President’s Message
Doug White, DPT, OCS, RMSK

In this issue the Imaging SIG leadership is pleased to announce the appointment of John C. Gray DPT, FAAOMPT, as Publications Editor. Dr. Gray will be accepting material for publication in this space and for the sections digital spaces. Please join us in welcoming him. Below is our first Imaging Pearl piece. We are planning this as a regular feature. Dr. Gray welcomes your submissions. Please send any items for publication to: Dr. John Gray at jcgray@san.rr.com.

Imaging Pearl
John C Gray, DPT, FAAOMPT

THE LITTLE POSTERIOR BRIDGE

Ponticulus posticus, translated as “little posterior bridge,” is a bony bridge on top of the posterior arch of atlas that forms an arcuate foramen that the vertebral artery passes through as it traverses across the posterior arch of atlas (see lateral radiographs of cervical spine). Ponticulus posticus is also known as posterior ponticle, arcuate foramen, pons posticus, and Kimmerle’s anomaly. Ponticulus posticus is formed by ossification of the oblique portion of the atlanto-occipital ligament that bridges the posterior portion of the superior articular process and the posterolateral portion of the superior margin of the posterior arch of the atlas. The incidence of ponticulus posticus varies in the literature from 4% to 38%. The most commonly referenced rate is 12% to 15% in the general population.

It is best seen on the lateral view of plain radiographs taken of the cervical spine and can be fully formed (more common in males – see Figure 1) or partially formed (more common in females – see Figure 2). Ponticulus posticus has been associated with migraines without aura, and some authors (with limited research evidence) suggest that people with ponticulus posticus are at greater risk of headaches, hearing loss, and transient vertebrobasilar insufficiency.1,2,4,7 The theory is that the bony bridge may cause compression on the vertebral artery or the posterior branch of the C1 nerve due to adhesions within the arcuate foramen that may tether the artery or nerve as the patient rotates and flexes or extends their head and neck.

Because this is a common anomaly, most radiologists will not note its presence in their report. This is a good example of the importance of looking at imaging films with your own eyes. Clinical decisions regarding the importance of imaging anomalies and abnormalities should be based on the correlation of your visual inspection of the imaging films, the radiologist’s report, and the signs, symptoms and physical findings from a thorough musculoskeletal examination.

Figure 1. 60-year-old male with fully formed ponticulus posticus.

Figure 2. 45-year-old female with partially formed ponticulus posticus.
REFERENCES


**IMAGING SIG LEADERSHIP**

Douglas M. White, DPT, OCS – President
dr.white@miltonortho.com @Douglas_M_White
Deydre Teyhen, PT, PhD, OCS – Vice President

**Nominating Committee**

Wayne Smith, DPT, Med, ATCr, SCS, RMSK - Chair
James "Jim" Elliot, PhD, PT
Richard Souza, PT, PhD, ATC, CSCS

John C. Gray, DPT FAAOMPT – Publications Editor
Gerard Brennan, PT, PhD - Orthopaedic Section Board Liaison

---

**MatScan® with Sway Analysis**

**Accurately Assess Balance & Sway**

- Evaluate weight bearing, balance and sway
- Set baselines and re-test post injury or treatment
- Portable, affordable tool for assessing patients

**Contact Us for more information**

[www.tekscan.com/orthopt](http://www.tekscan.com/orthopt)