

## Introduction to OMM for MDs and DOs

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ATSU A.T. Still University

## ATSU

National Center for Osteopathic Principles and Practice Education Counterstrain: Anterior & Posterior Cervical Spine

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## Counterstrain

#### Counterstrain,

- 1. A system of diagnosis and treatment that considers the dysfunction to be a continuing, inappropriate strain reflex, which is inhibited by applying a position of mild strain in the direction exactly opposite to that of the reflex; this is accomplished by specific directed positioning about the point of tenderness to achieve the desired therapeutic response.
- 2. Australian and French use: Jones technique, (correction spontaneous by position), spontaneous release by position.
- 3. Developed by Lawrence Jones, DO.

## Counterstrain

Dr. Jones experimented with different positions for different problems

Found that if he just positioned the affected areas of the body he only needed to maintain the position for 90 seconds

Found discrete tender points associated with different problems

Found both anterior and posterior tender points



Lawrence Jones, D.O., F.A.A.O.

## **Objectives**

- Describe the anatomic landmarks associated with anterior and posterior cervical counterstrain tender points
- Identify positive cervical tender points using palpation
- Describe the initial positioning and steps involved in counterstrain treatment of cervical tender points
- Demonstrate effective treatment of cervical tender points using counterstrain technique
- Describe the alternate treatment positions that may be required for effective treatment of AC3 and PC3

#### ACI

I) Posterior surface of ramus of mandible
*push posterior to anterior*

 Midway between ramus and mastoid process on the transverse process of C1 - push lateral to medial

AC2-6 Anterior surface of the transverse processes

#### AC7

2cm lateral to the medial end of the clavicle (clavicular head of SCM)

#### AC8

medial end of the clavicle (sternal head of the SCM at sternal notch)



#### ACI

- Mandible: Posterior surface of ramus of mandible - *push posterior to anterior*
- 2) Transverse Process:

Midway between ramus and mastoid process on the transverse process of C1 - *push lateral to medial* 





AC2-6 - Anterior surface of the transverse processes





- AC7 2cm lateral to the medical end of the clavicle (clavicular head of SCM)
- AC8 medial end of the clavicle (sternal head of the SCM at sternal notch)



## Lab Exercise

#### ACI

- 1) Posterior surface of ramus of mandible *push posterior to anterior*
- 2) Midway between ramus and mastoid process on the transverse process of C1 - *push lateral to medial*

#### AC2-6

Anterior surface of the transverse processes – *push posteromedially* 

#### AC7

2cm lateral to the medical end of the clavicle (clavicular head of SCM) – *push inferiorly on superior aspect of clavicle* 

#### AC8

medial end of the clavicle (sternal head of the SCM at sternal notch)



## **Counterstrain Treatment**

- I. Find the tender point
- 2. Establish a pain scale
  - a) 10/10, \$1.00's worth of pain, 100% MAX pain
- 3. Position in standard treatment position
- 4. Recheck TP -Goal is Zero minimum is 30% of original pain
- 5. Fine tune position for maximum effect
- 6. Monitor point and Hold treatment position for90 seconds
- 7. SLOWLY return to neutral
- 8. Recheck point

## TIPS

- Reach for 100% resolution; don't settle for just "30%"
- TPs located more laterally require more sidebending
- With multiple TPs, treat the most severe first
- With a row of TPs, treat the middle one first
- > Tell your pts they may be sore for 24-48 hrs

# How to Treat AC 1-6

## **Anterior C1**

#### Locations:

- ACI TP: On CI transverse process midway between ramus of mandible and mastoid process
  *push lateral to medial*
- 2. ACI Mandible: Posterior surface of ramus of mandible - *push posterior to anterior*

#### **Position:**

Sidebend and rotate head and neck away from point

(away, away)



Left AC1 Tender Point Treatment

## **Anterior C2-6**

#### Locations:

Found on anterior aspect of transverse processes of corresponding vertebra – *push anterior to posterior* 

#### **Position:**

Cervical flexion with sidebending and rotation of head and neck away from point

(Flex, away, away)

Note : sometimes AC3 may need - ESaRa



## **Anterior C3**

#### Locations:

Found on anterior aspect of transverse processes of corresponding vertebra -*push anterior to posterior* 

#### **Alternate Position:**

Cervical *extension* with sidebending and rotation of head and neck away from point

#### ESaRa

Note: AC3 may require cervical flexion

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Left AC3 Alternate Tender Point Treatment

## Lab Exercise

## Anterior CI

Rotate away Sidebend away

## Anterior C2-6

Flexion Sidebend away Rotate away

#### Alternate AC3

may need - ESaRa



Left AC1 Tender Point Treatment





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## **Clinical Correlation**

## Postural problems

- Upper cross Syndrome
- Headaches

▶ TMJ



# How to Treat AC 7 & 8

## **Anterior C7**

#### Location:

Found at clavicular insertion of sternocleidomastoid muscle, 2-3 cm lateral to proximal clavicle - *push superior to inferior* 

## **Position:**

Cervical flexion with sidebending **towards** and rotation of head and neck **away** from point



AC8

ACT

AC7

## **Anterior C8**

#### Location:

Found at sternal insertion of sternocleidomastoid muscle *push superomedial to inferolateral* 



#### **Position:**

Cervical flexion with sidebending and rotation of head and neck away from point

(Flex, away, away)



## Lab Exercise

## • Anterior C7

Flexion Rotate away Sidebend **toward** 

### Anterior C8

Flexion Rotate away sidebend **away** 





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Left AC8 Tender Point Treatment

## **Clinical Correlation**

- Poor posture
- Whiplash
- Torticollis



## Posterior Cervical Tender Points



![](_page_29_Picture_0.jpeg)

![](_page_30_Picture_0.jpeg)

## Posterior Cervical Tender Points

**PCI Occiput** –Found on occiput 3-4 cm lateral to midline in muscle mass

![](_page_31_Picture_2.jpeg)

![](_page_31_Picture_3.jpeg)

## Posterior Cervical Tender Points

## PC2

- Medial On C2 spinous process or just lateral
- 2. Lateral 2 cm lateral to midline below occiput in muscle mass

![](_page_32_Picture_4.jpeg)

![](_page_32_Picture_5.jpeg)

![](_page_33_Figure_0.jpeg)

**PC3-7** - Midline or slightly lateral to spinous processes of vertebra above

### **Bifid Spinous Processes**

![](_page_34_Picture_2.jpeg)

![](_page_34_Picture_3.jpeg)

## **Posterior Cervical Tender Points**

#### **PC8** Locations

- Medial At midline or inferolateral aspect of C7 spinous process
- Lateral on posterior tip of transverse processes, anterior to trapezius muscle belly

![](_page_35_Picture_4.jpeg)

## Posterior Cervical Tender Points

## PC8

- Medial At midline or inferolateral aspect of C7 spinous process
- 2. Lateral on posterior tip of transverse processes, anterior to trapezius muscle belly

![](_page_36_Picture_4.jpeg)

## Lab Exercise

#### PCI Inion

• On the inion, usually right or left side on protuberance, but occasionally midline

#### **PCI Occiput**

> 3-4 cm lateral to midline in muscle mass

#### PC2

- Medial On C2 spinous process or just lateral
- Lateral 2 cm lateral to midline below occiput in muscle mass

#### PC3-7

> Spinous process of vertebra above

#### PC8

- Medial At midline or inferolateral aspect of C7 spinous process
- Lateral on posterior tip of transverse processes, anterior to trapezius muscle belly

![](_page_37_Picture_13.jpeg)

# How to Treat PC 1 & 2

## **PC1 Inion**

## Location:

Found 1 cm inferior and lateral to inion

## Position:

Cervical flexion with sidebending towards and rotation of head and neck away from point

Flex StRa

![](_page_39_Picture_6.jpeg)

## **PC1 Occiput**

#### Location

Found on occiput 3-4 cm lateral to midline in muscle mass

# PC1 Occiput PC1 Inion

#### **Position:**

Cervical extension with sidebending and rotation of head and neck away from point as needed

(Extend, away, away)

#### E with SaRa as needed

![](_page_40_Picture_9.jpeg)

## **PC2**

## **TWO Locations:**

*Medial*: On C2 spinous process or just lateral *Lateral*: 2 cm lateral to midline below

*Lateral*. 2 cm lateral to midline below occiput in muscle mass

### **Position:**

Cervical extension with sidebending and rotation of head and neck away from point as needed

E with SaRa as needed

![](_page_41_Picture_7.jpeg)

![](_page_41_Picture_8.jpeg)

# WARNING

Hyperextension and rotation results in compression of vertebral artery on contralateral side

#### Vertebral artery stenosis

- Disequilibrium
- Vertigo
- Diplopia
- Tinnitus
- Paresthesia
- Dysphagia
- Dysarthria
- Ataxia

![](_page_42_Picture_11.jpeg)

## Lab Exercise

Treat Most significant Tender Point

**PCI** Inion – *F* StRa

**PCI Occiput -** *E with SaRa as needed* 

**PC2 (TWO Locations)** *E with SaRa as needed* 

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![](_page_43_Picture_6.jpeg)

![](_page_43_Picture_7.jpeg)

![](_page_43_Picture_8.jpeg)

# How to Treat PC 3 - 8

## **Posterior C3**

#### Locations:

Found at midline or inferolateral aspect of C2-6 spinous processes of named vertebra above or just lateral to spinous processes

#### **Alternate Position:**

Cervical flexion with sidebending and rotation of head and neck away from point

#### Flex SaRa

Note: PC3 may require cervical extension

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![](_page_45_Picture_8.jpeg)

Left PC3 Alternate Tender Point Treatment

## **Posterior C3-7**

#### Locations:

Found at midline or inferolateral aspect of C2-6 spinous processes of named vertebra above or just lateral to spinous processes

#### **Position:**

Cervical *extension* with sidebending and rotation of head and neck away from point

#### Extend SaRa

- Note: Midline points may require pure extension
- Note: PC3 may require cervical flexion

![](_page_46_Picture_9.jpeg)

![](_page_46_Picture_10.jpeg)

#### **PC8** Location

- 1. Medial: At midline or inferolateral aspect of C7 spinous processes
- 2. Lateral: On posterior tip of transverse processes, anterior to trapezius muscle belly

#### Treatment

- 1. Supine
- 2. Cervical extension with sidebending and rotation of head and neck away from point
- 3. Midline points may require pure extension

#### ESaRa

#### **Anatomical Consideration**

![](_page_47_Picture_9.jpeg)

![](_page_47_Picture_10.jpeg)

![](_page_47_Picture_11.jpeg)

## Lab Exercise

Treat most significant Tender Point

PC3-8 – ESaRa

Midline points may require pure extension

PC3 may require cervical flexion

![](_page_48_Picture_5.jpeg)

![](_page_48_Picture_6.jpeg)

## **Clinical Correlation**

- Tension headaches
- Migraine Headaches
- Occipital neuralgia
- Poor Posture
- Crick in the neck

![](_page_49_Picture_6.jpeg)

![](_page_49_Picture_7.jpeg)

![](_page_49_Picture_8.jpeg)

## **Session Evaluation**

![](_page_50_Picture_1.jpeg)

## **Grievance Policy**

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![](_page_51_Picture_2.jpeg)