Tuning fork tests quiz - Answers

Match the possible diagnoses (numbers) to the tuning fork test results (letters). Each test may have more than one interpretation. For example; Test result A can be matched with diagnosis 2 and 5.

Test results:

A       Weber   Central

        Rinne   L: AC>BC   R: AC>BC

B       Weber   Central

        Rinne   L: BC>AC   R: BC>AC

C       Weber   To Left

        Rinne   L: BC>AC   R: AC>BC

D       Weber   To Left

        Rinne   L: BC>AC   R: BC>AC

E       Weber   To Left

        Rinne   L: AC>BC   R: AC>BC

F       Weber   To Right

        Rinne   L: BC>AC   R: AC> BC

1. Sensory deafness R, normal L.

2. Sensory deafness R, sensory deafness L (of the same degree)

3. Sensory deafness R, conductive hearing loss L (greater degree than R)

4. Conductive hearing loss R, conductive hearing loss L (of the same degree)

5. Normal R and L ears.

6. Conductive loss R, greater conductive loss L

7. Sensory loss L, greater sensory loss R

8. Conductive loss L, normal R

9. Dead ear L, normal R

A – 2,5

B – 4

C – 8, 3

D – 6

E – 1

Can you fathom why F and 9 go together?

Surely, if BC>AC on the left then Weber should lateralise that side also! This is a special situation. The left ear is dead – it has no hearing at all so that AC vibrations do not register. However, when a tuning fork is placed behind that ear the patient says they can hear it (ie BC>AC). This is because they are hearing it in the opposite ear. Vibrations pass across the skull easily and stimulate the opposite cochlea, which is working well.

If such a situation arises then a masking noise is placed into the non-test ear (ie the Right one). When this is done, it will not pick up vibrations from the opposite side of the head and the patient will not hear AC or BC on the left.