

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ABSTRACT

The knowledge of anatomy in Ayurveda has been poorly understood in today's era. The lack of sufficient literatures regarding the subject has hindered its development. Despite the hurdles, still the concept of anatomy in Ayurveda is in depth and seeking for scientific exploration. The increasing incidence of joint diseases leading towards chronicity are best being treated through Ayurveda, but the concepts behind the results are not well understood due to lack of proper knowledge in anatomy. The description of various anatomical entities has been clearly mentioned in Samhitas in Ayurveda. Sushruta Samhita, the pioneer text of Ayurveda surgery, in its Shareera Sthana primarily has described about the human body anatomy. Apart from this, Charaka Samhita, the text of medicine has also lightened regarding the anatomy. In this article, the anatomical concepts of Kurpara Sandhi (elbow joint) are extracted from Sushruta Samhita and Charaka Samhita in order to organize the knowledge systematically. The concepts are correlated with the view of contemporary medical science and illustrated in best possible way.

KEYWORDS: Kurpara Sandi, Elbow Joint, Ayurveda Surgery, Ayurveda Anatomy.

INTRODUCTION

The knowledge of anatomy in the Ayurvedic literature is a great boon to the today's science. It seems as some fictitious story while reading about the Samhitas thoroughly, but deeper they are purely scientific and factual based. Elbow joint is considered as the complex joint in the Ayurvedic texts.^[1] Acharya Sushruta has mentioned the importance of Shavachedana (Cadaver dissection) for the proper knowledge of the human anatomy. To be a successful surgeon, it is compulsory for one to become an anatomist. Shareera Sthana in Sushruta Samhita has described in detail about the human anatomy in the 10 chapters. There are total number of 210 Sandhi (joints) in human body.^[2] Elbow joint is termed as the Kurpara Sandhi in Ayurveda classics.

Detail about the location, shape and size, muscle attachments and the different traumatic and non-traumatic diseases have been given by Acharya Charaka and Acharya Sushruta in their texts.

AIMS AND OBJECTIVES

- To compile all the information related to KurparaSandhi in the Ayurvedic texts Charaka Samhita and Sushruta Samhita.
- Illumination of all information related to Kurpara Sandhi.
- To present information in a clear and understandable manner.

MATERIALS AND METHODS

The information related to the Kurpara Sandhi were compiled from the texts of Ayurveda; Charaka Samhita and Sushruta Samhita. The different grammatical terms related to Kurparawere searched in e-samhita, correlated with the original textbooks and information were gathered.

Background

The term Kurparais found in the literature since Vedic period. It can be found in Rigveda, Atharvaveda, Yajurveda, Vajaseniya Samhita, Sulbasutra, Mahabharata, Rajatarangini, etc

The number of patients related to elbow joint pain in out-patient department are increasing day by day. Rather than achieving the holistic management of the diseases, almost all of them are leading towards chronicity, which may be the result of improper and inaccurate knowledge regarding to the anatomy of this complex joint.

Anatomy

Number of Kurpara Sandhi (Elbow Joint):

There are two Kurpara Sandhi in our body. ^[3,4] The contemporary anatomical science also tells the two elbow joints in our human body.

Type of Kurpara Sandhi/Type of Elbow joint

KurparaSandhi is the Kora type of Sandhi. There are total number of 8 types of Sandhi. Kora means Gadda or Kalli. ^[5] Elbow joint is a synovial hinge joint. It is a compound synovial joint composed of the ulnohumeral, radiohumeral and proximal radio-ulnar joints. It primarily functions as a hinge joint, allowing flexion and extension as well as a variety of other movements.

Size of Kurpara Sandhi (Elbow Joint)

The length of Kurpara Sandhi is 04 Angula. Acharya Sushruta's opinion regarding the length of Kurpara Sandhi is 03 Angula. ^[6] While Acharya Charaka tells the 04 Angula length. ^[7] The circumference of Kurpara Sandhi is 14 Angula.^[8] The circumference is measured at the middlemost part of the Kurpara Sandhi. ^[9]

We cannot get the exact dimension of elbow joint in the contemporary anatomical science. But the size varies according to the age, or the girth of the person. The average adult elbow joint dimensions are mentioned in the Ayurveda literature.

Position

Kurpara Sandhi is situated in between thePrabahu(forearm) and Bahu (arm) region.^[10] The distance between the Kurpara Sandhi and Kaksha Sandhi is 32 Angula. ^[11]

Number of Snayu in Kurpara Sandhi

There are 10 Snayus in Kurpara Sandhi out of the total 900 Snayu in human body. ^[12] There are 7 ligaments supporting the elbow joint namely medial collateral ligament, lateral collateral ligament annular ligament, transverse ligament, anterior oblique ligament, posterior oblique ligament, and quadrata ligament.

Number of Peshi in KurparaSandhi

There are 05 Peshi (muscles) attached to KurparaSandhi. ^[13] There are mainly 07 muscles supporting the movements of the elbow joint. Biceps brachi, brachialis, brachioradialis, pronator teres, extensor carpi radialis brevis, extensor digitorum and anconeus.

KurparaSandhi as the vital point

Kurpara is considered as the Marma (vital point) of the human body. It is Sandhi (joint) type of Marma. ^[14] It is also the Vaikalyakar (disability forming) type of Marma. The trauma at the Kurpara Sandhi results to Khanjata (clogged). ^[15]

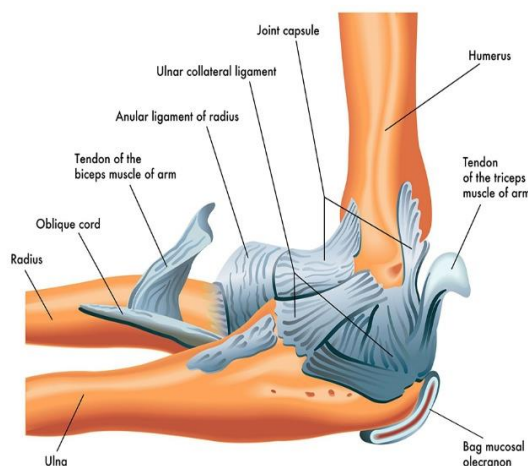
Asthi in KurparaSandhi

There are five types of Asthi in our body. They are Kapala Asthi, RuchakaAsthi, Taruna Asthi, Valaya Asthi and Nalaka Asthi. ^[16] The elbow joint is formed by the lower end of humerus and upper ends of radius and ulna.

Diseases involving Kurpara Sandhi

There are number of diseases in Ayurveda that involve Kurpara Sandhi. Some of them are Vatarakta^[17,18], Ardita^[19], VatajaJvara^[20] etc.

Entity (Related to Elbow joint)	Ayurveda view	Modern view
No. of elbow joints	02	02
Type of elbow joint	Kora Sandhi	Synovial hinge joint
Length of elbowjoint	Charaka – 04 Angula Sushruta – 03 Angula	--
Circumference of elbowjoint	Sushruta – 14 Angula	--
Snayu (Ligaments)	10	07
Peshi (Muscles)	05	07



DISCUSSION

Elbow joint is the most complex joint in the human body. The anatomy of the elbow joint not only deals with the single entity, but with the multiple anatomical structures. It has relations with various structures such as muscles, bones, ligaments, cartilage, synovial tissues, synovial fluid and connective tissues. The knowledge of anatomy in Ayurveda cannot be given of less importance. The various structures forming the elbowjoint, and associates are mentioned and explained to some extent in Ayurvedic texts. The number of various elbowjoint related structures mentioned in Samhitas are close with that mentioned in modern anatomical science.

CONCLUSION

Acharya Sushruta, the great surgeon of ancient times in his book, has clearly mentioned about the human anatomy. The organogenesis of the different organs, details about the Mamsa, Asthi, Sandhi, Snayu, Sira, Dhamani, etc. are the great contributions to the field of human anatomy. Similarly, Acharya Charaka after Acharya Sushruta has also mentioned about the human anatomy.

In present era, all the texts of Ayurveda are not available with us. There are more than 50 Teeka (explanatory texts) of Sushruta Samhita itself, but their availability is challenging. Ayurveda needs to get explored more in theoretical as well as practical approach in order to get the knowledge of human anatomy in more detail.

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