



Articular Originating Referred Pain Area

8

Jun Yoshida

This chapter describes the pain location and the joint which should be treated, which have been revealed by Dr. Hakata's huge amount of clinical experience.

In this chapter, the chiefly treated joints are shown for pain area in each patient. The articular originating referred pain area is described, which is revealed by clinical experiences by using the AKA-H method.

8.1 Introduction

Pain, such as low back pain, neck pain, and pain in the extremities, is one of the most common reasons for patient complaints. Most of the causes were not always identifiable by imaging such as radiography, CT, and MRI. Therefore, the symptomatic treatments didn't work well. Recently, the manual medicine is noticed as a diagnostic method for functional disorders.

Dating back to the 1960s, there was a report about pain in joints with no pathologic conditions, which was caused by the joint dysfunction, leading to musculoskeletal pain. The treatment results were poor because they were treated by manipulation techniques. The relationship between the pain area and the dysfunctional organ by traditional manipulation techniques was unclear because it usually regarded many joints or muscles as treatment targets. The AKA-Hakata method (hereafter AKA-H), focusing on treating one joint at a time, made it clear by clinical experience that the pain caused by the intra-articular joint dysfunction and the referred pain is area affected by it.

The important thing is that the pain origin is not always just in the pain area. Most of the pain derives from the dysfunctional joint relatively far from the pain area. Several joints may cause referring the pain to certain areas and plural joints need to be treated on a case by case basis.

J. Yoshida (✉)
Low Back Pain and Sacroiliac Joint Center,
JCHO Sendai Hospital, Sendai, Japan
e-mail: junyoshida@mve.biglobe.ne.jp

8.2 The Principles of Treatment by the AKA-H Method

It is necessary to identify the affected joint when we treat the pain originating from the joint. The pain referral maps, which were made based on the huge amount of clinical experience of the AKA-H methods, are useful for this purpose. Dr. Hakata revealed through his clinical experience that the most primarily affected joint was the sacroiliac joint (SIJ). Other joint dysfunction occurred secondarily following the SIJ dysfunction. Therefore, the treatment should start for SIJ first, and if necessary, the treatment for other secondarily affected joints should be added.

8.3 The Order in which the Joints Should Be Treated Is Shown in the Figures

1. The head (Fig. 8.1)
 - ① SIJ, ② C7/T1 facet joints, and ③ C2/3 facet joints.Most headaches related to joint dysfunction are caused by SIJ dysfunction and C7/T1 facet joints dysfunction occurring together with SIJ dysfunction.
2. The face (Fig. 8.2)
 - ① SIJ, ② C7/T1 facet joints, and ③ C2/3 facet joints.Similar to the treatment for headache originating from the joint dysfunction, the pain around the eyes and cheeks can be treated by the AKA-H method for SIJ and C7/T1 facet joints. Occasionally, temporomandibular joint pain can be related to sternoclavicular joint dysfunction.

Fig. 8.1 The order in which the joints cause the head pain

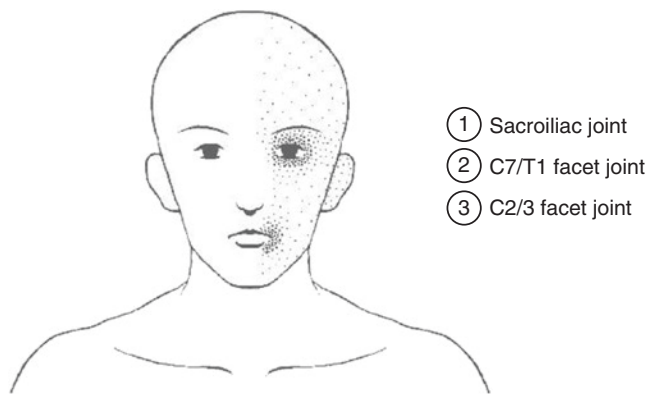
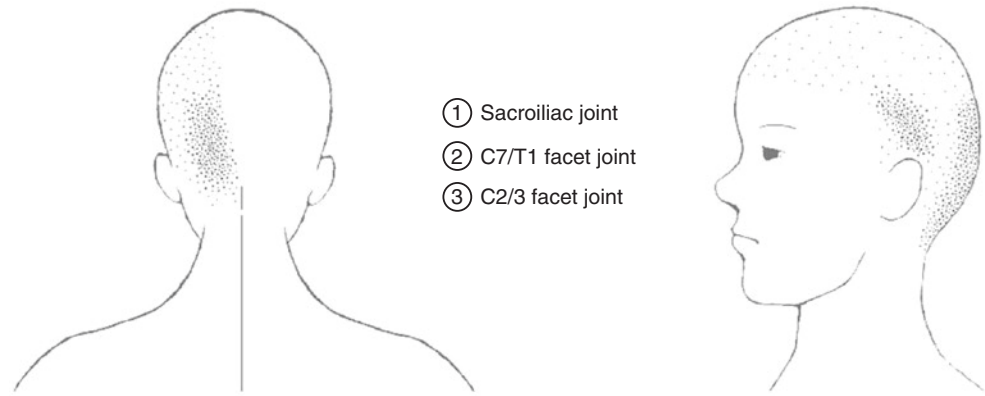


Fig. 8.2 The order in which the joints cause the face pain

3. The neck (Fig. 8.3)

Back: ① SIJ, ② 1st costovertebral joint, ③ Sternoclavicular joint, and ④ C7/T1 facet joint

Front: ① SIJ, ② Sternoclavicular joint, and ③ 1st costovertebral joint.

Upper shoulder girdle: ① SIJ, ② 1st costovertebral joint, ③ Sternoclavicular joint, ④ T1/2 facet joint, and ⑤ C7/T1 facet joint.

Pain from the occipital region of the head to the shoulders is a common complaint. Pain in the head, face, and upper back region accompanies it occasionally. SIJ dysfunction is basic to the joint dysfunction around the neck, and it causes this neck pain in most cases. The 1st costovertebral joint dysfunction follows SIJ dysfunction as the main cause of neck pain. Tenderness of this joint often suggests that the recovery of the accessory movement of SIJ is not complete. Treatments for SIJ dysfunction should be tried again.

The front of the neck pain can originate from the dysfunction of the sternoclavicular, 1st costovertebral joints followed by SIJ.

4. The back (Fig. 8.4)

① SIJ, ② 1st costovertebral joint, ③ Sternoclavicular joint, ④ Thoracic facet joint, and ⑤ Sterncostal joint

Back pain can occur together with the pain and/or numbness in the upper extremities. SIJ dysfunction primarily causes these symptoms, and the spinal facet joints, the costovertebral joints, and sternoclavicular or sternocostal joint dysfunction are secondary pain origins. Pain in the paravertebral, scapula, and posterior axillary area is often observed. Checking from the T1/2 to the T5/6 facet joints, from the 1st to the 5th costovertebral joints, and from the 2nd to the 3rd sternocostal joints is necessary when the back pain is treated by the AKA-H method.

5. The precordia (Fig. 8.5)

① SIJ, ② Sternoclavicular joint, ③ Sterncostal joint, and ④ Costovertebral joint.

Visceralgia, such as angina pectoris and pleurisy, should be differentiated from the cause of precordialgia. The tenderness of the chest wall (bone or muscle) suggests joint dysfunctions.

The sternoclavicular joint influences the entire chest wall. Therefore, this joint should be treated following SIJ.

6. The low back (Fig. 8.6)

① SIJ and ② L1/2-L5/S facet joints

Almost all affected joints in patients with low back pain come from SIJ dysfunction. Occasionally, lumbar facet joint dysfunction can accompany it. Radiculopathy, tumors, and fractures should be checked to differentiate them from joint pain. Lumbar facet joint dysfunction

Fig. 8.3 The order in which the joints cause the neck pain

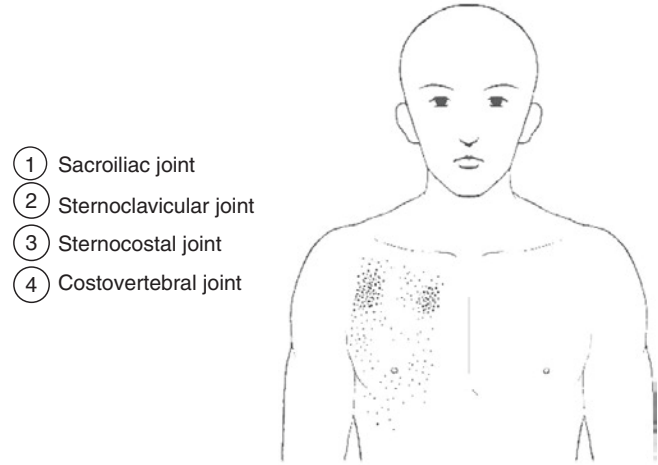
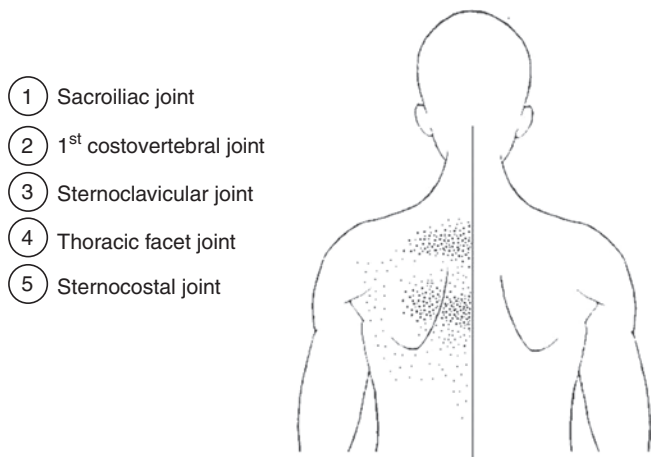
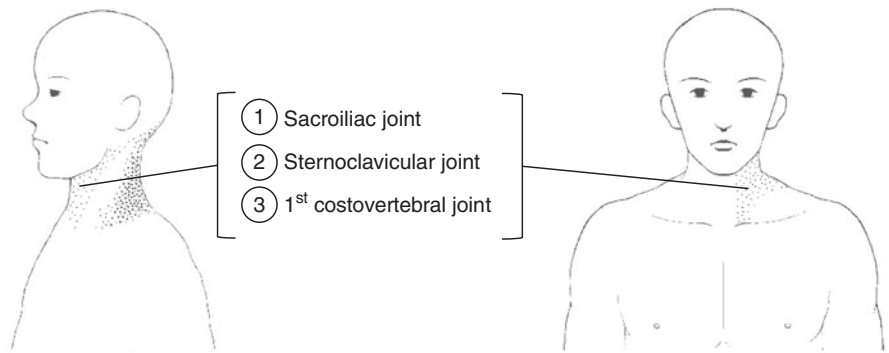
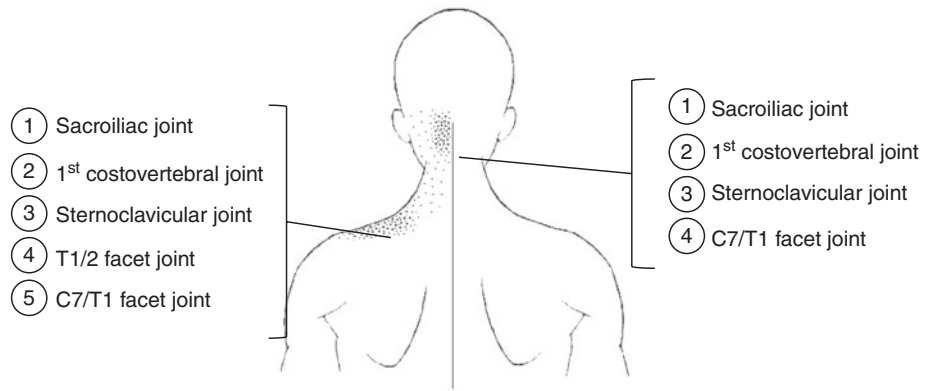


Fig. 8.4 The order in which the joints cause the back pain

Fig. 8.5 The order in which the joints cause the pectoria

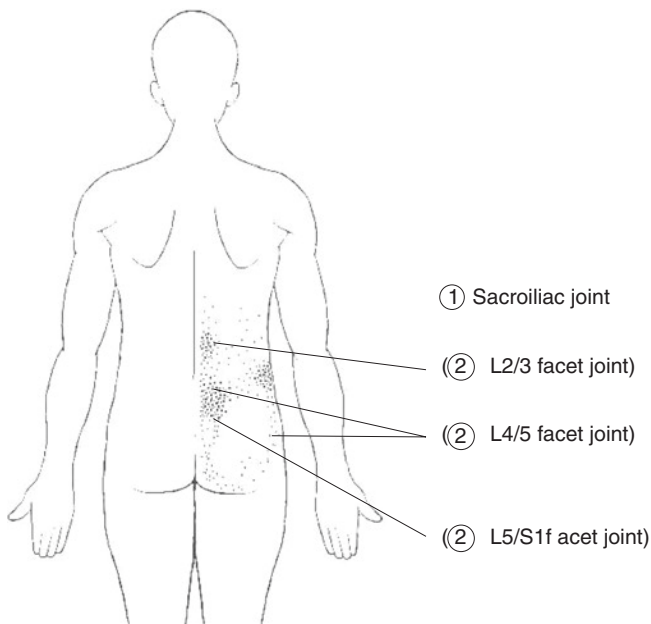


Fig. 8.6 The order in which the joints cause the low back pain

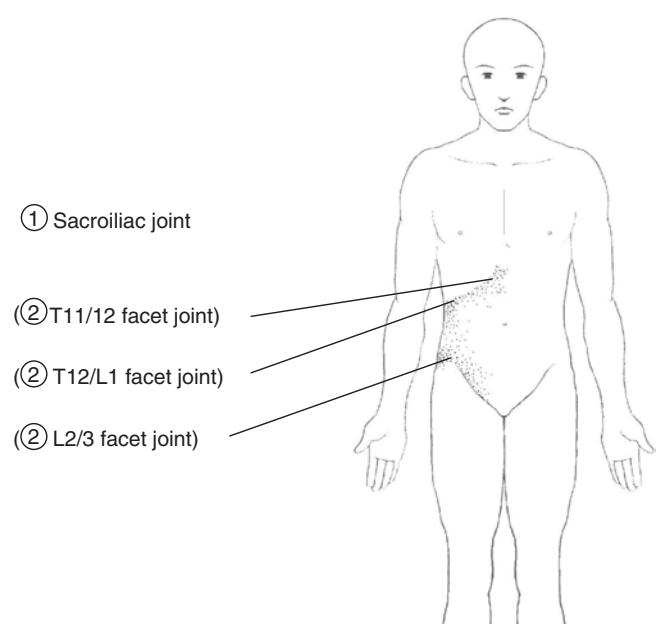


Fig. 8.7 The order in which the joints cause the abdominal pain

secondary to the compression vertebrae fractures or post-lumbar surgeries can occur, and the AKA-H for lumbar facet joints would be necessary to treat these.

7. The abdomen (Fig. 8.7)

① SIJ and ② T11/12 facet joint (for pain at epigastria), 7th sternocostal joint (for pain at costal arch), L1/2 facet joint (for pain at lateral abdominal), and L2/3 facet joint (for pain at lower abdominal and inguinal area).

Pain in the abdominal region can originate from SIJ dysfunction and from secondary-affected joints in the trunk when there are no abnormal findings from the examinations of the internal organs.

8. The upper extremities

① SIJ, ② sternoclavicular, 1st costovertebral, ③ II–V sternocostal and costovertebral joints, and ④ T1/2–T5/6 facet joints.

Articular originating pain and numbness in the upper extremities are observed locally around the affected joint or over the extremity related to the joint. Dysfunction of the upper costovertebral, sternocostal, thoracic facet, and sternoclavicular joints are secondary ones.

(a) Over the upper extremities

The articular originating pain and/or numbness doesn't completely correspond to dermatome or peripheral innervation areas. These could be treated by the AKA-H for SIJ alone. Occasionally, additional AKA-H to several joints related to the symptoms could be required.

- The dorsal (Fig. 8.8)

Pain and numbness in the dorsal upper extremities is caused by the dysfunction of the costover-

tebral, sternoclavicular, sternocostal, and thoracic facet joints, which often occur together with SIJ dysfunction. Dysfunction of the 1st costovertebral and sternoclavicular joints are key joints because they could affect the whole upper extremity.

- The palmar (Fig. 8.9)

Pain in the whole palmar area is caused by dysfunction of the SIJ and sternoclavicular joints. Pain in the palmar-radial humeral and the thenar eminence could be treated by the AKA-H for the sternoclavicular and/or 1st costovertebral joint.

(b) The upper extremities; local pain

- Shoulder (Fig. 8.10)

Most shoulder pain should be treated by the AKA-H to the SIJ and to related joints as follows:

- The anterior region

The sternoclavicular or 2nd sternocostal joint.

- The posterior region

1st costovertebral, sternoclavicular, and T1/2 or T 2/3 facet joints.

- The lateral region

1st costovertebral, sternoclavicular, 2nd costovertebral, and T1/2 and T2/3 facet joints

- The elbows

The pain and numbness on either the radial or ulnar elbow are common complaints. These are usually diagnosed as lateral or medial humeral epicondylitis. The 1st costovertebral and sternoclavicular joints are responsible for the pain.

Fig. 8.8 The order in which the joints cause pain in the dorsal upper extremities

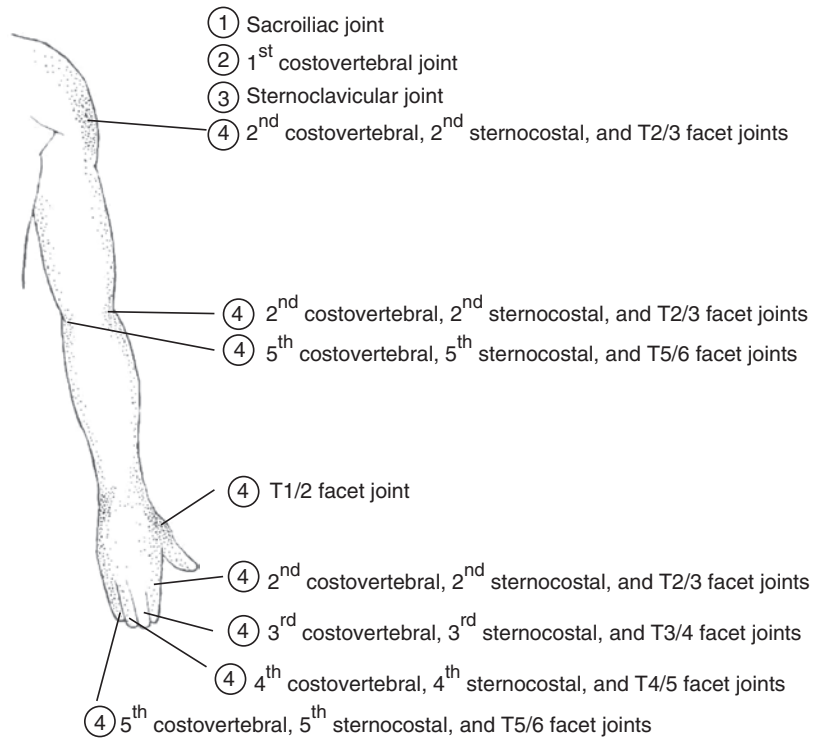


Fig. 8.9 The order in which the joints cause pain in the palmar upper extremities

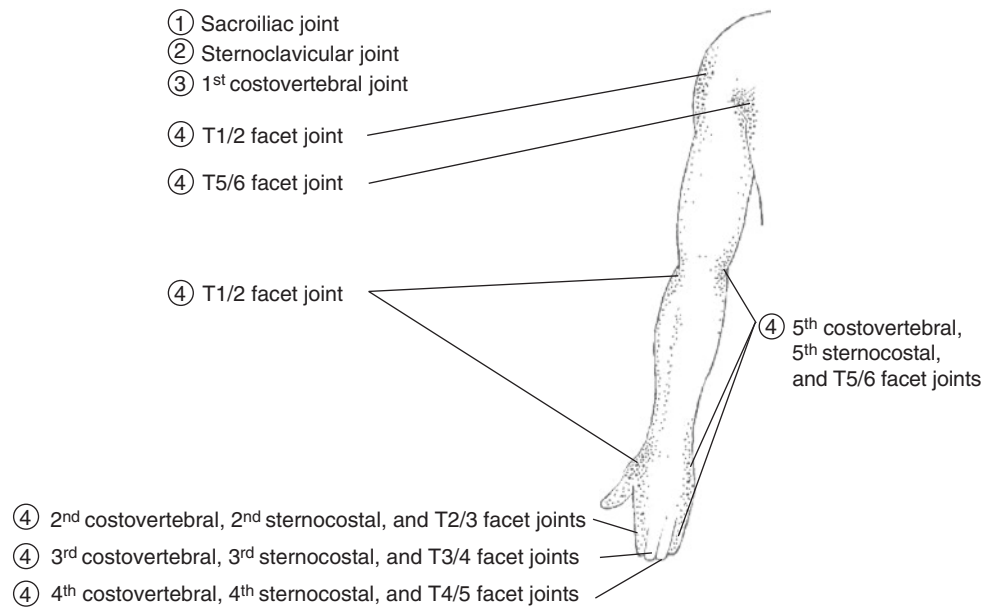


Fig. 8.10 The order in which the joints cause the shoulder pain

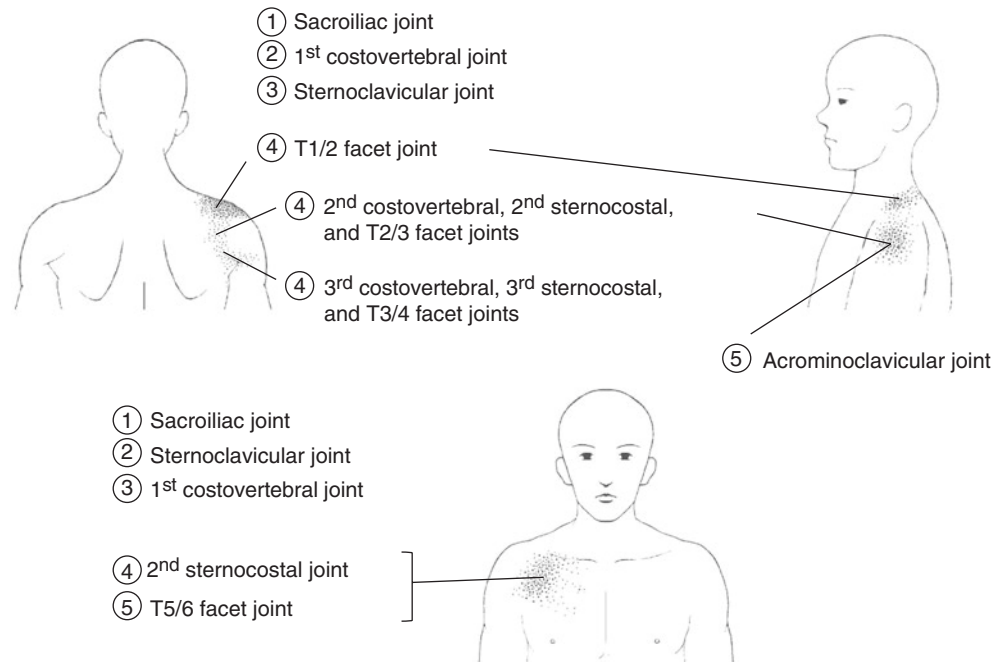
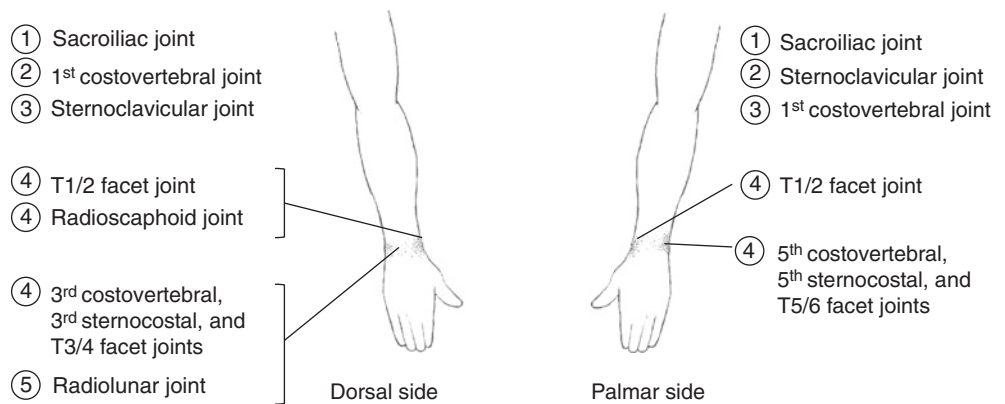


Fig. 8.11 The order in which the joints cause the wrist pain



- The wrists (Fig. 8.11)

In general, the pain and numbness around the wrist joint area is diagnosed as tendinitis. However, these symptoms could be treated by the AKA-H for the radioscaphoid and radiolunar joints.

- The hands

Most pain and numbness in the dorsal thumb and index finger area could be relieved by the AKA-H for the 1st costovertebral joint.

9. The lower extremities

Pain in the lower extremities is most often related to dysfunction of the SIJ wherever the pain is located. Occasionally, it is due to dysfunction of the lumbar facet joints.

(a) All the lower extremities (Fig. 8.12)

① SIJ and ② L1/2~L5/S facet joint

Local pain and numbness (paresthesia) in the lower extremities is common. Posterior thigh down to leg and ankle pain is usually diagnosed as sciatica. However, most of them could be the referred pain originating from SIJ dysfunction.

(b) The local lower extremities

- The hip region

Most of the buttock, great trochanter, and groin pain could be treated by the AKA-H for the SIJ.

- The knees (Fig. 8.13)

Pain and numbness in the knee could be affected by the tarsal joint dysfunction together with dysfunction of the SIJ and lumbar facet

Fig. 8.12 The order in which the joints cause pain in the lower extremities

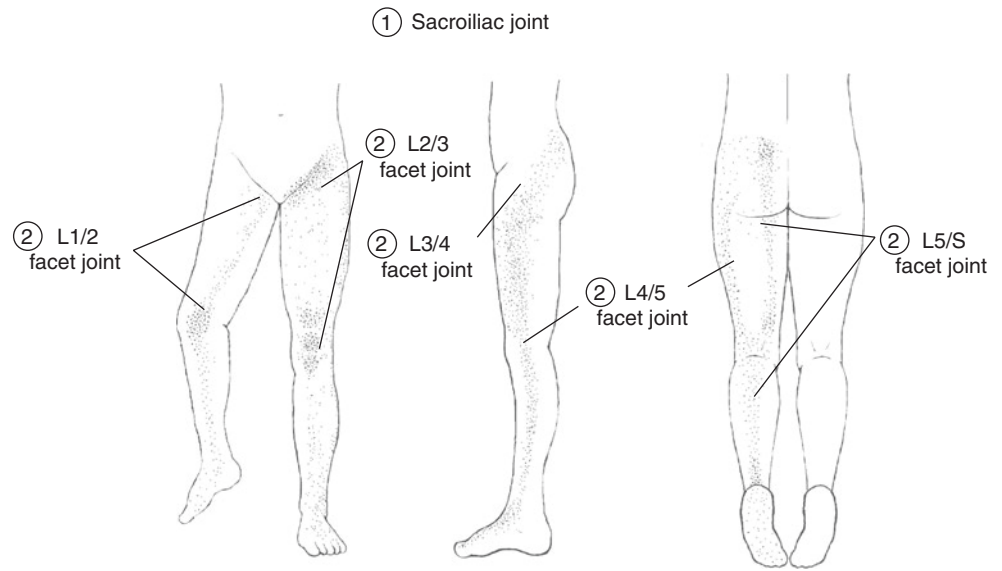
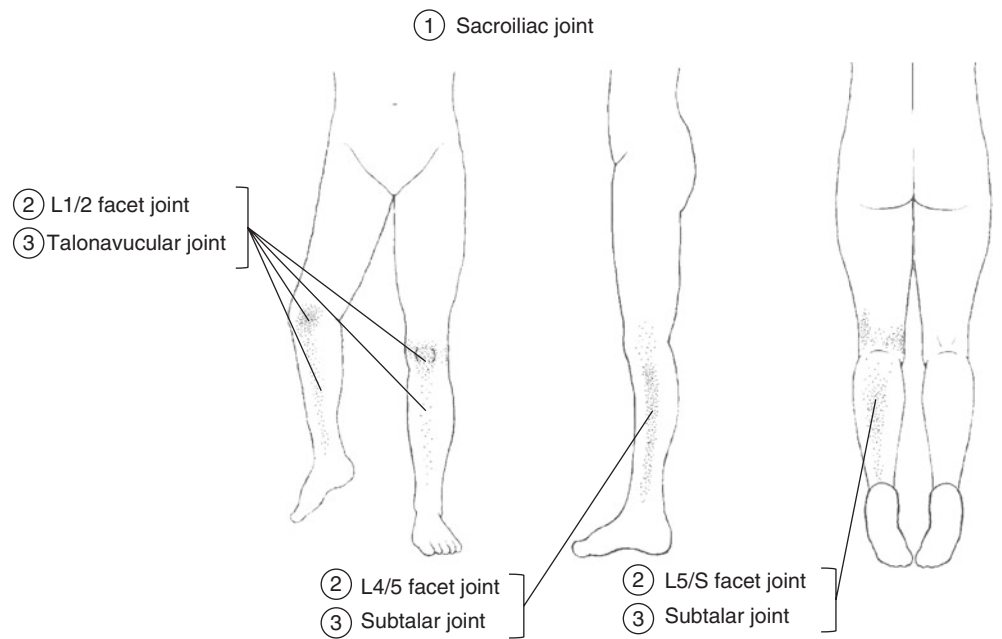


Fig. 8.13 The order in which the joints cause the knee pain



joints. Pain around the knee joint is easily diagnosed with injury of the ligament or meniscus. However, most of this is referred pain from SIJ dysfunction. Additionally, the talonavicular or subtalar joint should be checked.

- The ankle joint (Fig. 8.14)
Pain in the Achilles tendon area quite often accompanies subtalar joint dysfunction.

- The foot
Pain and numbness in the foot has the same origin as ankle joint pain. In some cases, pain is affected by tarsometatarsal joint dysfunction. Heel pain, which persists after the AKA-H for the SIJ, could be treated by the AKA-H for the subtalar joint. The dysfunction of the tarsal and tarsometatarsal joints should be checked as well.

Fig. 8.14 The order in which the joints cause the ankle and the foot pain

