

Case study: 59 year old man with atherosclerosis and how the disease developed

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A 59 year old right handed man with a history of alcohol abuse was recently diagnosed as diabetic hypertensive. The patient's condition manifested itself by the sudden onset of weakness on his left side while at an outdoor barbeque. A neuropsychological examination was immediately conducted. Due to the patient being diagnosed as diabetic hypertensive, a formation of plaque built up in the arteries, which narrowed the amount of blood flow throughout his body. The constriction of blood due to plaque buildup is known as atherosclerosis. As the narrowing becomes more severe, the blockages can suddenly rupture, causing blood to clot inside an artery. It was concluded that the patient had a cerebrovascular accident (stroke) in the middle cerebral artery along the right hemisphere.

The neuropsychological examination that was conducted assessed the patient's motor, sensory-perceptual, language, memory, and conceptual abilities. The patient's right side was intact, but had hemiparesis on his left side due to a stroke located on the right side of his brain. The CVA also left the patient with homonymous hemianopia: the loss of half of the field of view on the same side in both eyes. Therefore, the damage that took place in the right occipital lobe caused a loss of the left field of view in both eyes. This explains the patient's difficulties with complex visual, perceptual, and constructional tasks. However, rapid visual scanning is due to damage in area 8 of the frontal lobe which controls motor functioning.

On the patient's sensory- perceptual exam it was found that he neglected both the visual and auditory stimuli to his left side. This is a result of a lesion to the right temporal lobe which can cause a disturbance of selective attention of auditory and visual input. Area 22, 42, or 41 of the brain that <https://assignbuster.com/case-study-59-year-old-man-with-atherosclerosis-and-how-the-disease-developed/>

affect hearing ability and comprehension could be affected from the cerebrovascular accident. Another result of this right sided lesion to the temporal lobe was the patient's nonverbal reasoning skills that were found to be substantially low. However, since the middle cerebral artery also has branches that lead to the occipital lobe, which processes visual information such as colors and shapes, the patient's recall of material such as geometric designs was found to be exceptionally poor.

The patient yielded essentially normal results on the language examination except for a mild articulatory problem. The function of producing speech occurs in the pre motor section of the frontal lobe known as Brodmann area 4. It was then found out that the patient developed constructional apraxia as an onset from the right side cerebrovascular accident. This difficulty in visuospatial tasks, such as drawing, is most likely due to damage in area 40 of the parietal lobe.

The neurological symptoms that the patient was showing, including depression, correlates to the symptoms of a stroke, which in this case was caused by the sudden rupture of the middle cerebral artery. His depression could worsen due to the fact that he can no longer work as a carpenter since he lost function of one arm. However, as treatment, anti-depressants were given to the patient. The patient may also partake in physical therapy to regain some motor function of the left side of his body. Occupational therapy should also be considered to get the patient back on track towards getting daily tasks accomplished while being accommodated with his disabilities.